Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

OCD Hobbs

HOBBS OCD
JUN 02 2017
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM114991

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
GREEN WAVE 20-17 FED 41H

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

9. API Well No.
30-025-43186

3a. Address
333 WEST SHERIDAN
OKLAHOMA CITY, OK 73102

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

10. Field and Pool or Exploratory Area
WC-025 G-06 S263407P;UBS

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 20 T26S R34E NWSW 2305FSL 330FWL

11. County or Parish, State
LEA COUNTY, NM

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

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

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

Devon Energy Production Co., L.P. respectfully requests approval to change the approved well name, surface hole location, and bottom hole location from and to the following:

Name: From Green Wave 20-17 Fed 41H to Green Wave 20-32 Fed State Com 1H. PROPTY CODE 317795
SHL: From 2305 FSL & 330 FWL to 2155 FSL & 270 FWL, both in 26S-34E-20.
BHL: From 330 FNL & 380 FWL in 26S-34E-17 to 2180 FNL & 380 FWL in 26S-34E-32.

Shape files have been sent to William Falvey @ wfalvey@blm.gov.

Please see attached revised C-102, Directional and Drilling Plan.

NRS ok 5/26/17 JB use original COA's
Eng OK 5/23/17 CRW

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

Electronic Submission #372825 verified by the BLM Well Information System
For DEVON ENERGY, sent to the Hobbs
Committed to AFMSS for processing by DEBORAH MCKINNEY on 04/18/2017 ()

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

Signature (Electronic Submission) — Date 04/12/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By for Cody Layton — Title FIELD MANAGER — Date 5/30/17

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 CARLSBAD FIELD OFFICE

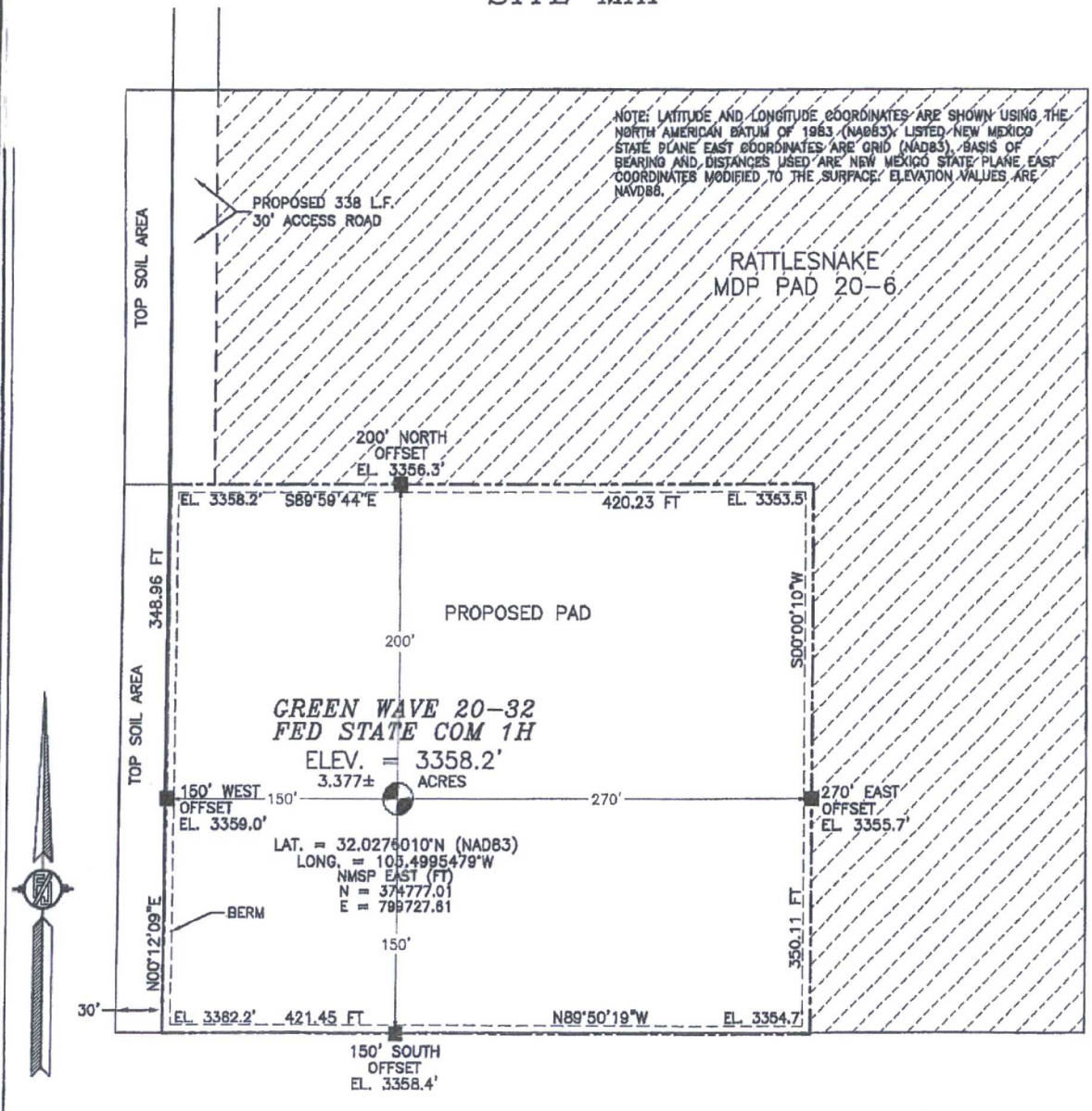
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

KZ

SECTION 20, 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 STATE HWY. 128 AND CR. 2 (BATTLE AXE) GO SOUTH AND WEST ON CR. 2 12.2 MILES, TURN LEFT ON CALICHE ROAD AND GO SOUTH 0.75 MILE, TURN LEFT AND GO EAST 2.0 MILES, TURN RIGHT AND GO SOUTH 2.6 MILES, TURN LEFT AND GO EAST 923' TO PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 338' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

GREEN WAVE 20-32 FED STATE COM 1H

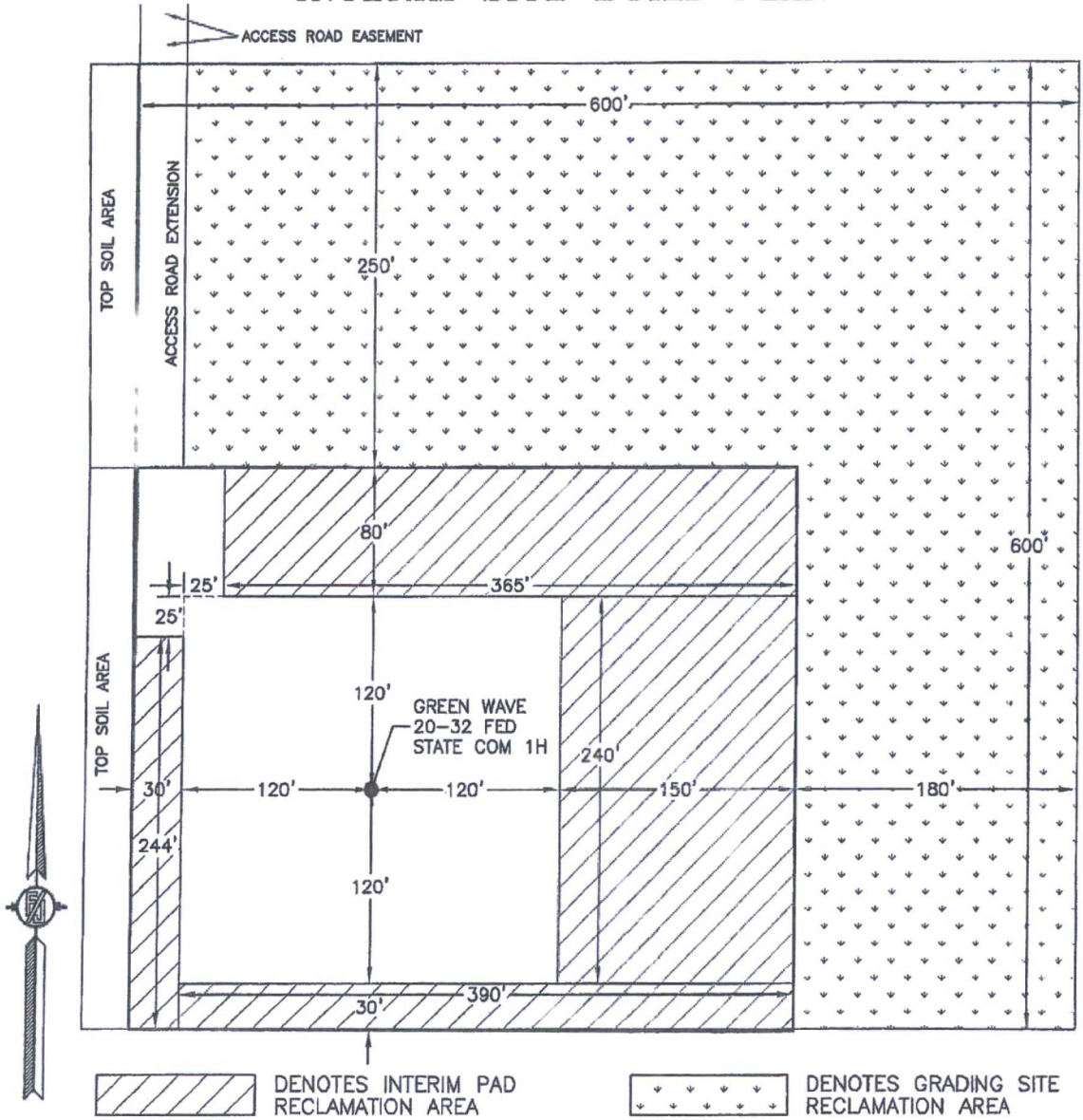
LOCATED 2155 FT. FROM THE SOUTH LINE AND 270 FT. FROM THE WEST LINE OF SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

SURVEY NO. 3917A

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

SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
INTERIM SITE BUILD PLAN



DENOTES INTERIM PAD RECLAMATION AREA
1.930± ACRES

DENOTES GRADING SITE RECLAMATION AREA
4.712± ACRES

010 50 100 200
SCALE 1" = 100'

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LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

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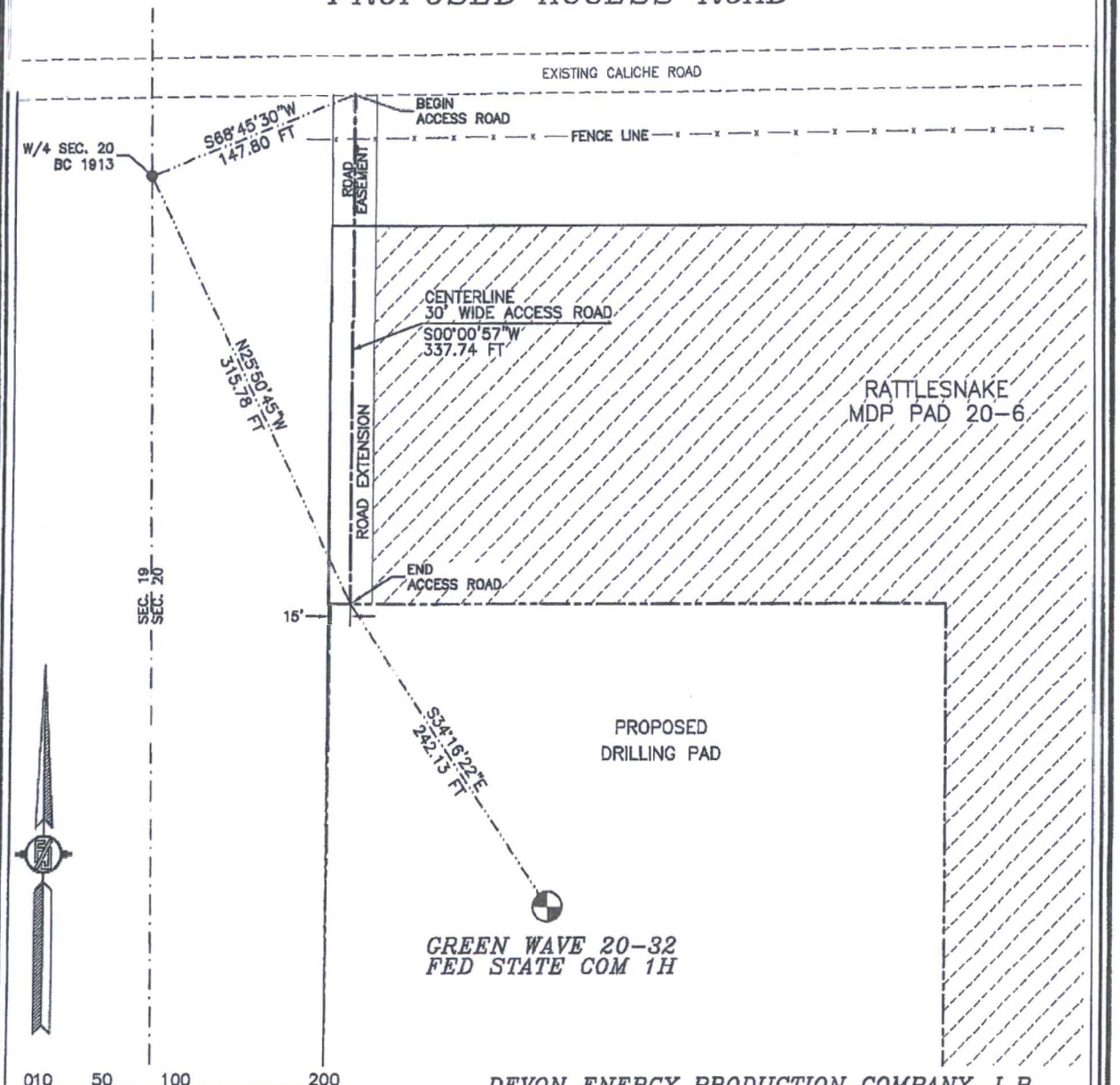
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
PROPOSED ACCESS ROAD



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SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
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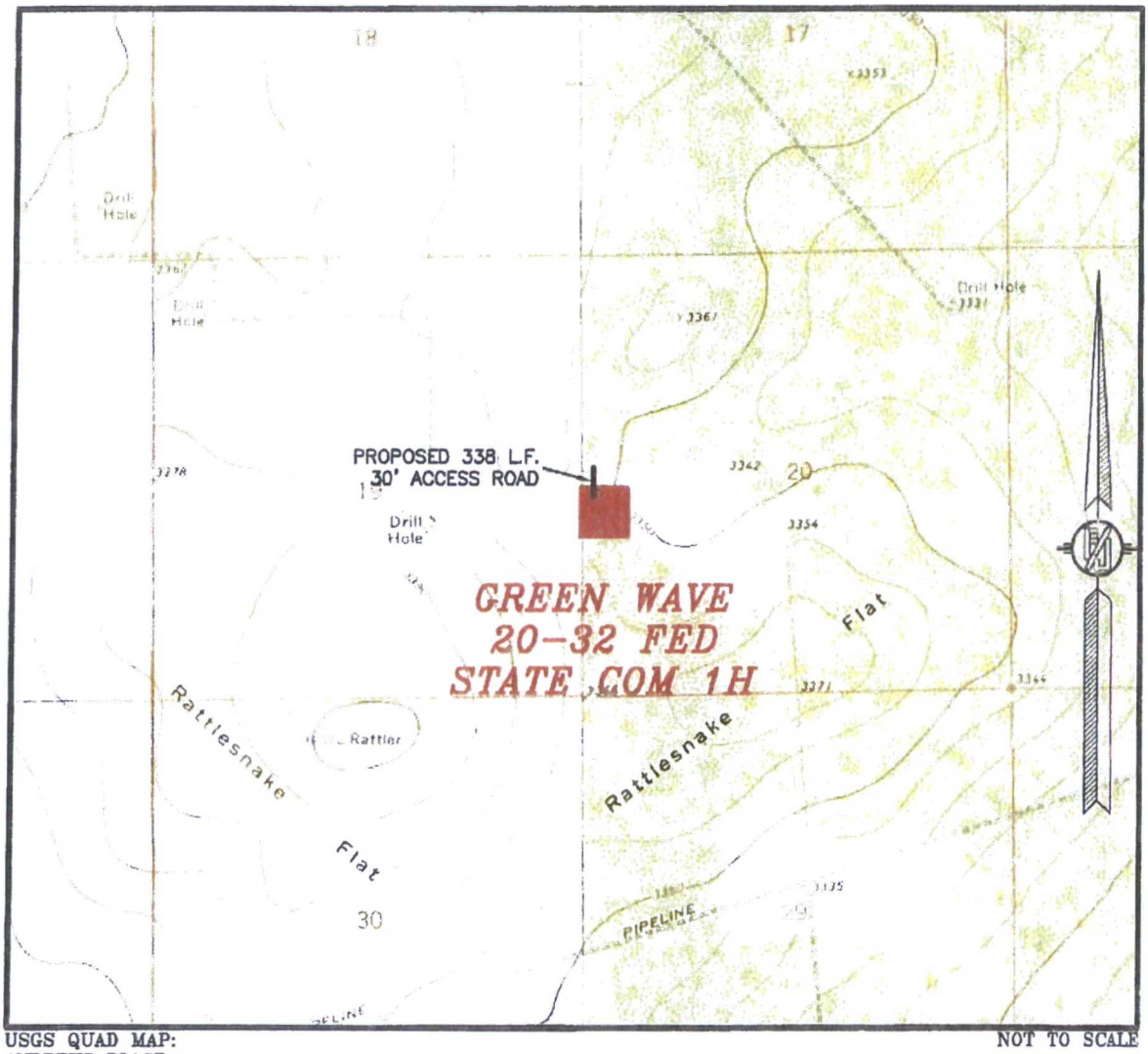
LOCATION VERIFICATION MAP



USGS QUAD MAP:
ANDREWS PLACE

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
GREEN WAVE 20-32 FED STATE COM 1H
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LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

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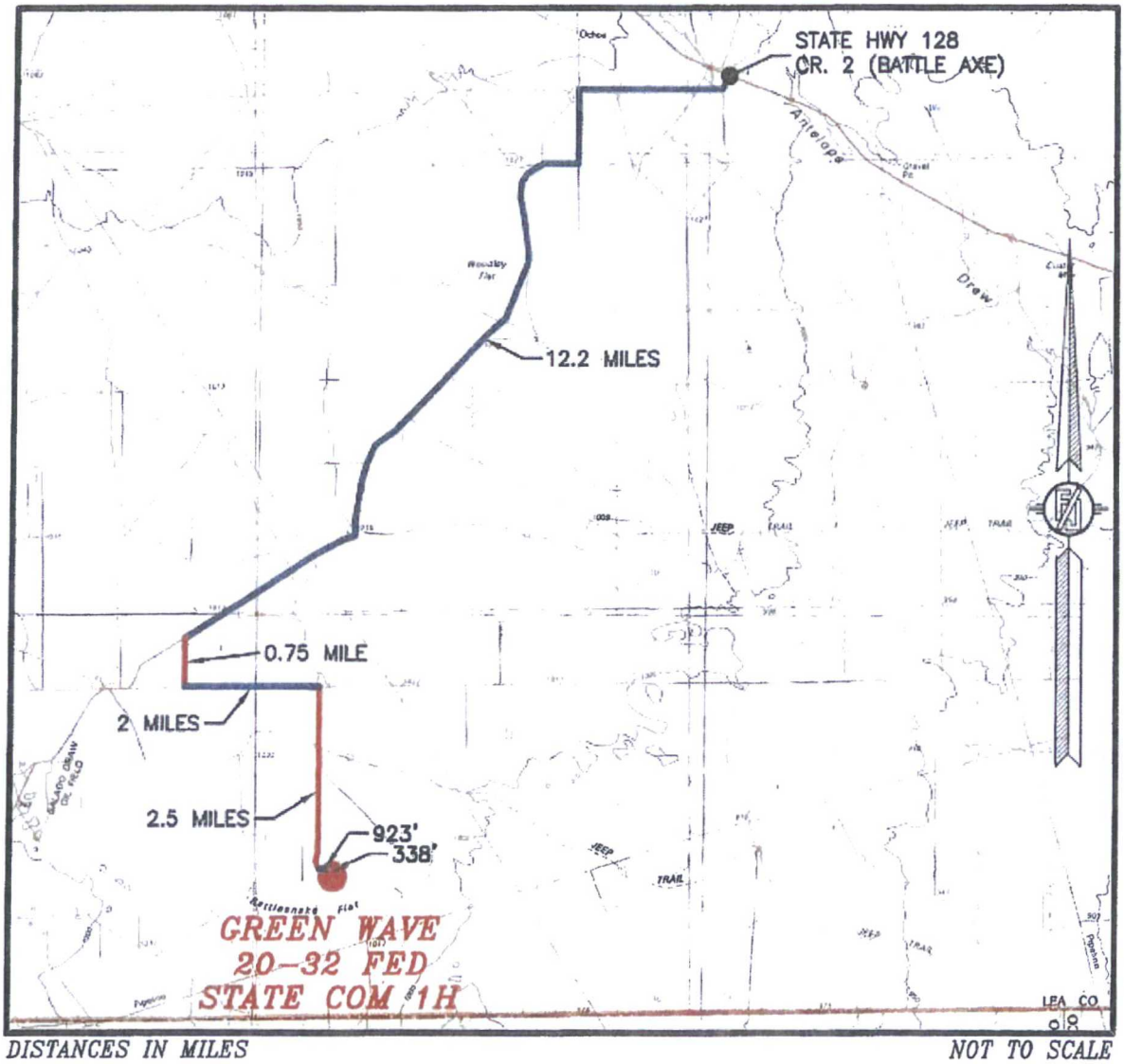
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION
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LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

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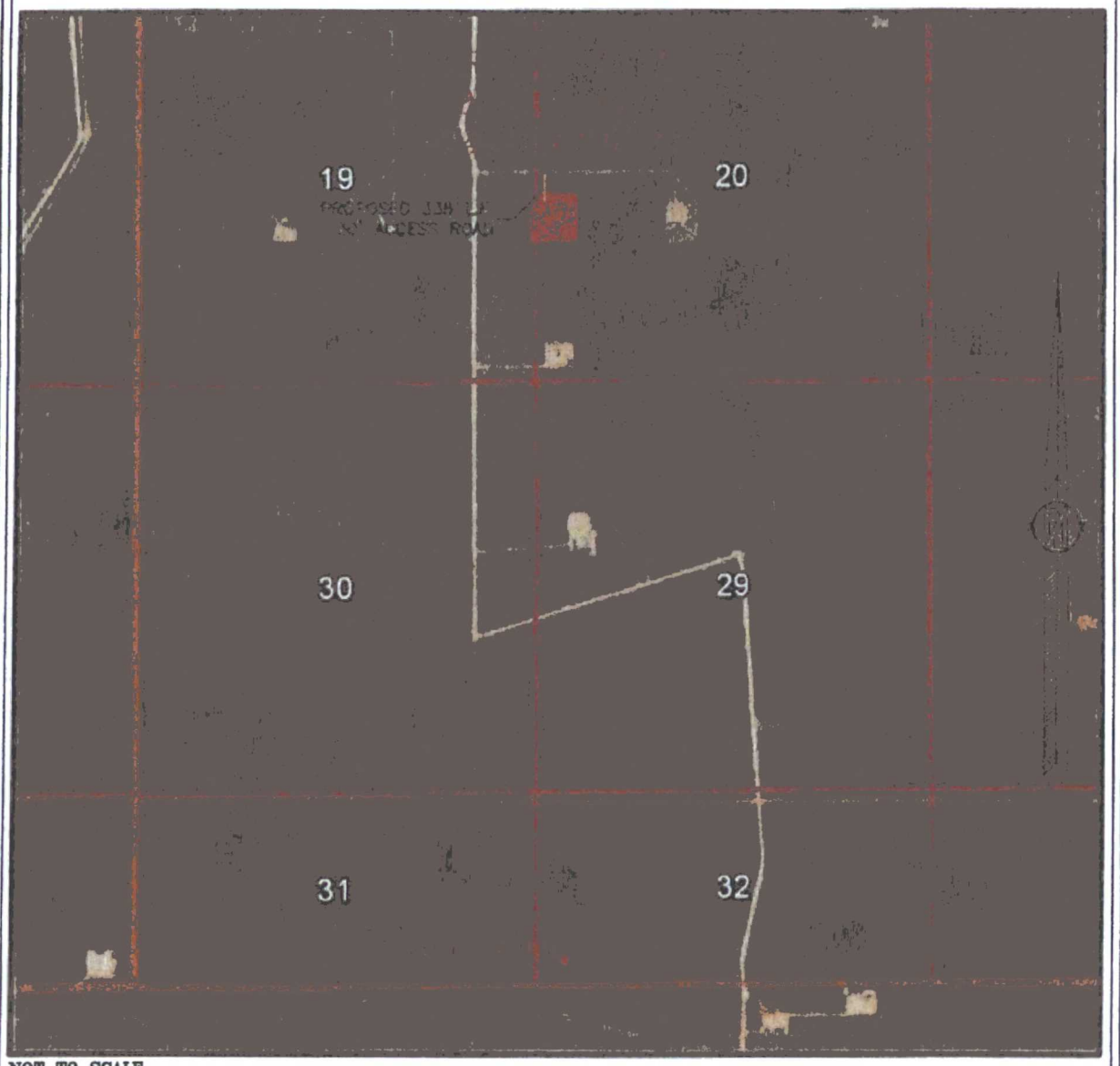
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOV. 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.

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SECTION 20, TOWNSHIP 26 SOUTH,
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LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

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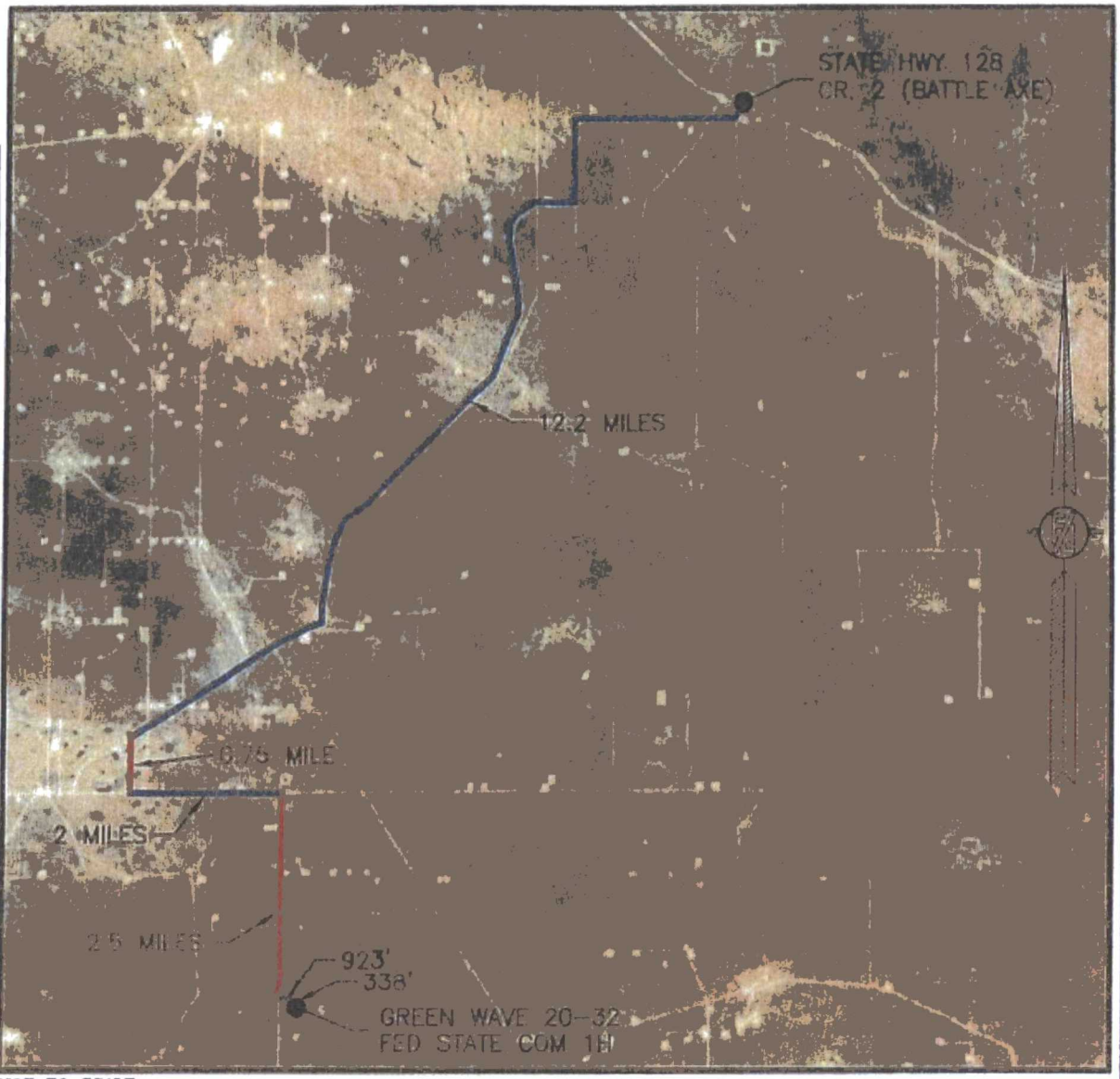
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M
LEA COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOV. 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.

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LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

SURVEY NO. 3917A

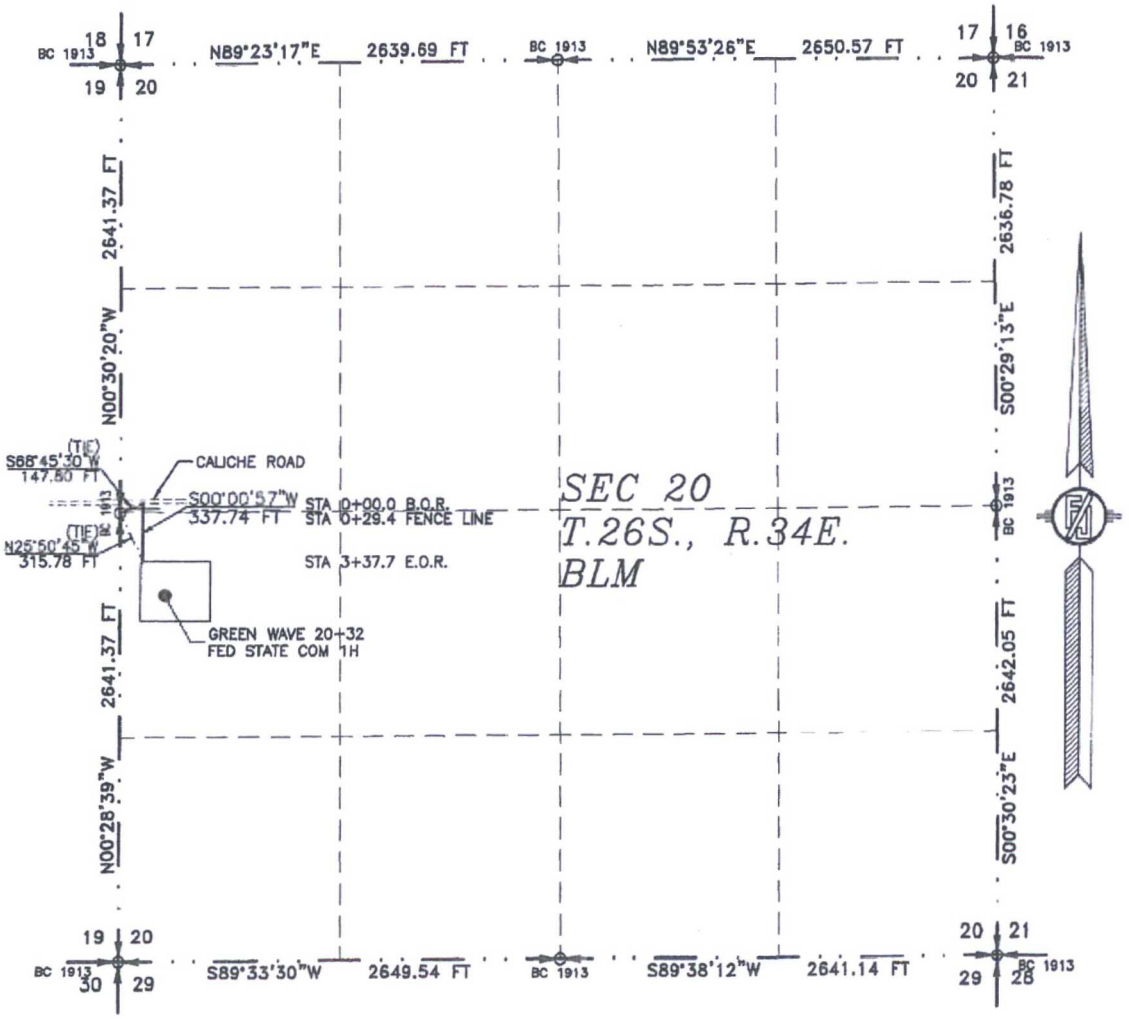
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR GREEN WAVE 20-32 FED STATE COM 1H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
MARCH 21, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

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.

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 23rd DAY OF MARCH 2017.

FILIMON F. JARAMILLO
12797
REGISTERED PROFESSIONAL SURVEYOR

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

SHEET: 1-2

SURVEY NO. 3917A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR GREEN WAVE 20-32 FED STATE COM 1H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
MARCH 21, 2017

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 20, 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 SW/4 NW/4 OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS S68°45'30"W, A DISTANCE OF 147.80 FEET;
THENCE S00°00'57"W A DISTANCE OF 337.74 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS N25°50'45"W, A DISTANCE OF 315.78 FEET;

SAID STRIP OF LAND BEING 337.74 FEET OR 20.47 RODS IN LENGTH, CONTAINING 0.233 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4	52.56 L.F.	3.19 RODS	0.036 ACRES
NW/4 SW/4	285.18 L.F.	17.28 RODS	0.196 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.

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 22 DAY OF MARCH 2017

FILIMON F. JARAMILLO PLS. 12797

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

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

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-43186	97892	WG-025 G-06 S263407P; Upper Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
30884	GREEN WAVE 20-32 FED STATE COM	1H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3358.2

[10] Surface Location

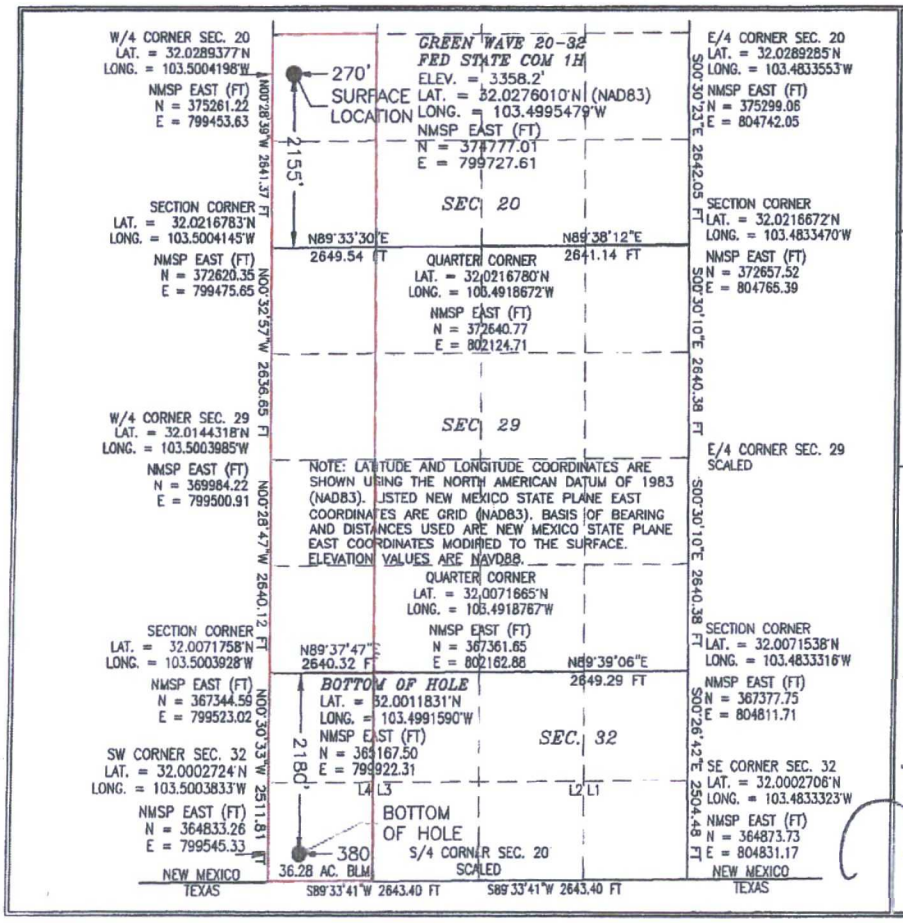
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	20	26 S	34 E		2155	SOUTH	270	WEST	LEA

[11] 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
4	32	26 S	34 E		2180	NORTH	380	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
316.28			

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.



[17] 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.

Rebecca Deal 3/27/2017
Signature Date

Rebecca Deal, Regulatory Analyst
Printed Name

rebecca.deal@dvn.com
E-mail Address

[18] 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.

MARCH 21, 2017
Date of Survey

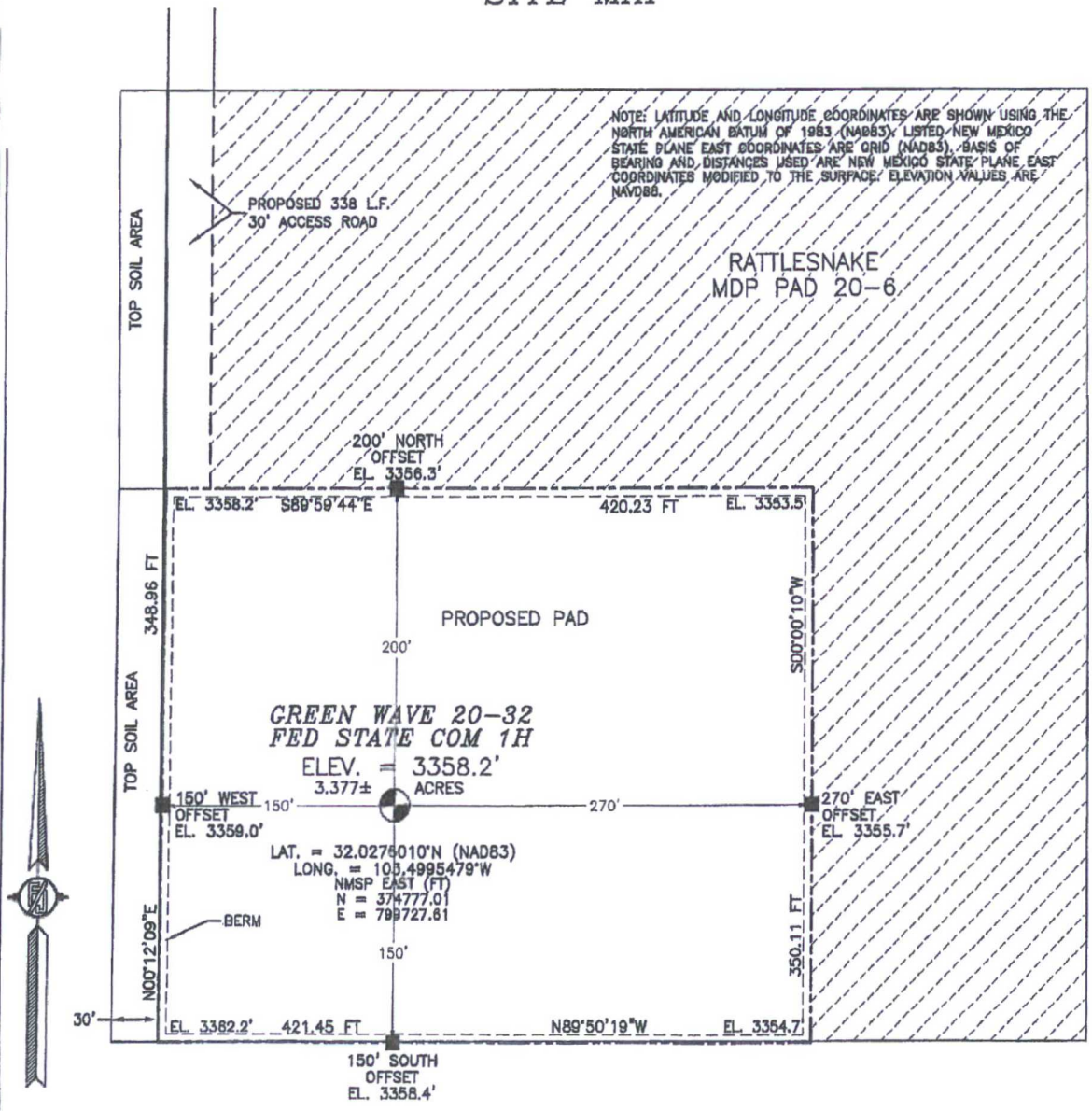
FILIMON F. JARAMILLO NEW MEXICO 12797 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 3917A

SECTION 20, 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

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MARCH 21, 2017

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LEA COUNTY, STATE OF NEW MEXICO
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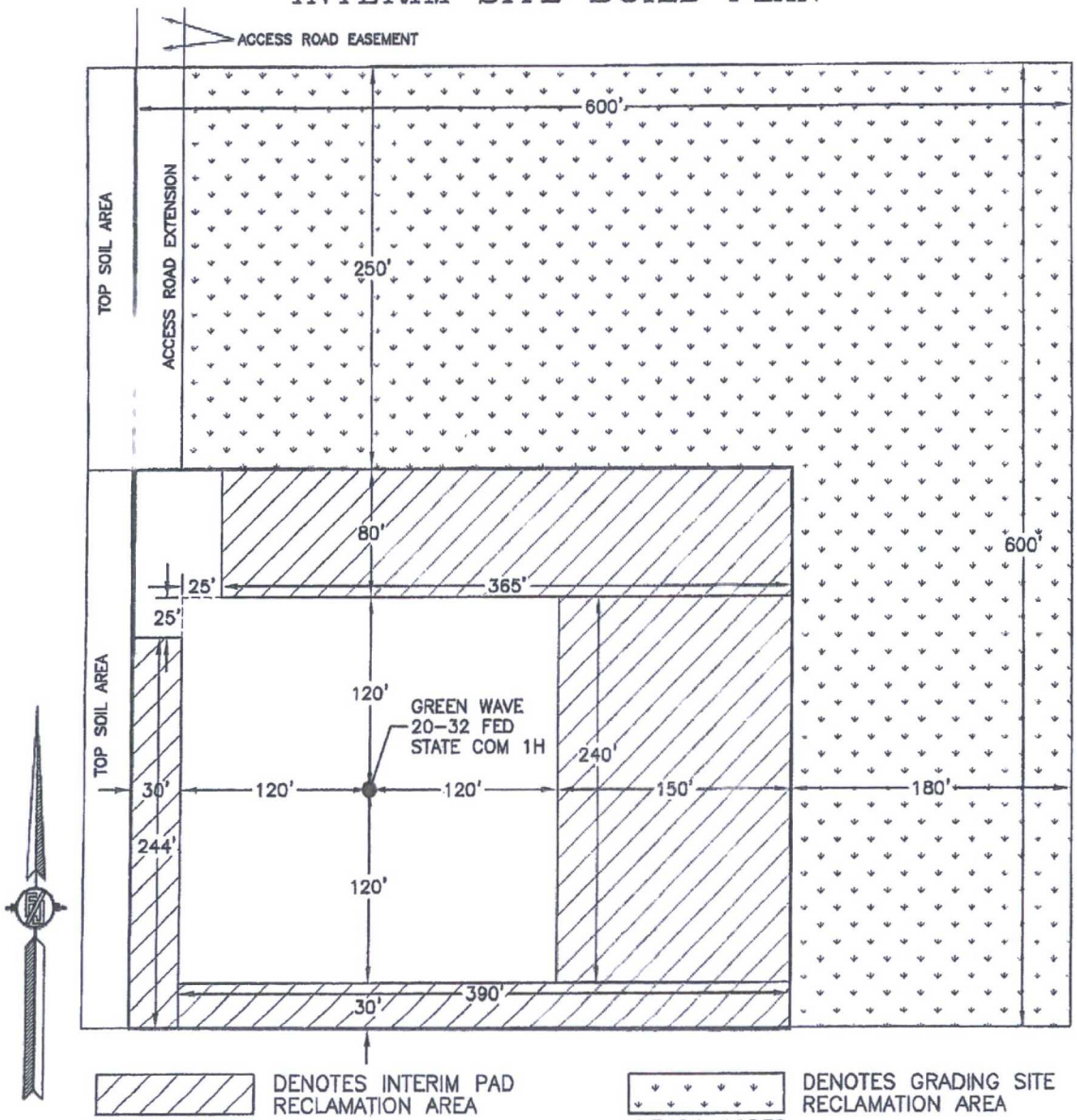

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MARCH 21, 2017

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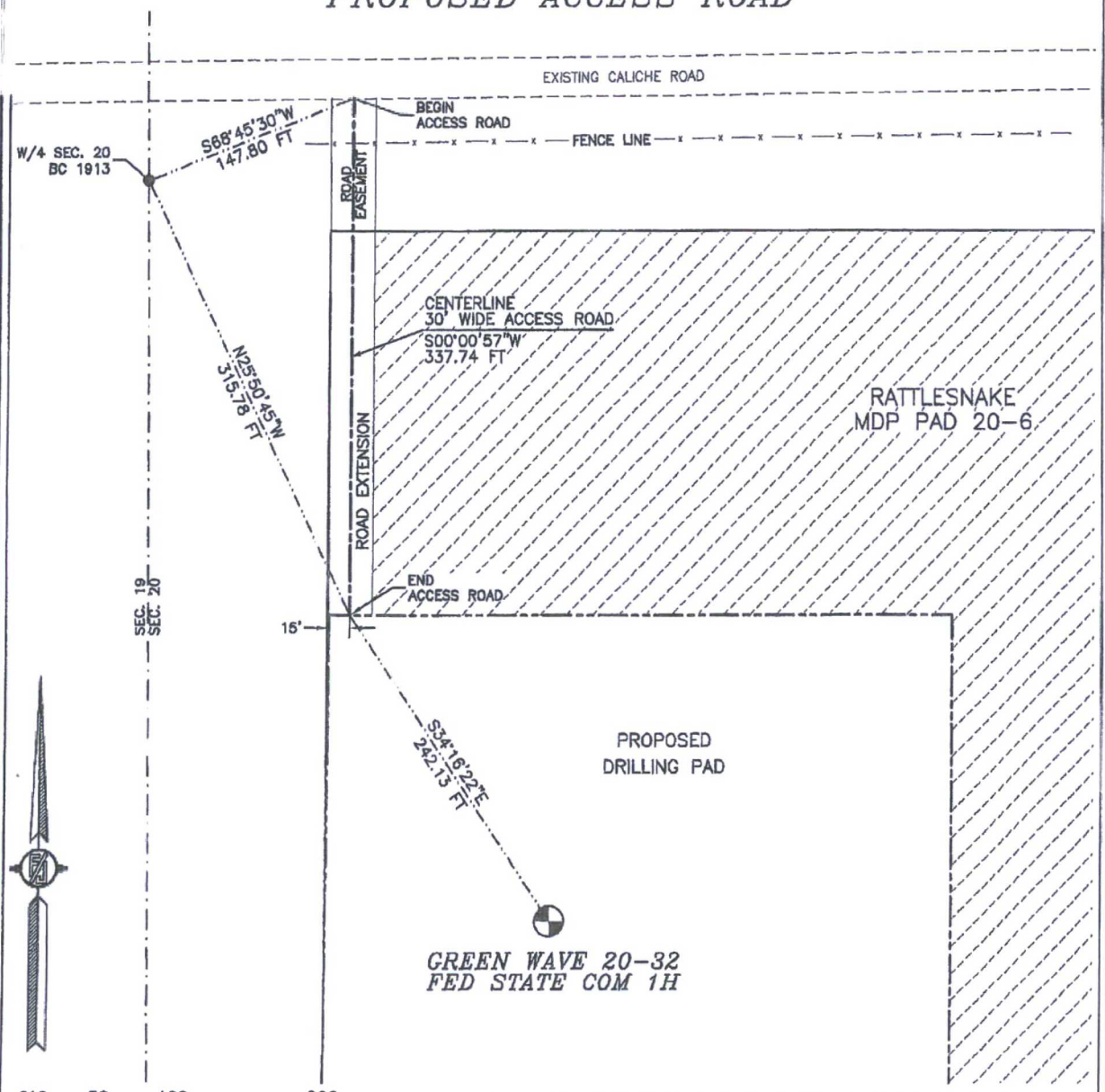
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
PROPOSED ACCESS ROAD



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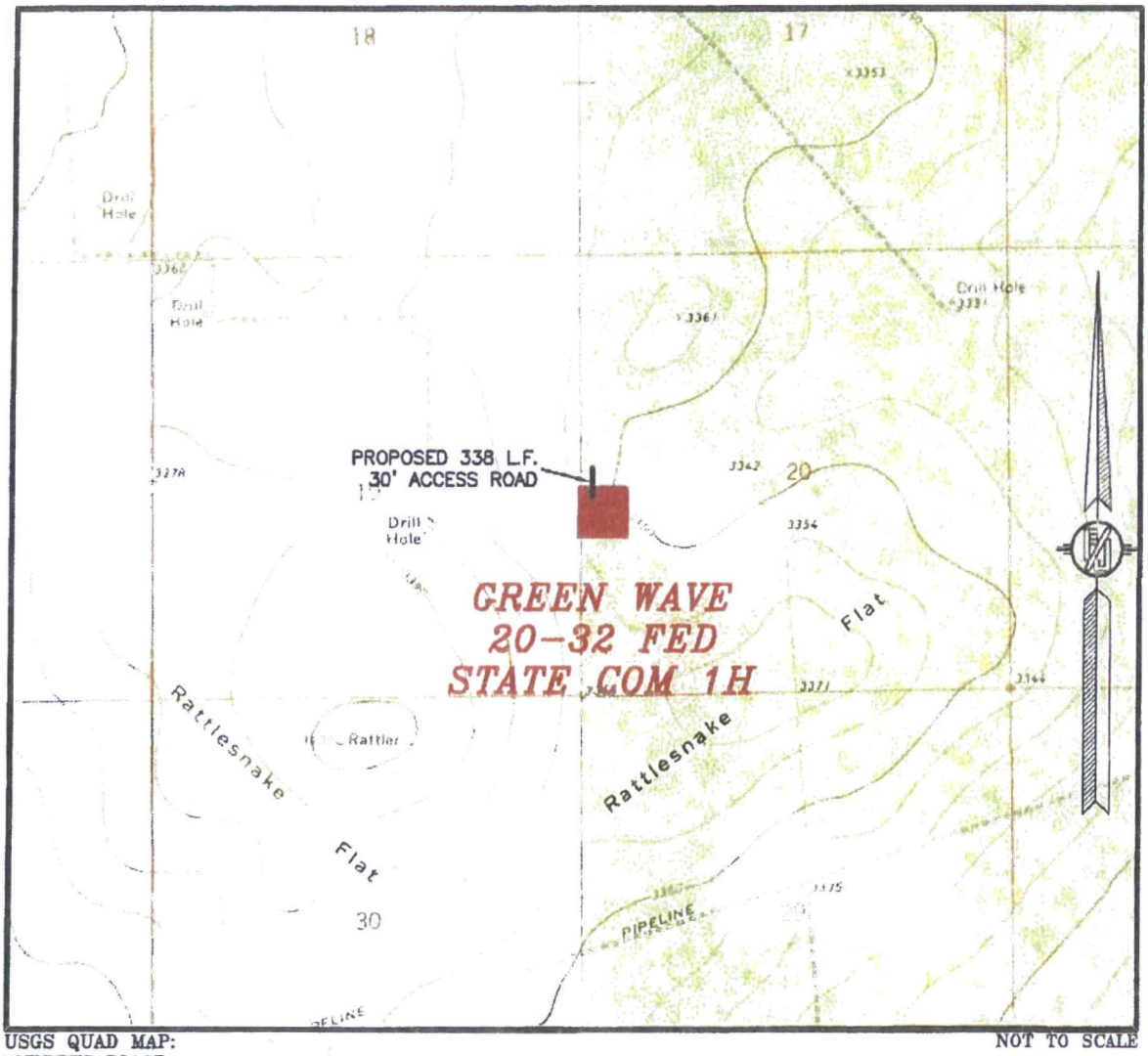
LOCATION VERIFICATION MAP



USGS QUAD MAP:
ANDREWS PLACE

NOT TO SCALE

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GREEN WAVE 20-32 FED STATE COM 1H
LOCATED 2155 FT. FROM THE SOUTH LINE
AND 270 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

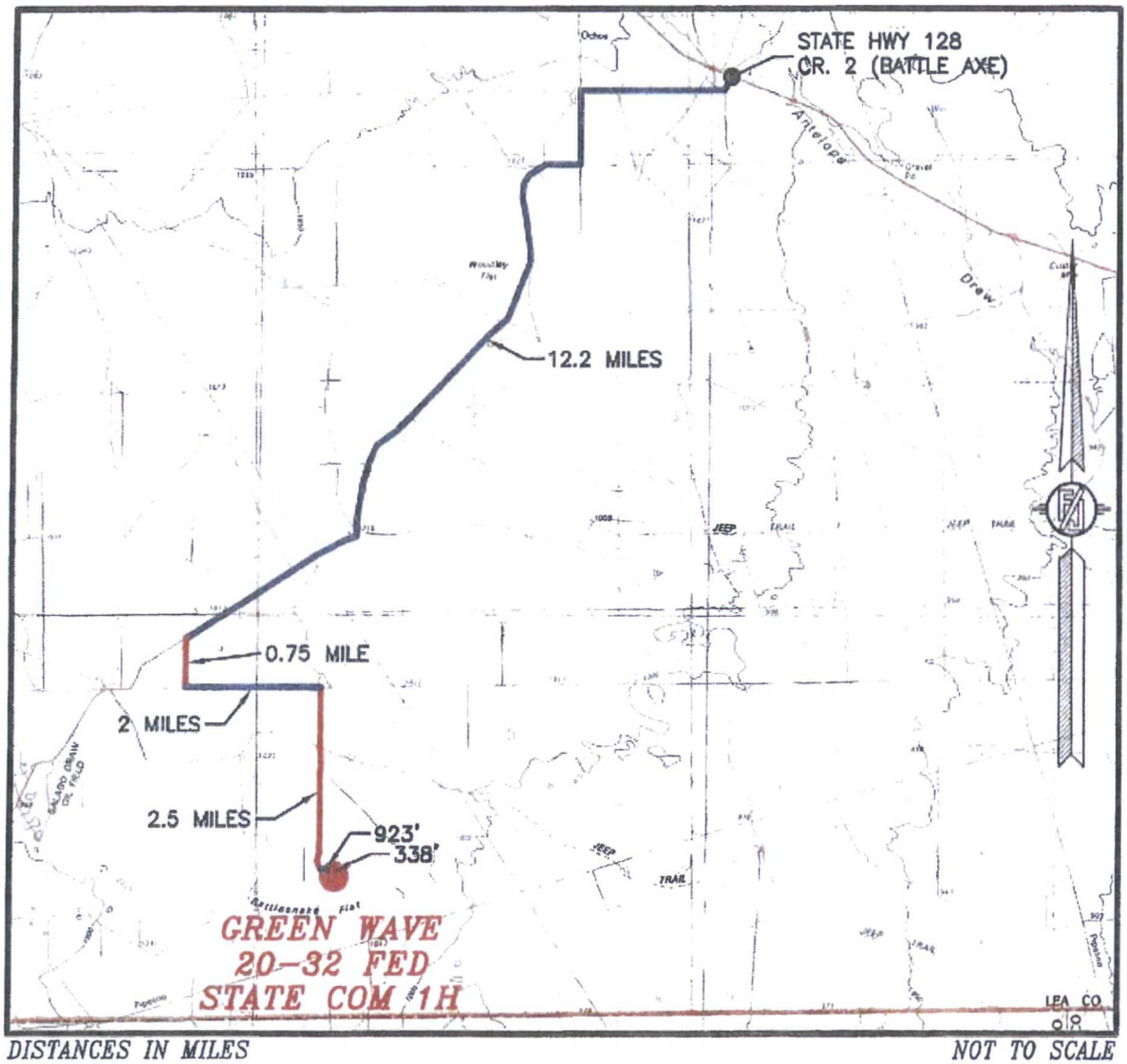
MARCH 21, 2017

SURVEY NO. 3917A

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

SECTION 20, 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 STATE HWY. 128 AND CR. 2 (BATTLE AXE) GO SOUTH AND WEST ON CR. 2 12.2 MILES, TURN LEFT ON CALICHE ROAD AND GO SOUTH 0.75 MILE, TURN LEFT AND GO EAST 2.0 MILES, TURN RIGHT AND GO SOUTH 2.5 MILES, TURN LEFT AND GO EAST 923' TO PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 338' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.
GREEN WAVE 20-32 FED STATE COM 1H
LOCATED 2155 FT. FROM THE SOUTH LINE
AND 270 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

SURVEY NO. 3917A

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

SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO

NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
NOV. 2015

DEVON ENERGY PRODUCTION COMPANY, L.P.
GREEN WAVE 20-32 FED STATE COM 1H
LOCATED 2155 FT. FROM THE SOUTH LINE
AND 270 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

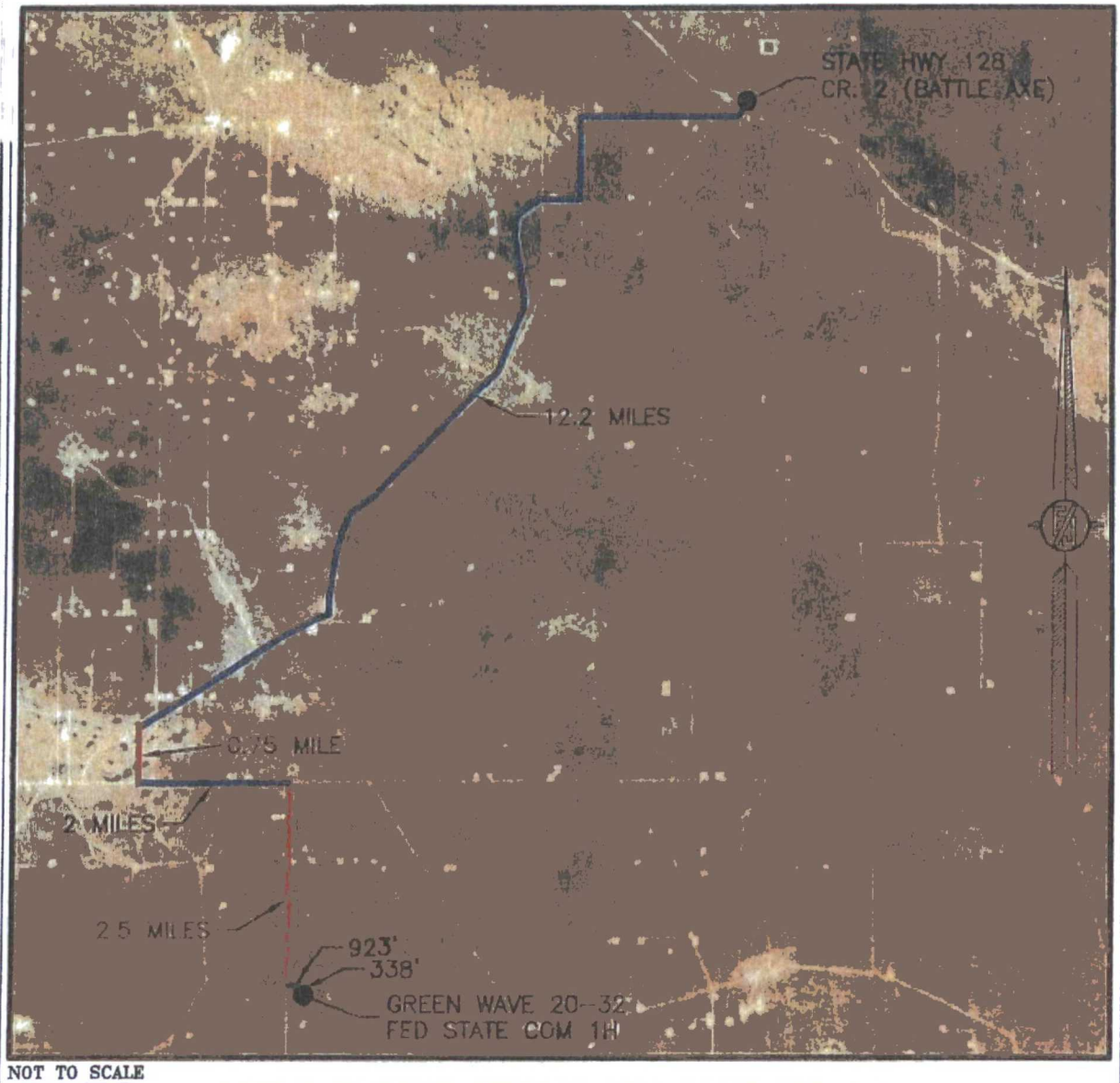
MARCH 21, 2017

SURVEY NO. 3917A

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

SECTION 20, 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.
GREEN WAVE 20-32 FED STATE COM 1H
LOCATED 2155 FT. FROM THE SOUTH LINE
AND 270 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MARCH 21, 2017

SURVEY NO. 3917A

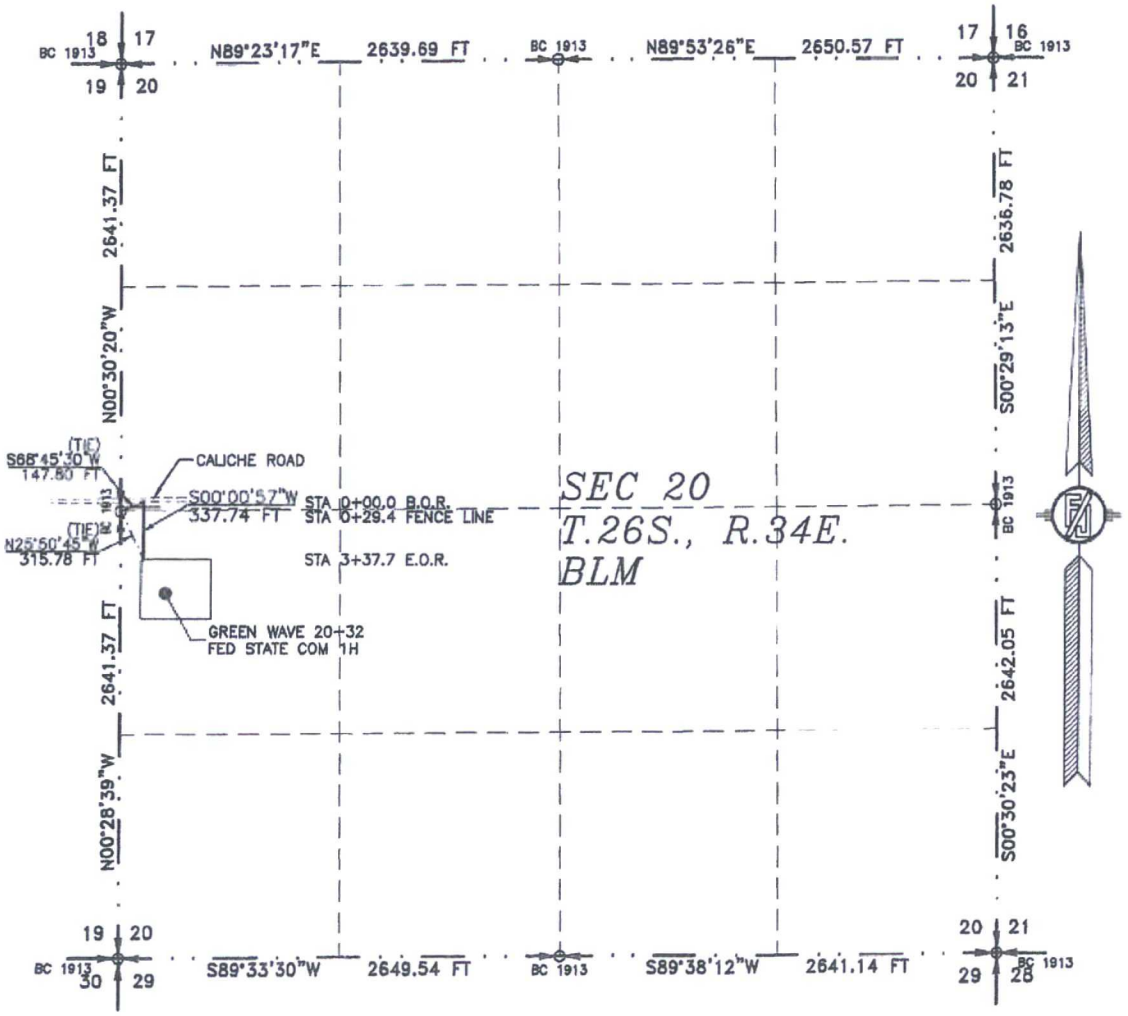
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR GREEN WAVE 20-32 FED STATE COM 1H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
MARCH 21, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION

1000 0 1000

Scale: 1" = 1000'

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.

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 20 DAY OF MARCH 2017.

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

SHEET: 1-2

SURVEY NO. 3917A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR GREEN WAVE 20-32 FED STATE COM 1H

DEVON ENERGY PRODUCTION COMPANY, L.P.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
MARCH 21, 2017

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 20, 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 SW/4 NW/4 OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS S68°45'30"W, A DISTANCE OF 147.80 FEET;
THENCE S00°00'57"W A DISTANCE OF 337.74 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 20, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS N25°50'45"W, A DISTANCE OF 315.78 FEET;

SAID STRIP OF LAND BEING 337.74 FEET OR 20.47 RODS IN LENGTH, CONTAINING 0.233 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4	52.56 L.F.	3.19 RODS	0.036 ACRES
NW/4 SW/4	285.18 L.F.	17.28 RODS	0.196 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.

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 22 DAY OF MARCH 2017

FILIMON F. JARAMILLO PLS. 12797

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

SHEET: 2-2

SURVEY NO. 3917A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Green Wave 20 Fed
Well: 1H
Wellbore: OH
Design: Plan #1

3358.2' + 25' KB @ 3383.20usft
Ground Level: 3358.20

Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.39°

Magnetic Field
Strength: 47909.6snT
Dip Angle: 59.77°
Date: 4/11/2017
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

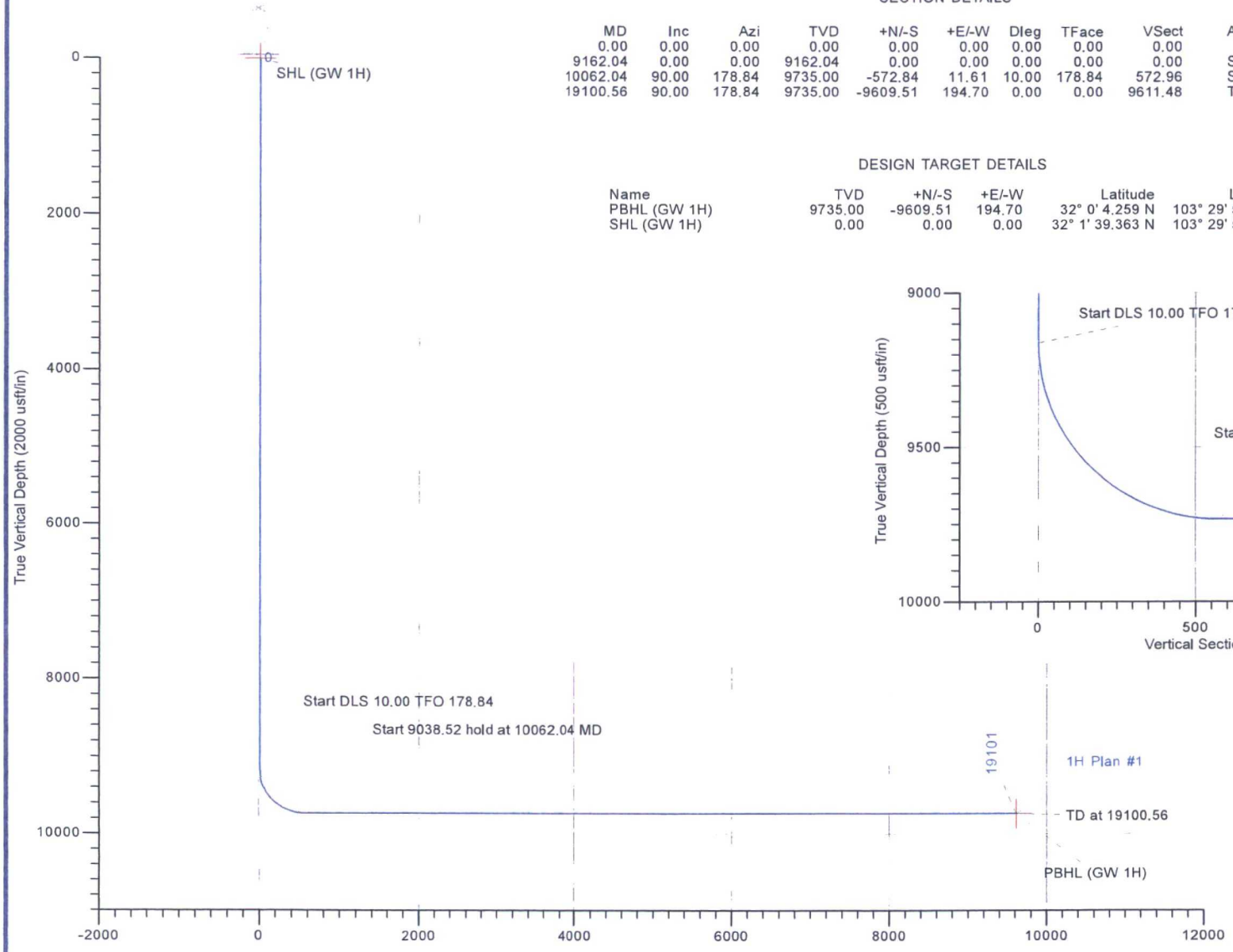
devon

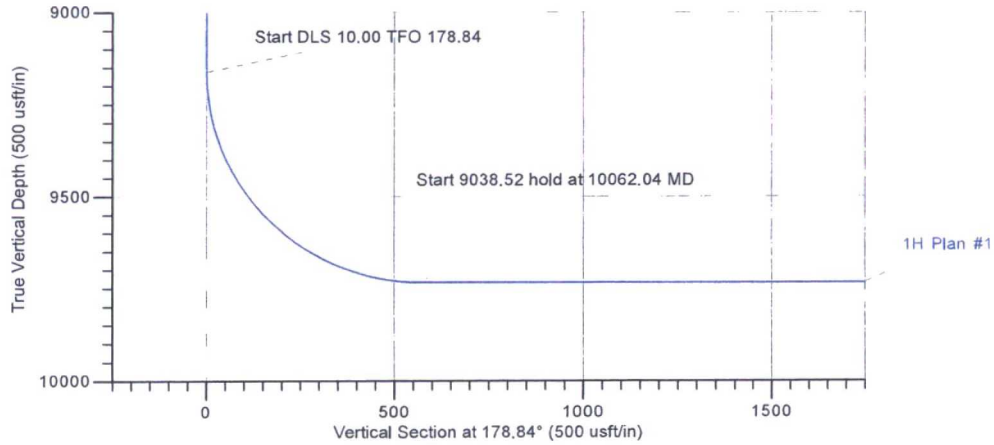
SECTION DETAILS

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	
9162.04	0.00	0.00	9162.04	0.00	0.00	0.00	0.00	0.00	Start DLS 10.00 TFO 178.84
10062.04	90.00	178.84	9735.00	-572.84	11.61	10.00	178.84	572.96	Start 9038.52 hold at 10062.04 MD
19100.56	90.00	178.84	9735.00	-9609.51	194.70	0.00	0.00	9611.48	TD at 19100.56

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (GW 1H)	9735.00	-9609.51	194.70	32° 0' 4.259 N	103° 29' 56.972 W
SHL (GW 1H)	0.00	0.00	0.00	32° 1' 39.363 N	103° 29' 58.372 W





LEAM Drilling Services

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

Plan: Plan #1 (1H/OH)
Green Wave 20 Fed
Created By: Dustin Ault Date: 14:20, April 11 2017
Date: _____
Approved: _____ Date: _____

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Green Wave 20 Fed
Well: 1H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.39°

Magnetic Field
Strength: 47909.6snT
Dip Angle: 59.77°
Date: 4/11/2017
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

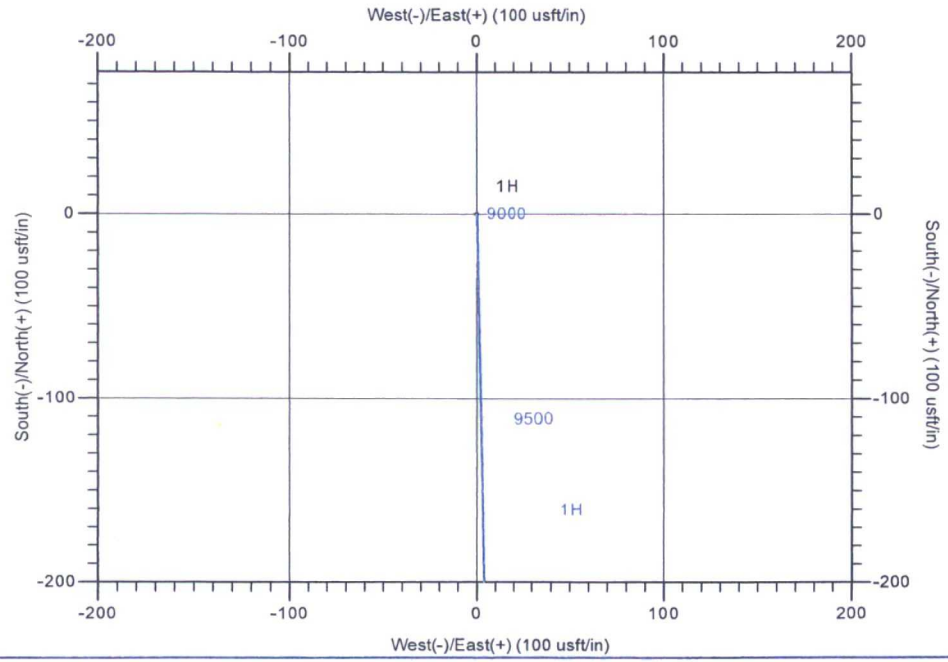
devon

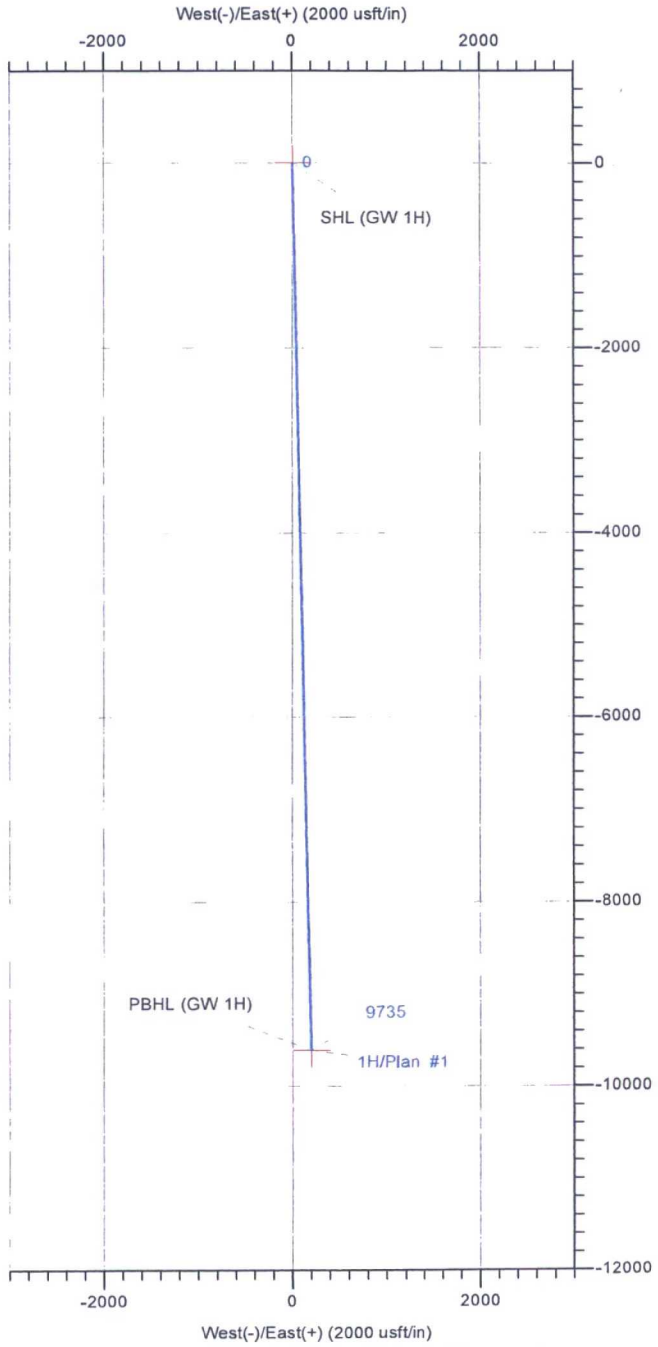
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9162.04	0.00	0.00	9162.04	0.00	0.00	0.00	0.00	0.00	
10062.04	90.00	178.84	9735.00	-572.84	11.61	10.00	178.84	572.96	
19100.56	90.00	178.84	9735.00	-9609.51	194.70	0.00	0.00	9611.48	PBHL (GW 1H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (GW 1H)	9735.00	-9609.51	194.70	365167.50	799922.31	32° 0' 4.259 N	103° 29' 56.972 W
SHL (GW 1H)	0.00	0.00	0.00	374777.01	799727.61	32° 1' 39.363 N	103° 29' 58.372 W





LEAM Drilling Services

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

Plan: Plan #1 (1H/OH)
Green Wave 20 Fed
Created By: Dustin Ault Date: 14:23, April 11 2017
Date:
Approved: Date:

Devon Energy

Lea County, NM (NAD-83)
Green Wave 20 Fed
1H

OH

Plan: Plan #1

Standard Planning Report

11 April, 2017

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site	Green Wave 20 Fed				
Site Position:		**Northing:**	375,305.15 usft	**Latitude:**	32° 1' 44.229 N
From:	Map	**Easting:**	804,412.02 usft	**Longitude:**	103° 29' 3.912 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.45 °

Well	1H					
Well Position	**+N/-S**	-528.14 usft	**Northing:**	374,777.01 usft	**Latitude:**	32° 1' 39.363 N
	+E/-W	-4,684.41 usft	**Easting:**	799,727.61 usft	**Longitude:**	103° 29' 58.372 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	3,363.60 usft	**Ground Level:**	3,358.20 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	4/11/2017	6.83	59.77	47,910

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	178.84	

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	
9,162.04	0.00	0.00	9,162.04	0.00	0.00	0.00	0.00	0.00	0.00	
10,062.04	90.00	178.84	9,735.00	-572.84	11.61	10.00	10.00	19.87	178.84	
19,100.56	90.00	178.84	9,735.00	-9,609.51	194.70	0.00	0.00	0.00	0.00	PBHL (GW 1H)

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
SHL (GW 1H)									
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

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
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
9,162.04	0.00	0.00	9,162.04	0.00	0.00	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 178.84									
9,200.00	3.80	178.84	9,199.97	-1.26	0.03	1.26	10.00	10.00	0.00
9,250.00	8.80	178.84	9,249.66	-6.74	0.14	6.74	10.00	10.00	0.00
9,300.00	13.80	178.84	9,298.67	-16.53	0.33	16.53	10.00	10.00	0.00
9,350.00	18.80	178.84	9,346.65	-30.55	0.62	30.55	10.00	10.00	0.00
9,400.00	23.80	178.84	9,393.22	-48.70	0.99	48.71	10.00	10.00	0.00
9,450.00	28.80	178.84	9,438.03	-70.84	1.44	70.85	10.00	10.00	0.00
9,500.00	33.80	178.84	9,480.74	-96.80	1.96	96.82	10.00	10.00	0.00
9,550.00	38.80	178.84	9,521.03	-126.38	2.56	126.40	10.00	10.00	0.00
9,600.00	43.80	178.84	9,558.58	-159.36	3.23	159.39	10.00	10.00	0.00
9,650.00	48.80	178.84	9,593.12	-195.49	3.96	195.53	10.00	10.00	0.00
9,700.00	53.80	178.84	9,624.37	-234.49	4.75	234.53	10.00	10.00	0.00
9,750.00	58.80	178.84	9,652.11	-276.06	5.59	276.12	10.00	10.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
9,800.00	63.80	178.84	9,676.11	-319.89	6.48	319.96	10.00	10.00	0.00
9,850.00	68.80	178.84	9,696.21	-365.65	7.41	365.72	10.00	10.00	0.00
9,900.00	73.80	178.84	9,712.24	-412.98	8.37	413.07	10.00	10.00	0.00
9,950.00	78.80	178.84	9,724.08	-461.54	9.35	461.63	10.00	10.00	0.00
10,000.00	83.80	178.84	9,731.64	-510.93	10.35	511.04	10.00	10.00	0.00
10,050.00	88.80	178.84	9,734.87	-560.80	11.36	560.92	10.00	10.00	0.00
10,062.04	90.00	178.84	9,735.00	-572.84	11.61	572.96	10.00	10.00	0.00
Start 9038.52 hold at 10062.04 MD									
10,100.00	90.00	178.84	9,735.00	-610.79	12.38	610.92	0.00	0.00	0.00
10,200.00	90.00	178.84	9,735.00	-710.77	14.40	710.92	0.00	0.00	0.00
10,300.00	90.00	178.84	9,735.00	-810.75	16.43	810.92	0.00	0.00	0.00
10,400.00	90.00	178.84	9,735.00	-910.73	18.45	910.92	0.00	0.00	0.00
10,500.00	90.00	178.84	9,735.00	-1,010.71	20.48	1,010.92	0.00	0.00	0.00
10,600.00	90.00	178.84	9,735.00	-1,110.69	22.50	1,110.92	0.00	0.00	0.00
10,700.00	90.00	178.84	9,735.00	-1,210.67	24.53	1,210.92	0.00	0.00	0.00
10,800.00	90.00	178.84	9,735.00	-1,310.65	26.56	1,310.92	0.00	0.00	0.00
10,900.00	90.00	178.84	9,735.00	-1,410.63	28.58	1,410.92	0.00	0.00	0.00
11,000.00	90.00	178.84	9,735.00	-1,510.61	30.61	1,510.92	0.00	0.00	0.00
11,100.00	90.00	178.84	9,735.00	-1,610.59	32.63	1,610.92	0.00	0.00	0.00
11,200.00	90.00	178.84	9,735.00	-1,710.57	34.66	1,710.92	0.00	0.00	0.00
11,300.00	90.00	178.84	9,735.00	-1,810.55	36.68	1,810.92	0.00	0.00	0.00
11,400.00	90.00	178.84	9,735.00	-1,910.53	38.71	1,910.92	0.00	0.00	0.00
11,500.00	90.00	178.84	9,735.00	-2,010.51	40.74	2,010.92	0.00	0.00	0.00
11,600.00	90.00	178.84	9,735.00	-2,110.48	42.76	2,110.92	0.00	0.00	0.00
11,700.00	90.00	178.84	9,735.00	-2,210.46	44.79	2,210.92	0.00	0.00	0.00
11,800.00	90.00	178.84	9,735.00	-2,310.44	46.81	2,310.92	0.00	0.00	0.00
11,900.00	90.00	178.84	9,735.00	-2,410.42	48.84	2,410.92	0.00	0.00	0.00
12,000.00	90.00	178.84	9,735.00	-2,510.40	50.86	2,510.92	0.00	0.00	0.00
12,100.00	90.00	178.84	9,735.00	-2,610.38	52.89	2,610.92	0.00	0.00	0.00
12,200.00	90.00	178.84	9,735.00	-2,710.36	54.92	2,710.92	0.00	0.00	0.00
12,300.00	90.00	178.84	9,735.00	-2,810.34	56.94	2,810.92	0.00	0.00	0.00
12,400.00	90.00	178.84	9,735.00	-2,910.32	58.97	2,910.92	0.00	0.00	0.00
12,500.00	90.00	178.84	9,735.00	-3,010.30	60.99	3,010.92	0.00	0.00	0.00
12,600.00	90.00	178.84	9,735.00	-3,110.28	63.02	3,110.92	0.00	0.00	0.00
12,700.00	90.00	178.84	9,735.00	-3,210.26	65.04	3,210.92	0.00	0.00	0.00
12,800.00	90.00	178.84	9,735.00	-3,310.24	67.07	3,310.92	0.00	0.00	0.00
12,900.00	90.00	178.84	9,735.00	-3,410.22	69.10	3,410.92	0.00	0.00	0.00
13,000.00	90.00	178.84	9,735.00	-3,510.20	71.12	3,510.92	0.00	0.00	0.00
13,100.00	90.00	178.84	9,735.00	-3,610.18	73.15	3,610.92	0.00	0.00	0.00
13,200.00	90.00	178.84	9,735.00	-3,710.16	75.17	3,710.92	0.00	0.00	0.00
13,300.00	90.00	178.84	9,735.00	-3,810.14	77.20	3,810.92	0.00	0.00	0.00
13,400.00	90.00	178.84	9,735.00	-3,910.12	79.22	3,910.92	0.00	0.00	0.00
13,500.00	90.00	178.84	9,735.00	-4,010.09	81.25	4,010.92	0.00	0.00	0.00
13,600.00	90.00	178.84	9,735.00	-4,110.07	83.27	4,110.92	0.00	0.00	0.00
13,700.00	90.00	178.84	9,735.00	-4,210.05	85.30	4,210.92	0.00	0.00	0.00
13,800.00	90.00	178.84	9,735.00	-4,310.03	87.33	4,310.92	0.00	0.00	0.00
13,900.00	90.00	178.84	9,735.00	-4,410.01	89.35	4,410.92	0.00	0.00	0.00
14,000.00	90.00	178.84	9,735.00	-4,509.99	91.38	4,510.92	0.00	0.00	0.00
14,100.00	90.00	178.84	9,735.00	-4,609.97	93.40	4,610.92	0.00	0.00	0.00
14,200.00	90.00	178.84	9,735.00	-4,709.95	95.43	4,710.92	0.00	0.00	0.00
14,300.00	90.00	178.84	9,735.00	-4,809.93	97.45	4,810.92	0.00	0.00	0.00
14,400.00	90.00	178.84	9,735.00	-4,909.91	99.48	4,910.92	0.00	0.00	0.00
14,500.00	90.00	178.84	9,735.00	-5,009.89	101.51	5,010.92	0.00	0.00	0.00
14,600.00	90.00	178.84	9,735.00	-5,109.87	103.53	5,110.92	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
14,700.00	90.00	178.84	9,735.00	-5,209.85	105.56	5,210.92	0.00	0.00	0.00
14,800.00	90.00	178.84	9,735.00	-5,309.83	107.58	5,310.92	0.00	0.00	0.00
14,900.00	90.00	178.84	9,735.00	-5,409.81	109.61	5,410.92	0.00	0.00	0.00
15,000.00	90.00	178.84	9,735.00	-5,509.79	111.63	5,510.92	0.00	0.00	0.00
15,100.00	90.00	178.84	9,735.00	-5,609.77	113.66	5,610.92	0.00	0.00	0.00
15,200.00	90.00	178.84	9,735.00	-5,709.75	115.69	5,710.92	0.00	0.00	0.00
15,300.00	90.00	178.84	9,735.00	-5,809.73	117.71	5,810.92	0.00	0.00	0.00
15,400.00	90.00	178.84	9,735.00	-5,909.71	119.74	5,910.92	0.00	0.00	0.00
15,500.00	90.00	178.84	9,735.00	-6,009.68	121.76	6,010.92	0.00	0.00	0.00
15,600.00	90.00	178.84	9,735.00	-6,109.66	123.79	6,110.92	0.00	0.00	0.00
15,700.00	90.00	178.84	9,735.00	-6,209.64	125.81	6,210.92	0.00	0.00	0.00
15,800.00	90.00	178.84	9,735.00	-6,309.62	127.84	6,310.92	0.00	0.00	0.00
15,900.00	90.00	178.84	9,735.00	-6,409.60	129.87	6,410.92	0.00	0.00	0.00
16,000.00	90.00	178.84	9,735.00	-6,509.58	131.89	6,510.92	0.00	0.00	0.00
16,100.00	90.00	178.84	9,735.00	-6,609.56	133.92	6,610.92	0.00	0.00	0.00
16,200.00	90.00	178.84	9,735.00	-6,709.54	135.94	6,710.92	0.00	0.00	0.00
16,300.00	90.00	178.84	9,735.00	-6,809.52	137.97	6,810.92	0.00	0.00	0.00
16,400.00	90.00	178.84	9,735.00	-6,909.50	139.99	6,910.92	0.00	0.00	0.00
16,500.00	90.00	178.84	9,735.00	-7,009.48	142.02	7,010.92	0.00	0.00	0.00
16,600.00	90.00	178.84	9,735.00	-7,109.46	144.05	7,110.92	0.00	0.00	0.00
16,700.00	90.00	178.84	9,735.00	-7,209.44	146.07	7,210.92	0.00	0.00	0.00
16,800.00	90.00	178.84	9,735.00	-7,309.42	148.10	7,310.92	0.00	0.00	0.00
16,900.00	90.00	178.84	9,735.00	-7,409.40	150.12	7,410.92	0.00	0.00	0.00
17,000.00	90.00	178.84	9,735.00	-7,509.38	152.15	7,510.92	0.00	0.00	0.00
17,100.00	90.00	178.84	9,735.00	-7,609.36	154.17	7,610.92	0.00	0.00	0.00
17,200.00	90.00	178.84	9,735.00	-7,709.34	156.20	7,710.92	0.00	0.00	0.00
17,300.00	90.00	178.84	9,735.00	-7,809.32	158.23	7,810.92	0.00	0.00	0.00
17,400.00	90.00	178.84	9,735.00	-7,909.29	160.25	7,910.92	0.00	0.00	0.00
17,500.00	90.00	178.84	9,735.00	-8,009.27	162.28	8,010.92	0.00	0.00	0.00
17,600.00	90.00	178.84	9,735.00	-8,109.25	164.30	8,110.92	0.00	0.00	0.00
17,700.00	90.00	178.84	9,735.00	-8,209.23	166.33	8,210.92	0.00	0.00	0.00
17,800.00	90.00	178.84	9,735.00	-8,309.21	168.35	8,310.92	0.00	0.00	0.00
17,900.00	90.00	178.84	9,735.00	-8,409.19	170.38	8,410.92	0.00	0.00	0.00
18,000.00	90.00	178.84	9,735.00	-8,509.17	172.41	8,510.92	0.00	0.00	0.00
18,100.00	90.00	178.84	9,735.00	-8,609.15	174.43	8,610.92	0.00	0.00	0.00
18,200.00	90.00	178.84	9,735.00	-8,709.13	176.46	8,710.92	0.00	0.00	0.00
18,300.00	90.00	178.84	9,735.00	-8,809.11	178.48	8,810.92	0.00	0.00	0.00
18,400.00	90.00	178.84	9,735.00	-8,909.09	180.51	8,910.92	0.00	0.00	0.00
18,500.00	90.00	178.84	9,735.00	-9,009.07	182.53	9,010.92	0.00	0.00	0.00
18,600.00	90.00	178.84	9,735.00	-9,109.05	184.56	9,110.92	0.00	0.00	0.00
18,700.00	90.00	178.84	9,735.00	-9,209.03	186.59	9,210.92	0.00	0.00	0.00
18,800.00	90.00	178.84	9,735.00	-9,309.01	188.61	9,310.92	0.00	0.00	0.00
18,900.00	90.00	178.84	9,735.00	-9,408.99	190.64	9,410.92	0.00	0.00	0.00
19,000.00	90.00	178.84	9,735.00	-9,508.97	192.66	9,510.92	0.00	0.00	0.00
19,100.56	90.00	178.84	9,735.00	-9,609.51	194.70	9,611.48	0.00	0.00	0.00
TD at 19100.56 - PBHL (GW 1H)									

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 1H
Company:	Devon Energy	**TVD Reference:**	3358.2' + 25' KB @ 3383.20usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3358.2' + 25' KB @ 3383.20usft
Site:	Green Wave 20 Fed	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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 (GW 1H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	374,777.01	799,727.61	32° 1' 39.363 N	103° 29' 58.372 W
PBHL (GW 1H) - plan hits target center - Point	0.00	0.01	9,735.00	-9,609.51	194.70	365,167.50	799,922.31	32° 0' 4.259 N	103° 29' 56.972 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,162.04	9,162.04	0.00	0.00	Start DLS 10.00 TFO 178.84
10,062.04	9,735.00	-572.84	11.61	Start 9038.52 hold at 10062.04 MD
19,100.56	9,735.00	-9,609.51	194.70	TD at 19100.56

Devon Energy, Green Wave 20-32 Fed State Com 1H

1. Geologic Formations

TVD of target	9,735	Pilot hole depth	N/A
MD at TD:	19,100	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	762		
Top of salt	1186		
Base of salt	4992		
Delaware	5315		
Bone Spring	9608		

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

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	800' 820	13.375"	48	H-40	STC	2.12	4.77	14.54
12.25"	0	4,300'	9.625"	40	J-55	BTC	1.15	3.43	4.69
12.25"	4,300'	5,400' 5300	9.625"	40	HCK-55	BTC	1.57	4.63	6.07
8.75"	0	19,100	5.5"	17	P-110	BTC	1.54	2.19	3.09
			BLM Minimum Safety Factor				1.125	1.00	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

	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 3rd 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 2nd 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?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	H_2O gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	860	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1220	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.	370	11.9	12.89	2.31	n/a	1st 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
	330	12.5	10.86	1.96	30	2nd Lead: (65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake
	2250	14.5	5.31	1.2	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
5-1/2" Prod. Two Stage	620	11.9	12.89	2.31	n/a	1st Stage 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
	2250	14.5	5.31	1.2	25	1st Stage 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
	DV Tool = 5450ft					
	20	11	14.81	2.55	22	2nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	30	14.8	6.32	1.33	6	2nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake

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'	100%
9-5/8" Intermediate	0'	75%
5-1/2" Production Casing	5200'	25%
5-1/2" Production Casing Two Stage Option	1st Stage = 5450' / 2nd Stage = 5200'	25%

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

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
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			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.

	Y	Are anchors required by manufacturer?
Y	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. 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. • Wellhead will be installed by vendor's representatives. • 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. • Vendor representative will install the test plug for the initial BOP test. • 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. • 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. • Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. • Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. 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. 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. 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. 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.		

	See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	800'	FW Gel	8.6-8.8	28-34	N/C
800'	5,400'	Saturated Brine	10.0-10.2	28-34	N/C
5,400'	19100	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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5051 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? No.
Will be pre-setting casing? No.

Attachments
_x_ Directional Plan
___ Other, describe