

AAPD

Form 3160-5
(August 2007)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. ALDABRA 27 FED COM 1H
2. Name of Operator DEVON ENERGY PRODUCTION CO. LP Contact: TRINA C COUCH Email: trina.couch@devn.com		9. API Well No. 30-015-38625
3a. Address DEVON ENERGY PRODUCTION CO. LP 333 WEST OKLAHOMA CITY, OK 73102-5015	3b. Phone No. (include area code) 405-220-7202	10. Field and Pool, or Exploratory WILDCAT; BONE SPRING
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 27 T23S R31E 200FSL 275FWL		11. County or Parish, and State EDDY COUNTY COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A PD
	☐ 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall 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 Company, L.P. formally requests to change the BHL on the subject well as follows:

FROM: 2600' FSL & 400' FWL Sec. 27-23S-31E

TO: 330' FNL & 600' FWL Sec. 27-23S-31E

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Due to the proposed BHL change (above), Devon Energy will also need to request a name change as follows:

FROM: ALDABRA 27 FED COM 1H

Accepted for record
NMOCD**RECEIVED**

DEC 12 2013

NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct. Electronic Submission #224798 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO. LP, sent to the Carlsbad Committed to AFMSS for processing by JOHNNY DICKERSON on 11/07/2013 ()	
Name (Printed/Typed) TRINA C COUCH	Title REGULATORY ASSOCIATE
Signature (Electronic Submission)	Date 10/29/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____
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 _____

APPROVED

DEC 19 2013

Is/ Chris Walls

BUREAU OF LAND MANAGEMENT

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.

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

Additional data for EC transaction #224798 that would not fit on the form

32. Additional remarks, continued

TO: ALDABRA 27 FEDERAL 1H

Property code : 40290

Devon Energy would also like to request to change the target formation in the original APD:

FROM: Avalon Shale

TO: 3rd Bone Spring

Due to the change in the target formation, Devon Energy requests a new casing design program. The casing design factors are attached in the new proposed drilling program.

Devon Energy requests to no longer drill the original proposed Pilot Hole.

Attachments:

Revised C-102

Drilling Plan

Directional Survey

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 87503
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 30-015-38625		² Pool Code 96403		³ Pool Name Wildcat, Bone Spring	
⁴ Property Code 38560		⁵ Property Name ALDABRA "27" FED			⁶ Well Number 1H
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			⁹ Elevation 3404.1

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
M	27	23S	31 E		200	SOUTH	275	WEST	EDDY

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
D	27	23S	31 E		330	NORTH	600	WEST	EDDY

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

600' 330' BOTTOM OF HOLE NW CORNER SEC. 27 LAT. = 32.2826999°N LONG. = 103.7742128°W NMSP EAST (FT) N = 467029.31 E = 714125.49 W/4 CORNER SEC. 27 LAT. = 32.2754407°N LONG. = 103.7742100°W NMSP EAST (FT) N = 464388.47 E = 714140.10 SW CORNER SEC. 27 LAT. = 32.2681826°N LONG. = 103.7742069°W NMSP EAST (FT) N = 461748.07 E = 714154.81 200' SURFACE LOCATION		N/4 CORNER SEC. 27 LAT. = 32.2827070°N LONG. = 103.7656692°W NMSP EAST (FT) N = 467045.78 E = 715765.78 BOTTOM OF HOLE LAT. = 32.2817945°N LONG. = 103.7722710°W NMSP EAST (FT) N = 466703.06 E = 714727.31 NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ALDABRA "27" FED #1H ELEV. = 3404.1' LAT. = 32.2687327°N (NAD83) LONG. = 103.7733176°W NMSP EAST (FT) N = 461949.62 E = 714428.64 S/4 CORNER SEC. 27 LAT. = 32.2681863°N LONG. = 103.7656662°W NMSP EAST (FT) N = 461763.25 E = 715794.65		NE CORNER SEC. 27 LAT. = 32.2827139°N LONG. = 103.7571232°W NMSP EAST (FT) N = 467062.36 E = 719406.80 E/4 CORNER SEC. 27 LAT. = 32.2754504°N LONG. = 103.7571220°W NMSP EAST (FT) N = 464419.95 E = 719421.39 SE CORNER SEC. 27 LAT. = 32.2681897°N LONG. = 103.7571227°W NMSP EAST (FT) N = 461778.57 E = 719435.33	
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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 released 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 this Division.

Trina C. Couch 10-28-13
Signature Date

Trina C. Couch, Regulatory Associate
Printed Name

trina.couch@dmn.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

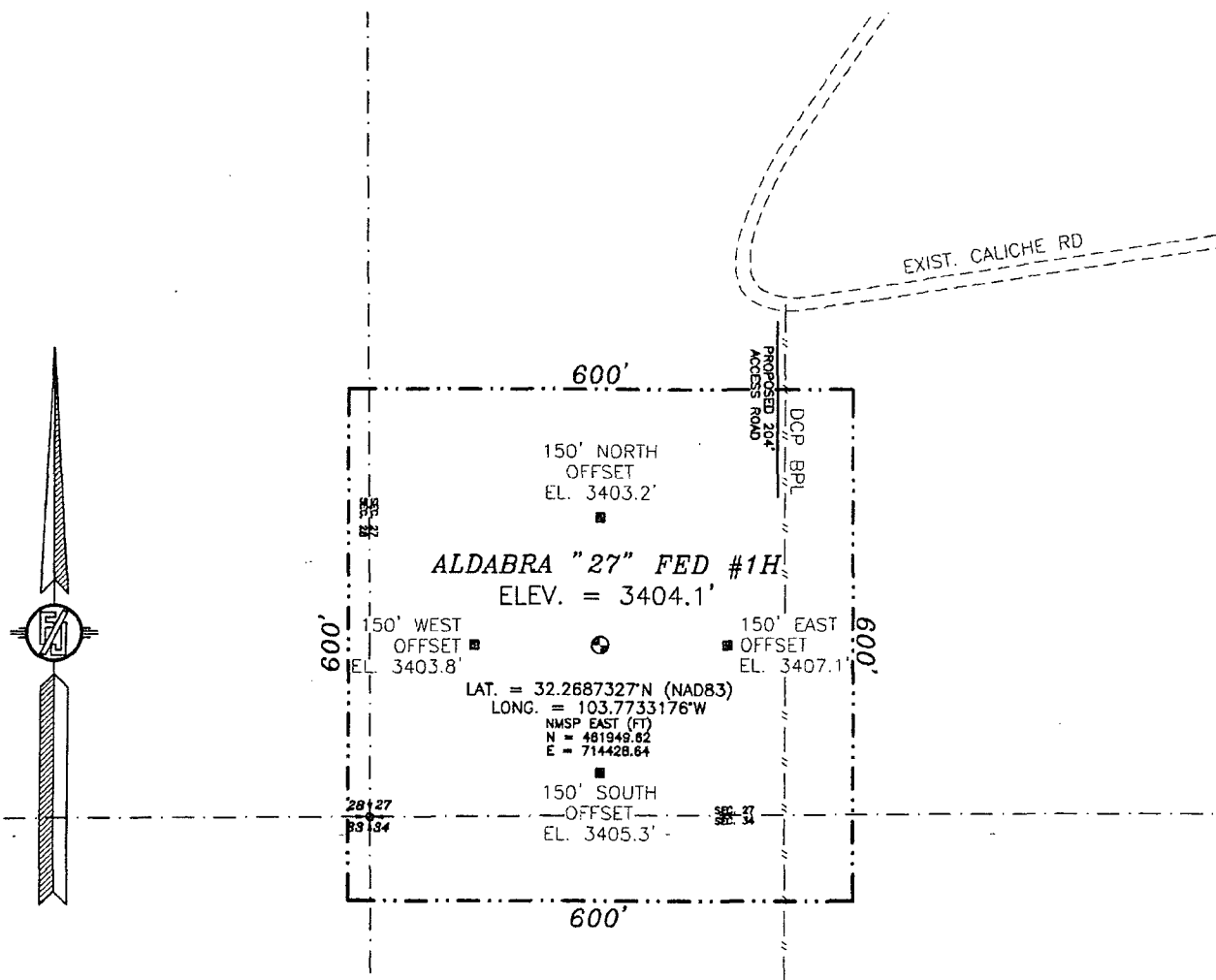
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 16, 2013
Date of Survey

[Signature]
Signature and Seal of Professional Surveyor

Certificate Number: F-1110001 JARAMILLO, PLS 12797
SURVEY NO. 201B

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



020 100 200 400

SCALE 1" = 200'

DIRECTIONS TO LOCATION

FROM STATE HWY. 128 AND CO. RD. 798 (RED RD.) GO NORTHWEST ON 128 APPROX. 2.5 MILES AND TURN LEFT ON CALICHE ROAD AND GO SOUTHWEST 0.25 MILES TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 204' TO THE NE CORNER OF THE PROPOSED PAD FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

ALDABRA "27" FED #1H

LOCATED 200 FT. FROM THE SOUTH LINE

AND 275 FT. FROM THE WEST LINE OF

SECTION 27, TOWNSHIP 23 SOUTH,

RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

OCTOBER 16, 2013

SURVEY NO. 201B

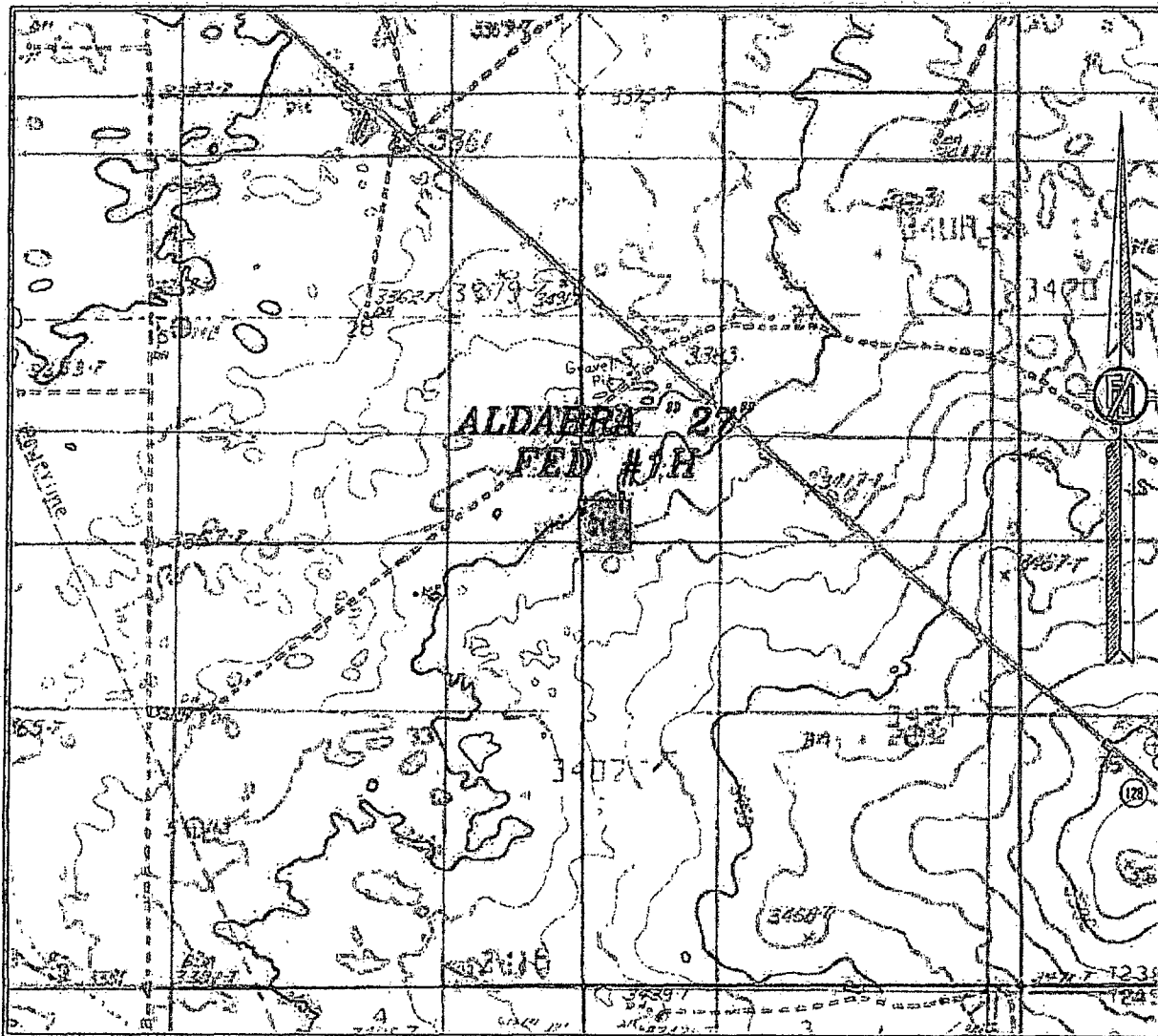
MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 887-5830

CARLSBAD, NEW MEXICO

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



CONTOUR INTERVAL:
LOS MEDANOS

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
ALDABRA "27" FED #1H
LOCATED 200 FT. FROM THE SOUTH LINE
AND 275 FT. FROM THE WEST LINE OF
SECTION 27, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

OCTOBER 16, 2013

MADRON SURVEYING, INC.

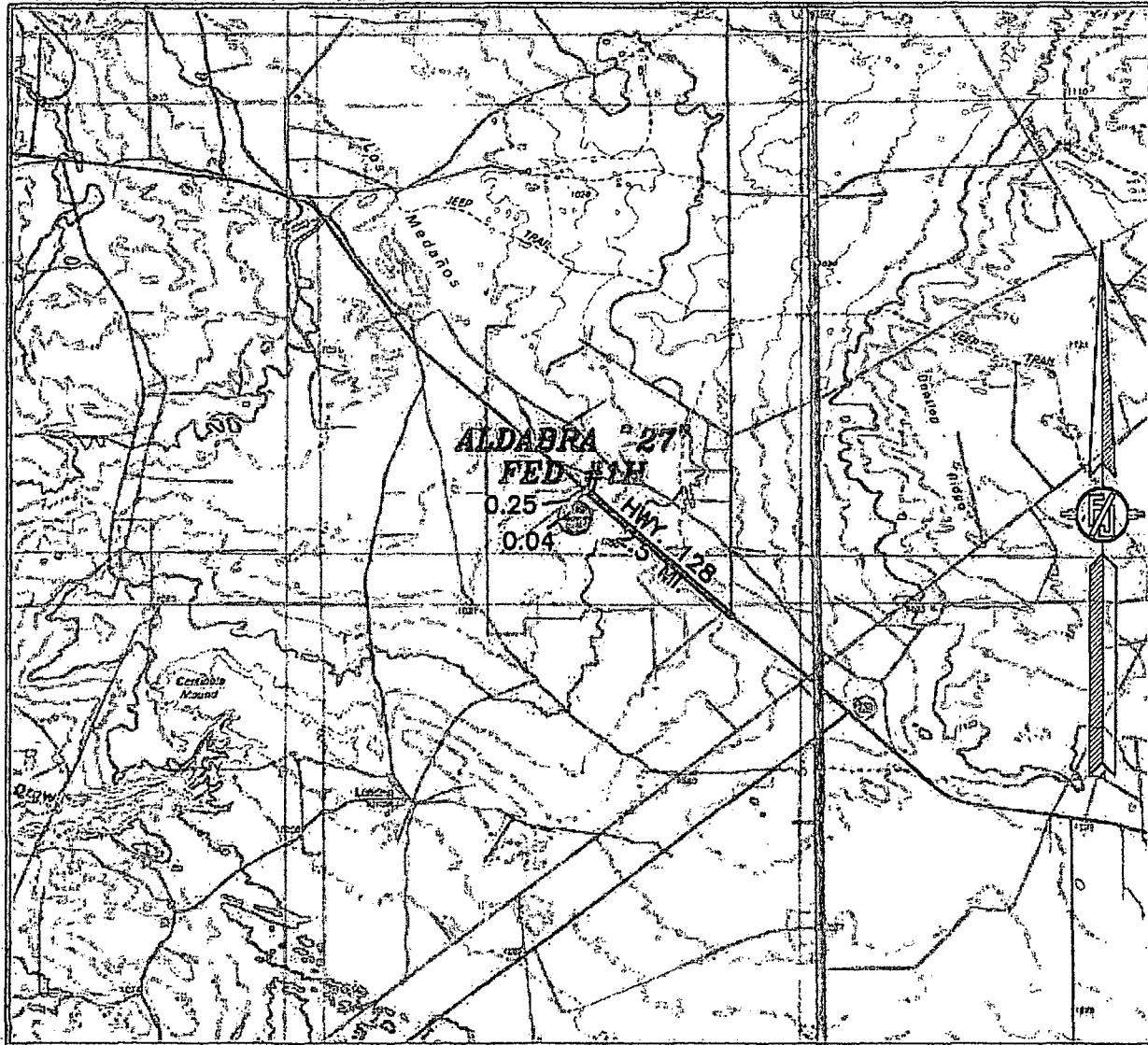
301 SOUTH CANAL
(575) 897-5830

CARLSBAD, NEW MEXICO

SURVEY NO. 201B

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM STATE HWY. 128 AND CO. RD. 798 (RED RD.) GO NORTHWEST ON 128 APPROX. 2.5 MILES AND TURN LEFT ON CALICHE ROAD AND GO SOUTHWEST 0.25 MILES TO A PROPOSED ROAD SURVEY AND FOLLOW FLAGS SOUTH 204' TO THE NE CORNER OF THE PROPOSED PAD FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

ALDABRA "27" FED #1H

LOCATED 200 FT. FROM THE SOUTH LINE
AND 275 FT. FROM THE WEST LINE OF
SECTION 27, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

OCTOBER 16, 2013

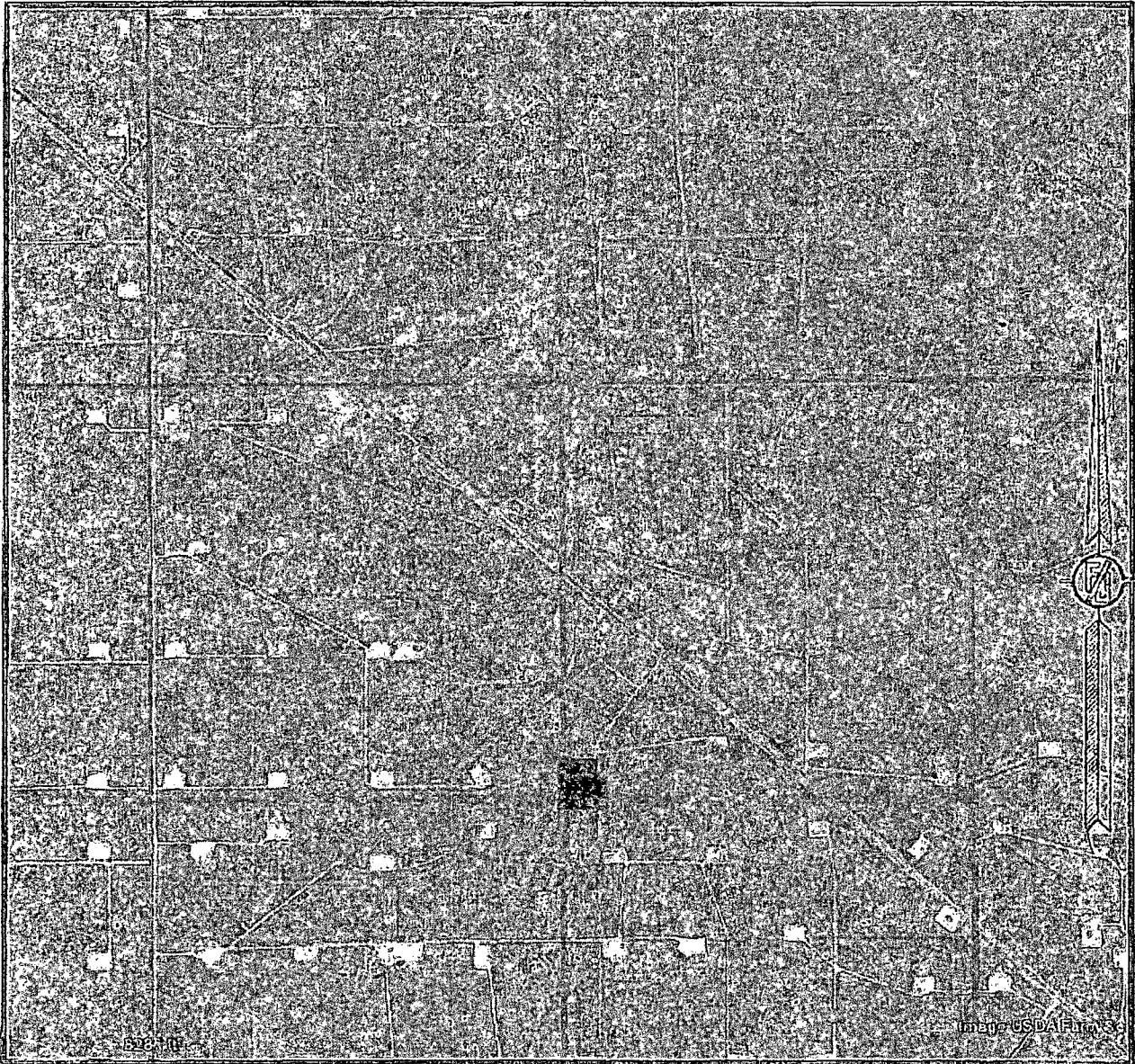
SURVEY NO. 201B

MADRON SURVEYING, INC. 301 SOUTH CANAL
(575) 687-5830

CARLSBAD, NEW MEXICO

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
USDA - AUG, 2009

DEVON ENERGY PRODUCTION COMPANY, L.P.
ALDABRA "27" FED #1H
LOCATED 200 FT. FROM THE SOUTH LINE
AND 275 FT. FROM THE WEST LINE OF
SECTION 27, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

OCTOBER 16, 2013

SURVEY NO. 201B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-8830 CARLSBAD, NEW MEXICO

Aldabra 27 Fed 1H- Sundry DRILLING PLAN
RJC 10.09.13

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
26"	0 - 610	20"	0 - 610	94#	STC	J-55
17-1/2"	610 - 4,225	13-3/8"	0 - 4,225	68#	BTC	HCL-80
12-1/4"	4,225 - 8,200	9-5/8"	0 - 8,200	43.5#	BTC	HCP-110
8-1/2"	8,200 - 15,985	5-1/2"	0 - 15,985	17#	BTC	HCP-110

MAX TVD: 11,425 FT

Design Factors

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
20", 94#, J-55, BT&C	1.71	6.93	24.45
13-3/8", 68#, L-80HC, BT&C	1.224	1.57	3.97
9-5/8", 43.5#, HCP-110, LT&C	1.428	2.22	3.10
5-1/2", 17#, HCP-110, BT&C	1.51	1.87	6.61

Mud Program

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 - 610	8.4 - 9.0	30 - 34	N/C	FW
610 - 4,225	9.8 - 10.0	28 - 32	N/C	Brine
4,225 - 8,200	8.6 - 9.2	28 - 32	N/C	FW/Cut Brine
8,200 - 15,985	9.2 - 9.6	28 - 32	N/C	Cut Brine

Pressure Control Equipment

The BOP system used to drill the 17-1/2" hole will consist of a **20" 2M Annular preventer**. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **2M system** prior to drilling out the casing shoe.

A **3M 13-5/8" BOP system (Triple Ram and Annular preventer)** will be installed and tested prior to drilling out the 12-1/4" and 8-1/2" hole sections. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the casing shoes.

The pipe rams will be operated and checked as per Onshore Order No 2. 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); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

Aldabra 27 Fed 1H

Cementing Program (cement volumes based on at least Surface 100% excess, Intermediate #1 75%, Intermediate #2 50% excess and Production 25% excess)

20" Surface

Tail: 1450 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.32 gal/sk

Mix Water Volume: 219bbbls

TOC @ surface

13-3/8" Intermediate #1

Lead: 2125 sacks (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water, 12.9 ppg

Yield: 1.85 cf/sk

Water Requirement: 9.81gal/sk

Mix Water Volume: 497bbbls

TOC @ surface

Tail: 945 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.32 gal/sk

Mix Water Volume: 142 bbls

9-5/8" Intermediate #2

Lead: 1230 sacks Tuned Light Class C Based + 0.2 lb/sack HR-800 + 62.3 % Fresh Water, 11 ppg

Yield: 2.24 cf/sk

TOC @ surface

Water Requirement: 10.41gal/sk

Mix Water Volume: 305bbbls

Tail: 580 sacks (50:50) Class H Cement: Poz (Fly Ash) + 0.2% bwoc Halad-9 + 2% bwoc Bentonite + 60.7% Fresh Water, 14.4 ppg

Yield: 1.24 cf/sk

Water Requirement: 5.75 gal/sk

Mix Water Volume: 80bbbls

Cement contingency plan: If lost circulation is encountered while drilling the 2nd intermediate well bore, 2 DV tools will be ran. The first one will be placed above the loss zone. The second will be placed a minimum of 50' below the previous casing shoe. If the DV tool does have to be moved, the cement volumes will be adjusted proportionately.

9-5/8" Intermediate #2 – 3 Stage

1" Stage

Lead: 115 sacks Tuned Light Class C Based + 2 lbs/sack Kol-Seal+ 0.125 lbs/sack Poly-E-Flake + 0.2 lb/sack HR-800 + 70.01 % Fresh Water, 10.4 ppg

Yield: 2.91 cf/sk

Water Requirement: 15.24gal/sk

Mix Water Volume: 42 bbls

TOC @ 7000ft

Tail: 205 sacks (50:50) Class H Cement: Poz (Fly Ash) + 0.2% bwoc Halad-9 + 2% bwoc Bentonite + 60.7% Fresh Water, 14.4 ppg

Yield: 1.24 cf/sk

Water Requirement: 5.75 gal/sk

Mix Water Volume: 28bbls

2nd Stage DV Tool at 7000ft

Lead: 360 sacks Tuned Light Class C Based + 2 lbs/sack Kol-Seal+ 0.125 lbs/sack Poly-E-Flake + 0.2 lb/sack HR-800 + 70.01 % Fresh Water, 10.4 ppg

Yield: 2.91 cf/sk

Water Requirement: 15.24gal/sk

Mix Water Volume: 131bbls

TOC @ 4275ft

Tail: 180 sacks Class C Cement + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.34 gal/sk

Mix Water Volume: 27bbls

3rd Stage DV Tool @ 4275ft

Lead: 635 sacks Tuned Light Class C Based + 0.2 lb/sack HR-800 + 62.3 % Fresh Water, 11 ppg

Yield: 2.24 cf/sk

TOC @ surface

Water Requirement: 10.41 gal/sk

Mix Water Volume: 158bbls

TOC @ surface

Tail: 150 sacks Class C Cement + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33 cf/sk

Water Requirement: 6.34 gal/sk

Mix Water Volume: 23bbls

5-1/2" Production

Lead #1: 400 sacks (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 + 76.4% Fresh Water, 11.9 ppg

Yield: 2.26 cf/sk

Water Requirement: 12.89 gal/sk

Mix Water Volume: 123bbls

TOC @ 7700ft

Tail: 1190 sacks (50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg

Yield: 1.22 cf/sk

Water Requirement: 5.38 gal/sk

Mix Water Volume: 153bbls

TOC for All Strings:

Surface: 610ft	0ft (610ft of fill of Tail)
Intermediate#1: 4225ft	0ft (3225ft of fill of Lead & 1000 ft of fill of Tail)
Intermediate#2: 8200ft	0ft (6700ft of fill of Lead & 1500 ft of fill of Tail)
Intermediate#2 – 2 Stage 8200ft	5500ft Stage #1 (1700ft of fill of Lead & 1000 ft of fill of Tail) 0ft Stage #2 (5000ft of fill of Lead & 500 ft of fill of Tail)
Intermediate#2 – 3 Stage 8200ft	7000ft Stage #1 (700ft of fill of Lead & 500 ft of fill of Tail) 4275ft Stage #2 (2225ft of fill of Lead & 500 ft of fill of Tail) 0ft Stage #3 (3775ft of fill of Lead & 500 ft of fill of Tail)
Production: 15985ft	7700ft (3232ft of fill of Lead & 5053ft of fill of Tail)

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA.

Devon

HALLIBURTON
Sperdy Drilling

Project: Eddy County, NM (NAD 83)

Site: Sec 27 T. 23S., R.31E.

Well: Aldabra 27 FED.COM 1H

Wellbore: Wellbore #1

Plan: Plan#1 100913 RevA0 (Aldabra 27 FED.COM 1H/Wellbore #1)

HP223 25'KB

WELL DETAILS: Aldabra 27 FED.COM 1H

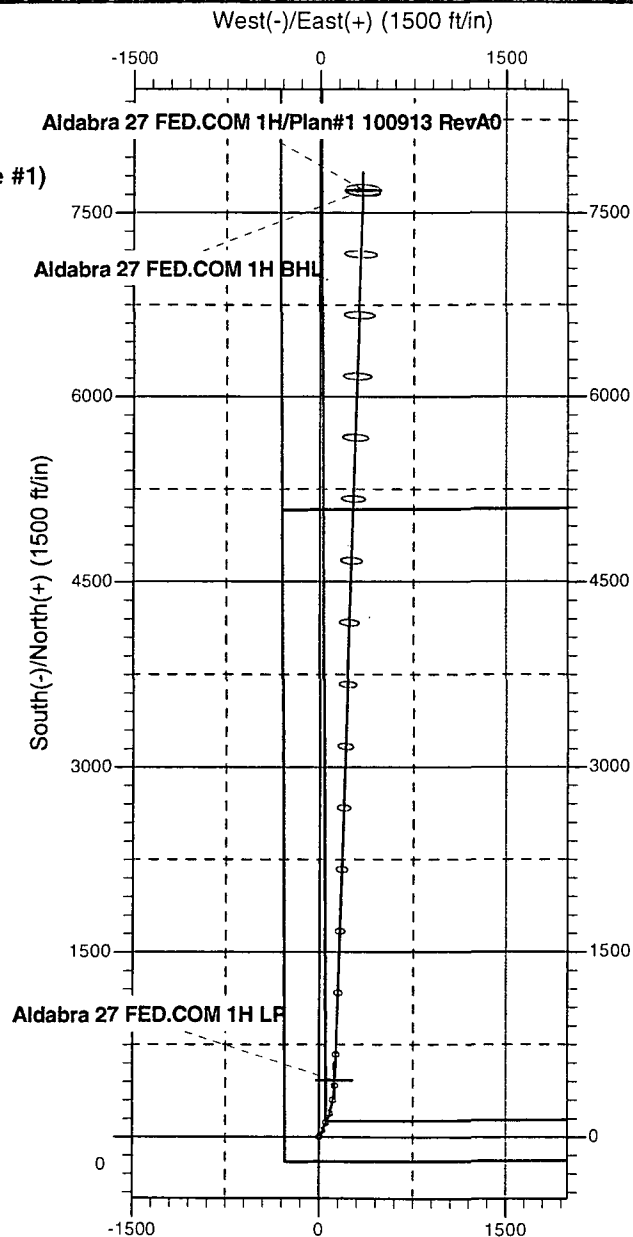
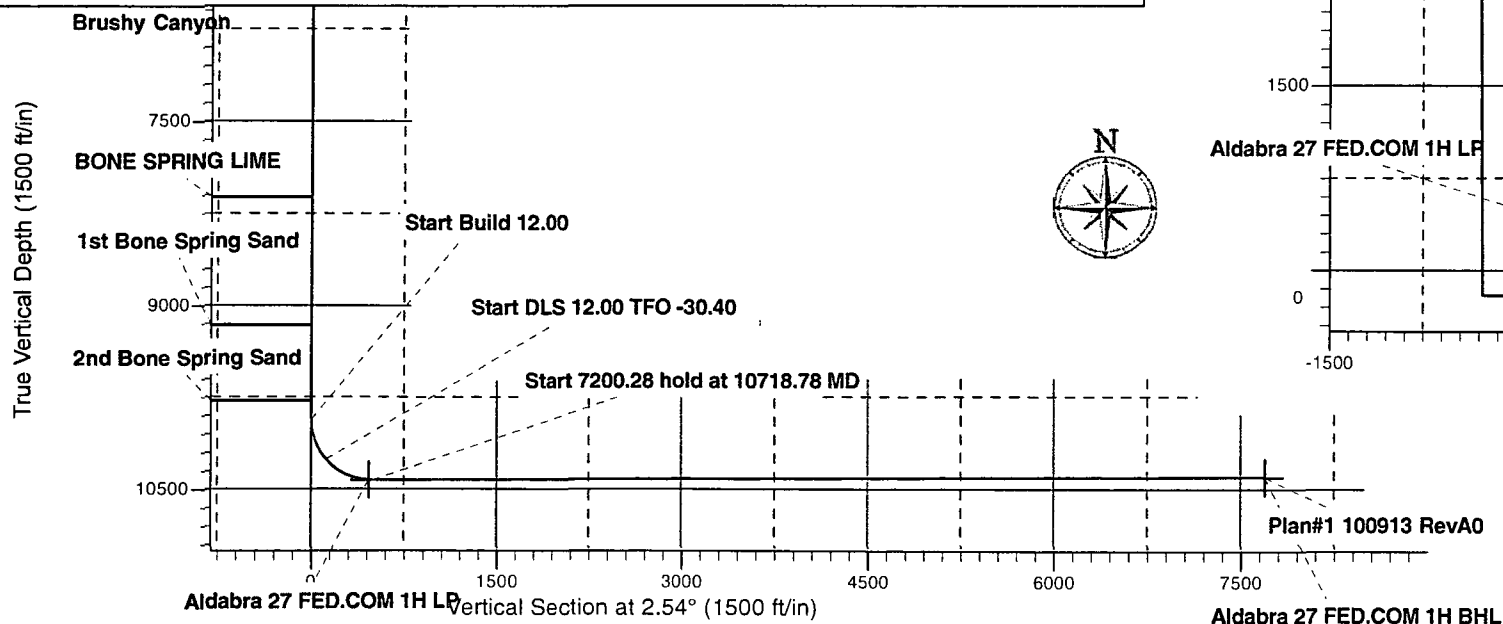
Ground Level: 3404.10			
Northing	Easting	Latitude	Longitude
461950.58	714427.10	32° 16' 7.447 N	103° 46' 23.961 W

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Aldabra 27 FED.COM 1H BHL	10400.00	7685.04	341.37	Point
Aldabra 27 FED.COM 1H LP	10425.00	460.72	122.43	Point

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	
9932.10	0.00	0.00	9932.10	0.00	0.00	0.00	0.00	0.00	
10290.43	43.00	25.00	10257.73	116.25	54.21	12.00	25.00	118.54	
10718.78	90.20	1.70	10425.00	487.99	127.28	12.00	-30.40	493.15	Aldabra 27 FED.COM 1H BHL
17919.06	90.20	1.70	10400.00	7685.04	341.37	0.00	0.00	7692.61	Aldabra 27 FED.COM 1H BHL



Job#
HP223 25'KB

Devon

Eddy County, NM (NAD 83) Sec 27 T. 23S., R.31E.

API#

Aldabra 27 FED.COM 1H (200' FSL & 275' FWL)

Wellbore #1

Plan: Plan#1 100913 RevA0

Sperry Drilling Services Combo Report

09 October, 2013

Well Coordinates: 32° 16' 07.45" N
103° 46' 23.96" W

North American Datum 1983
New Mexico Eastern Zone
461,950.58 N
714,427.10 E

Ground Level: 3,404.10 ft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well Aldabra 27 FED.COM 1H

WELL @ 3429.10ft (HP223 25'KB)

N

Grid

API US Survey Feet

Version: 5000.1 Build: 65

Report Version: Midcon Combo v1.30

HALLIBURTON

Plan Report for Aldabra 27 FED.COM 1H - Plan#1 100913 RevA0

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
0.00	0.00	0.00	-3,429.10	0.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
100.00	0.00	0.00	-3,329.10	100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
200.00	0.00	0.00	-3,229.10	200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
300.00	0.00	0.00	-3,129.10	300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
400.00	0.00	0.00	-3,029.10	400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
500.00	0.00	0.00	-2,929.10	500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
600.00	0.00	0.00	-2,829.10	600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
700.00	0.00	0.00	-2,729.10	700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
800.00	0.00	0.00	-2,629.10	800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
900.00	0.00	0.00	-2,529.10	900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,000.00	0.00	0.00	-2,429.10	1,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,100.00	0.00	0.00	-2,329.10	1,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,200.00	0.00	0.00	-2,229.10	1,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,300.00	0.00	0.00	-2,129.10	1,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,400.00	0.00	0.00	-2,029.10	1,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,500.00	0.00	0.00	-1,929.10	1,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,600.00	0.00	0.00	-1,829.10	1,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,700.00	0.00	0.00	-1,729.10	1,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,800.00	0.00	0.00	-1,629.10	1,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
1,900.00	0.00	0.00	-1,529.10	1,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,000.00	0.00	0.00	-1,429.10	2,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,100.00	0.00	0.00	-1,329.10	2,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,200.00	0.00	0.00	-1,229.10	2,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,300.00	0.00	0.00	-1,129.10	2,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,400.00	0.00	0.00	-1,029.10	2,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,500.00	0.00	0.00	-929.10	2,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,600.00	0.00	0.00	-829.10	2,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,700.00	0.00	0.00	-729.10	2,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,800.00	0.00	0.00	-629.10	2,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
2,900.00	0.00	0.00	-529.10	2,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,000.00	0.00	0.00	-429.10	3,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,100.00	0.00	0.00	-329.10	3,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,200.00	0.00	0.00	-229.10	3,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,300.00	0.00	0.00	-129.10	3,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,400.00	0.00	0.00	-29.10	3,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,500.00	0.00	0.00	70.90	3,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,600.00	0.00	0.00	170.90	3,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,700.00	0.00	0.00	270.90	3,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,800.00	0.00	0.00	370.90	3,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
3,900.00	0.00	0.00	470.90	3,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,000.00	0.00	0.00	570.90	4,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	

HALLIBURTON

Eddy County, NM (NAD 83)

Plan Report for Aldabra 27 FED.COM 1H - Plan#1 100913 RevA0

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
4,100.00	0.00	0.00	670.90	4,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,200.00	0.00	0.00	770.90	4,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,300.00	0.00	0.00	870.90	4,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,400.00	0.00	0.00	970.90	4,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,500.00	0.00	0.00	1,070.90	4,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,600.00	0.00	0.00	1,170.90	4,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,700.00	0.00	0.00	1,270.90	4,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,800.00	0.00	0.00	1,370.90	4,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
4,900.00	0.00	0.00	1,470.90	4,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,000.00	0.00	0.00	1,570.90	5,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,100.00	0.00	0.00	1,670.90	5,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,200.00	0.00	0.00	1,770.90	5,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,300.00	0.00	0.00	1,870.90	5,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,400.00	0.00	0.00	1,970.90	5,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,500.00	0.00	0.00	2,070.90	5,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,600.00	0.00	0.00	2,170.90	5,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,700.00	0.00	0.00	2,270.90	5,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,800.00	0.00	0.00	2,370.90	5,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
5,900.00	0.00	0.00	2,470.90	5,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,000.00	0.00	0.00	2,570.90	6,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,100.00	0.00	0.00	2,670.90	6,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,200.00	0.00	0.00	2,770.90	6,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,300.00	0.00	0.00	2,870.90	6,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,400.00	0.00	0.00	2,970.90	6,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,500.00	0.00	0.00	3,070.90	6,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,600.00	0.00	0.00	3,170.90	6,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,700.00	0.00	0.00	3,270.90	6,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,800.00	0.00	0.00	3,370.90	6,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
6,900.00	0.00	0.00	3,470.90	6,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,000.00	0.00	0.00	3,570.90	7,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,100.00	0.00	0.00	3,670.90	7,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,200.00	0.00	0.00	3,770.90	7,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,300.00	0.00	0.00	3,870.90	7,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,400.00	0.00	0.00	3,970.90	7,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,500.00	0.00	0.00	4,070.90	7,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,600.00	0.00	0.00	4,170.90	7,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,700.00	0.00	0.00	4,270.90	7,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,800.00	0.00	0.00	4,370.90	7,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
7,900.00	0.00	0.00	4,470.90	7,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,000.00	0.00	0.00	4,570.90	8,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,100.00	0.00	0.00	4,670.90	8,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	

Plan Report for Aldabra 27 FED.COM 1H - Plan#1 100913 RevA0

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
8,200.00	0.00	0.00	4,770.90	8,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,300.00	0.00	0.00	4,870.90	8,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,400.00	0.00	0.00	4,970.90	8,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,500.00	0.00	0.00	5,070.90	8,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,600.00	0.00	0.00	5,170.90	8,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,700.00	0.00	0.00	5,270.90	8,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,800.00	0.00	0.00	5,370.90	8,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
8,900.00	0.00	0.00	5,470.90	8,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,000.00	0.00	0.00	5,570.90	9,000.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,100.00	0.00	0.00	5,670.90	9,100.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,200.00	0.00	0.00	5,770.90	9,200.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,300.00	0.00	0.00	5,870.90	9,300.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,400.00	0.00	0.00	5,970.90	9,400.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,500.00	0.00	0.00	6,070.90	9,500.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,600.00	0.00	0.00	6,170.90	9,600.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,700.00	0.00	0.00	6,270.90	9,700.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,800.00	0.00	0.00	6,370.90	9,800.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,900.00	0.00	0.00	6,470.90	9,900.00	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	
9,932.10	0.00	0.00	6,503.00	9,932.10	0.00 N	0.00 E	461,950.58	714,427.10	0.00	0.00	Start Build 12.00
10,000.00	8.15	25.00	6,570.67	9,999.77	4.37 N	2.04 E	461,954.95	714,429.14	12.00	4.45	
10,100.00	20.15	25.00	6,667.46	10,096.56	26.48 N	12.35 E	461,977.06	714,439.45	12.00	27.00	
10,200.00	32.15	25.00	6,757.06	10,186.16	66.35 N	30.94 E	462,016.93	714,458.04	12.00	67.66	
10,290.43	43.00	25.00	6,828.63	10,257.73	116.25 N	54.21 E	462,066.83	714,481.31	12.00	118.54	Start DLS 12:00 TFO 30:40
10,300.00	43.99	24.16	6,835.57	10,264.67	122.24 N	56.95 E	462,072.82	714,484.05	12.00	124.65	
10,400.00	54.66	16.89	6,900.70	10,329.80	193.21 N	83.11 E	462,143.79	714,510.21	12.00	196.71	
10,500.00	65.67	11.35	6,950.40	10,379.50	277.22 N	104.00 E	462,227.80	714,531.10	12.00	281.56	
10,600.00	76.84	6.71	6,982.51	10,411.61	370.58 N	118.71 E	462,321.16	714,545.81	12.00	375.48	
10,700.00	88.08	2.48	6,995.62	10,424.72	469.22 N	126.59 E	462,419.80	714,553.69	12.00	474.37	
10,718.78	90.20	1.70	6,995.90	10,425.00	487.99 N	127.28 E	462,438.56	714,554.38	12.00	493.15	Start 7200.28 hold at 10718.78 MD
10,800.00	90.20	1.70	6,995.61	10,424.71	569.17 N	129.69 E	462,519.74	714,556.79	0.00	574.36	
10,900.00	90.20	1.70	6,995.27	10,424.37	669.12 N	132.66 E	462,619.70	714,559.76	0.00	674.35	
11,000.00	90.20	1.70	6,994.92	10,424.02	769.08 N	135.64 E	462,719.65	714,562.74	0.00	774.34	
11,100.00	90.20	1.70	6,994.57	10,423.67	869.03 N	138.61 E	462,819.61	714,565.71	0.00	874.33	
11,200.00	90.20	1.70	6,994.23	10,423.33	968.99 N	141.58 E	462,919.56	714,568.68	0.00	974.31	
11,300.00	90.20	1.70	6,993.88	10,422.98	1,068.94 N	144.56 E	463,019.52	714,571.66	0.00	1,074.30	
11,400.00	90.20	1.70	6,993.53	10,422.63	1,168.90 N	147.53 E	463,119.47	714,574.63	0.00	1,174.29	
11,500.00	90.20	1.70	6,993.18	10,422.28	1,268.85 N	150.50 E	463,219.43	714,577.60	0.00	1,274.28	
11,600.00	90.20	1.70	6,992.84	10,421.94	1,368.81 N	153.48 E	463,319.38	714,580.58	0.00	1,374.27	
11,700.00	90.20	1.70	6,992.49	10,421.59	1,468.76 N	156.45 E	463,419.34	714,583.55	0.00	1,474.26	
11,800.00	90.20	1.70	6,992.14	10,421.24	1,568.72 N	159.42 E	463,519.29	714,586.52	0.00	1,574.25	
11,900.00	90.20	1.70	6,991.80	10,420.90	1,668.67 N	162.40 E	463,619.25	714,589.50	0.00	1,674.23	

Plan Report for Aldabra 27 FED.COM 1H - Plan#1 100913 RevA0

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
12,000.00	90.20	1.70	6,991.45	10,420.55	1,768.63 N	165.37 E	463,719.20	714,592.47	0.00	1,774.22	
12,100.00	90.20	1.70	6,991.10	10,420.20	1,868.58 N	168.34 E	463,819.16	714,595.44	0.00	1,874.21	
12,200.00	90.20	1.70	6,990.75	10,419.85	1,968.54 N	171.32 E	463,919.11	714,598.42	0.00	1,974.20	
12,300.00	90.20	1.70	6,990.41	10,419.51	2,068.49 N	174.29 E	464,019.07	714,601.39	0.00	2,074.19	
12,400.00	90.20	1.70	6,990.06	10,419.16	2,168.45 N	177.27 E	464,119.02	714,604.36	0.00	2,174.18	
12,500.00	90.20	1.70	6,989.71	10,418.81	2,268.40 N	180.24 E	464,218.98	714,607.34	0.00	2,274.17	
12,600.00	90.20	1.70	6,989.37	10,418.47	2,368.36 N	183.21 E	464,318.93	714,610.31	0.00	2,374.16	
12,700.00	90.20	1.70	6,989.02	10,418.12	2,468.31 N	186.19 E	464,418.89	714,613.29	0.00	2,474.14	
12,800.00	90.20	1.70	6,988.67	10,417.77	2,568.27 N	189.16 E	464,518.84	714,616.26	0.00	2,574.13	
12,900.00	90.20	1.70	6,988.32	10,417.42	2,668.22 N	192.13 E	464,618.80	714,619.23	0.00	2,674.12	
13,000.00	90.20	1.70	6,987.98	10,417.08	2,768.18 N	195.11 E	464,718.75	714,622.21	0.00	2,774.11	
13,100.00	90.20	1.70	6,987.63	10,416.73	2,868.13 N	198.08 E	464,818.71	714,625.18	0.00	2,874.10	
13,200.00	90.20	1.70	6,987.28	10,416.38	2,968.09 N	201.05 E	464,918.66	714,628.15	0.00	2,974.09	
13,300.00	90.20	1.70	6,986.94	10,416.04	3,068.04 N	204.03 E	465,018.62	714,631.13	0.00	3,074.08	
13,400.00	90.20	1.70	6,986.59	10,415.69	3,168.00 N	207.00 E	465,118.57	714,634.10	0.00	3,174.06	
13,500.00	90.20	1.70	6,986.24	10,415.34	3,267.96 N	209.97 E	465,218.53	714,637.07	0.00	3,274.05	
13,600.00	90.20	1.70	6,985.89	10,414.99	3,367.91 N	212.95 E	465,318.48	714,640.05	0.00	3,374.04	
13,700.00	90.20	1.70	6,985.55	10,414.65	3,467.87 N	215.92 E	465,418.44	714,643.02	0.00	3,474.03	
13,800.00	90.20	1.70	6,985.20	10,414.30	3,567.82 N	218.89 E	465,518.39	714,645.99	0.00	3,574.02	
13,900.00	90.20	1.70	6,984.85	10,413.95	3,667.78 N	221.87 E	465,618.35	714,648.97	0.00	3,674.01	
14,000.00	90.20	1.70	6,984.51	10,413.61	3,767.73 N	224.84 E	465,718.30	714,651.94	0.00	3,774.00	
14,100.00	90.20	1.70	6,984.16	10,413.26	3,867.69 N	227.81 E	465,818.26	714,654.91	0.00	3,873.99	
14,200.00	90.20	1.70	6,983.81	10,412.91	3,967.64 N	230.79 E	465,918.21	714,657.89	0.00	3,973.97	
14,300.00	90.20	1.70	6,983.46	10,412.56	4,067.60 N	233.76 E	466,018.17	714,660.86	0.00	4,073.96	
14,400.00	90.20	1.70	6,983.12	10,412.22	4,167.55 N	236.73 E	466,118.12	714,663.83	0.00	4,173.95	
14,500.00	90.20	1.70	6,982.77	10,411.87	4,267.51 N	239.71 E	466,218.08	714,666.81	0.00	4,273.94	
14,600.00	90.20	1.70	6,982.42	10,411.52	4,367.46 N	242.68 E	466,318.03	714,669.78	0.00	4,373.93	
14,700.00	90.20	1.70	6,982.08	10,411.18	4,467.42 N	245.65 E	466,417.99	714,672.75	0.00	4,473.92	
14,800.00	90.20	1.70	6,981.73	10,410.83	4,567.37 N	248.63 E	466,517.94	714,675.73	0.00	4,573.91	
14,900.00	90.20	1.70	6,981.38	10,410.48	4,667.33 N	251.60 E	466,617.90	714,678.70	0.00	4,673.89	
15,000.00	90.20	1.70	6,981.03	10,410.13	4,767.28 N	254.57 E	466,717.85	714,681.67	0.00	4,773.88	
15,100.00	90.20	1.70	6,980.69	10,409.79	4,867.24 N	257.55 E	466,817.81	714,684.65	0.00	4,873.87	
15,200.00	90.20	1.70	6,980.34	10,409.44	4,967.19 N	260.52 E	466,917.76	714,687.62	0.00	4,973.86	
15,300.00	90.20	1.70	6,979.99	10,409.09	5,067.15 N	263.49 E	467,017.72	714,690.59	0.00	5,073.85	
15,400.00	90.20	1.70	6,979.65	10,408.75	5,167.10 N	266.47 E	467,117.67	714,693.57	0.00	5,173.84	
15,500.00	90.20	1.70	6,979.30	10,408.40	5,267.06 N	269.44 E	467,217.63	714,696.54	0.00	5,273.83	
15,600.00	90.20	1.70	6,978.95	10,408.05	5,367.01 N	272.42 E	467,317.58	714,699.51	0.00	5,373.82	
15,700.00	90.20	1.70	6,978.60	10,407.70	5,466.97 N	275.39 E	467,417.54	714,702.49	0.00	5,473.80	
15,800.00	90.20	1.70	6,978.26	10,407.36	5,566.92 N	278.36 E	467,517.49	714,705.46	0.00	5,573.79	
15,900.00	90.20	1.70	6,977.91	10,407.01	5,666.88 N	281.34 E	467,617.45	714,708.43	0.00	5,673.78	
16,000.00	90.20	1.70	6,977.56	10,406.66	5,766.83 N	284.31 E	467,717.40	714,711.41	0.00	5,773.77	

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Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
16,100.00	90.20	1.70	6,977.22	10,406.32	5,866.79 N	287.28 E	467,817.36	714,714.38	0.00	5,873.76	
16,200.00	90.20	1.70	6,976.87	10,405.97	5,966.74 N	290.26 E	467,917.31	714,717.36	0.00	5,973.75	
16,300.00	90.20	1.70	6,976.52	10,405.62	6,066.70 N	293.23 E	468,017.27	714,720.33	0.00	6,073.74	
16,400.00	90.20	1.70	6,976.17	10,405.27	6,166.66 N	296.20 E	468,117.22	714,723.30	0.00	6,173.72	
16,500.00	90.20	1.70	6,975.83	10,404.93	6,266.61 N	299.18 E	468,217.18	714,726.28	0.00	6,273.71	
16,600.00	90.20	1.70	6,975.48	10,404.58	6,366.57 N	302.15 E	468,317.13	714,729.25	0.00	6,373.70	
16,700.00	90.20	1.70	6,975.13	10,404.23	6,466.52 N	305.12 E	468,417.09	714,732.22	0.00	6,473.69	
16,800.00	90.20	1.70	6,974.79	10,403.89	6,566.48 N	308.10 E	468,517.04	714,735.20	0.00	6,573.68	
16,900.00	90.20	1.70	6,974.44	10,403.54	6,666.43 N	311.07 E	468,617.00	714,738.17	0.00	6,673.67	
17,000.00	90.20	1.70	6,974.09	10,403.19	6,766.39 N	314.04 E	468,716.95	714,741.14	0.00	6,773.66	
17,100.00	90.20	1.70	6,973.74	10,402.84	6,866.34 N	317.02 E	468,816.91	714,744.12	0.00	6,873.65	
17,200.00	90.20	1.70	6,973.40	10,402.50	6,966.30 N	319.99 E	468,916.86	714,747.09	0.00	6,973.63	
17,300.00	90.20	1.70	6,973.05	10,402.15	7,066.25 N	322.96 E	469,016.82	714,750.06	0.00	7,073.62	
17,400.00	90.20	1.70	6,972.70	10,401.80	7,166.21 N	325.94 E	469,116.77	714,753.04	0.00	7,173.61	
17,500.00	90.20	1.70	6,972.36	10,401.46	7,266.16 N	328.91 E	469,216.73	714,756.01	0.00	7,273.60	
17,600.00	90.20	1.70	6,972.01	10,401.11	7,366.12 N	331.88 E	469,316.68	714,758.98	0.00	7,373.59	
17,700.00	90.20	1.70	6,971.66	10,400.76	7,466.07 N	334.86 E	469,416.64	714,761.96	0.00	7,473.58	
17,800.00	90.20	1.70	6,971.31	10,400.41	7,566.03 N	337.83 E	469,516.59	714,764.93	0.00	7,573.57	
17,900.00	90.20	1.70	6,970.97	10,400.07	7,665.98 N	340.80 E	469,616.55	714,767.90	0.00	7,673.55	
17,919.06	90.20	1.70	6,970.90	10,400.00	7,685.04 N	341.37 E	469,635.60	714,768.47	0.00	7,692.61	TD at 17919.06

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,932.10	9,932.10	0.00	0.00	Start Build 12.00
10,290.43	10,257.73	116.25	54.21	Start DLS 12.00 TFO -30.40
10,718.78	10,425.00	487.99	127.28	Start 7200.28 hold at 10718.78 MD
17,919.06	10,400.00	7,685.04	341.37	TD at 17919.06

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
TD	No Target (Freehand)	2.54	Slot	0.00	0.00	0.00

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Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	17,918.93	Plan#1 100913 RevA0	MWD

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	TVDSS (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
513.00	513.00	-2,916.10	RUSTLER			
839.00	839.00	-2,590.10	TOP SALT			
4,038.00	4,038.00	608.90	BASE SALT			
4,270.00	4,270.00	840.90	DELAWARE			
4,305.00	4,305.00	875.90	Bell Canyon			
5,192.00	5,192.00	1,762.90	Cherry Canyon			
6,465.00	6,465.00	3,035.90	Brushy Canyon			
8,115.00	8,115.00	4,685.90	BONE SPRING LIME			
9,159.00	9,159.00	5,729.90	1st Bone Spring Sand			
9,779.00	9,779.00	6,349.90	2nd Bone Spring Sand			

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Aldabra 27 FED.COM 1H BHL ()									
- hit/miss target	0.00	0.00	10,400.00	7,685.04	341.37	469,635.60	714,768.47	32° 17' 23.477 N	103° 46' 19.517 W
- Shape									
- plan hits target center									
- Point									

Aldabra 27 FED.COM 1H LP-():

0.00	0.00	10,425.00	460.72	122.43	462,411.30	714,549.53	32° 16' 12.000 N	103° 46' 22.507 W	
- plan misses target center by 3.82ft at 10691.30ft MD (10424.35 TVD, 460.53 N, 126.19 E)									
- Point									

Plan Report for Aldabra 27 FED.COM 1H - Plan#1 100913 RevA0

Directional Difficulty Index

Average Dogleg over Survey: 0.53 °/100usft

Maximum Dogleg over Survey: 12.00 °/100usft at
10,290.43 ft

Net Tortosity applicable to Plans: 0.53 °/100usft

Directional Difficulty Index: 6.378

Audit Info

North Reference Sheet for Sec 27 T. 23S., R.31E. - Aldabra 27 FED.COM 1H - Wellbore #1

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to WELL @ 3429.10ft (HP223 25'KB). Northing and Easting are relative to Aldabra 27 FED.COM 1H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 541,337.50usft, False Northing: 0.00usft, Scale Reduction: 0.99994340

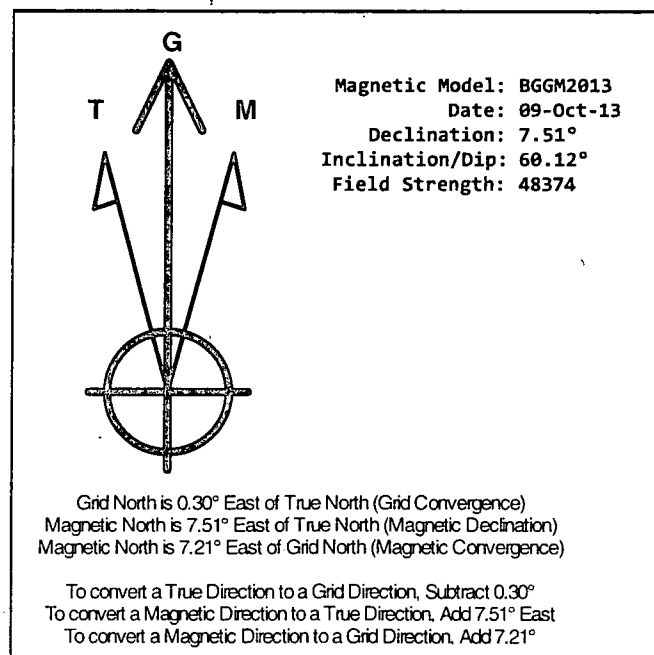
Grid Coordinates of Well: 461,950.58 usft N, 714,427.10 usft E

Geographical Coordinates of Well: 32° 16' 07.45" N, 103° 46' 23.96" W

Grid Convergence at Surface is: 0.30°

Based upon Minimum Curvature type calculations, at a Measured Depth of 17,919.06ft
the Bottom Hole Displacement is 7,692.61ft in the Direction of 2.54° (Grid).

Magnetic Convergence at surface is: -7.21° (9 October 2013, , BGGM2013)



**Aldabra 27 Federal 1H
30-015-38625
Devon Energy Production Co.
December 9, 2013
Conditions of Approval**

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

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

R-111-P-Potash

Possible lost circulation in the Delaware and Bone Spring.

Possible water and brine flows in the Salado, Castile, Delaware and Bone Spring.

1. The **20 inch surface casing shall be set at approximately 610 feet (below the Magenta Dolomite of the Rustler Anhydrite and above the salt) and cemented to the surface. Freshwater mud to be used to setting depth.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that

string.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

Contingency cement for the 9-5/8 inch casing if lost circulation is encountered:

Operator has proposed two DV tools at depths of 7000' and 4275', but will adjust cement proportionately if moved. DV tool at 4275' shall be set a minimum of 50' below previous shoe and DV tool at 7000' a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

- b. Second stage above DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with third stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

- c. Third stage above DV tool:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash. Additional cement may be required as excess calculates to 13%.**

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

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required as excess calculates to 23%.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 inch intermediate casing shoe shall be **3000 (3M)** psi.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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