

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

NM OIL CONSERVATION
ARTESIA DISTRICT

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

SEP 30 2014
RECEIVED
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42688	² Pool Code 82840	³ Pool Name ROSS Ranch Phantom Draw: Wolfcamp ; (GAS)
⁴ Property Code 38600	⁵ Property Name SNAPPING 2 STATE	
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	
		⁶ Well Number 14H
		⁹ Elevation 3282.0

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
P	2	26 S	31 E		250	SOUTH	330	EAST	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
A	2	26 S	31 E		330	NORTH	660	EAST	EDDY

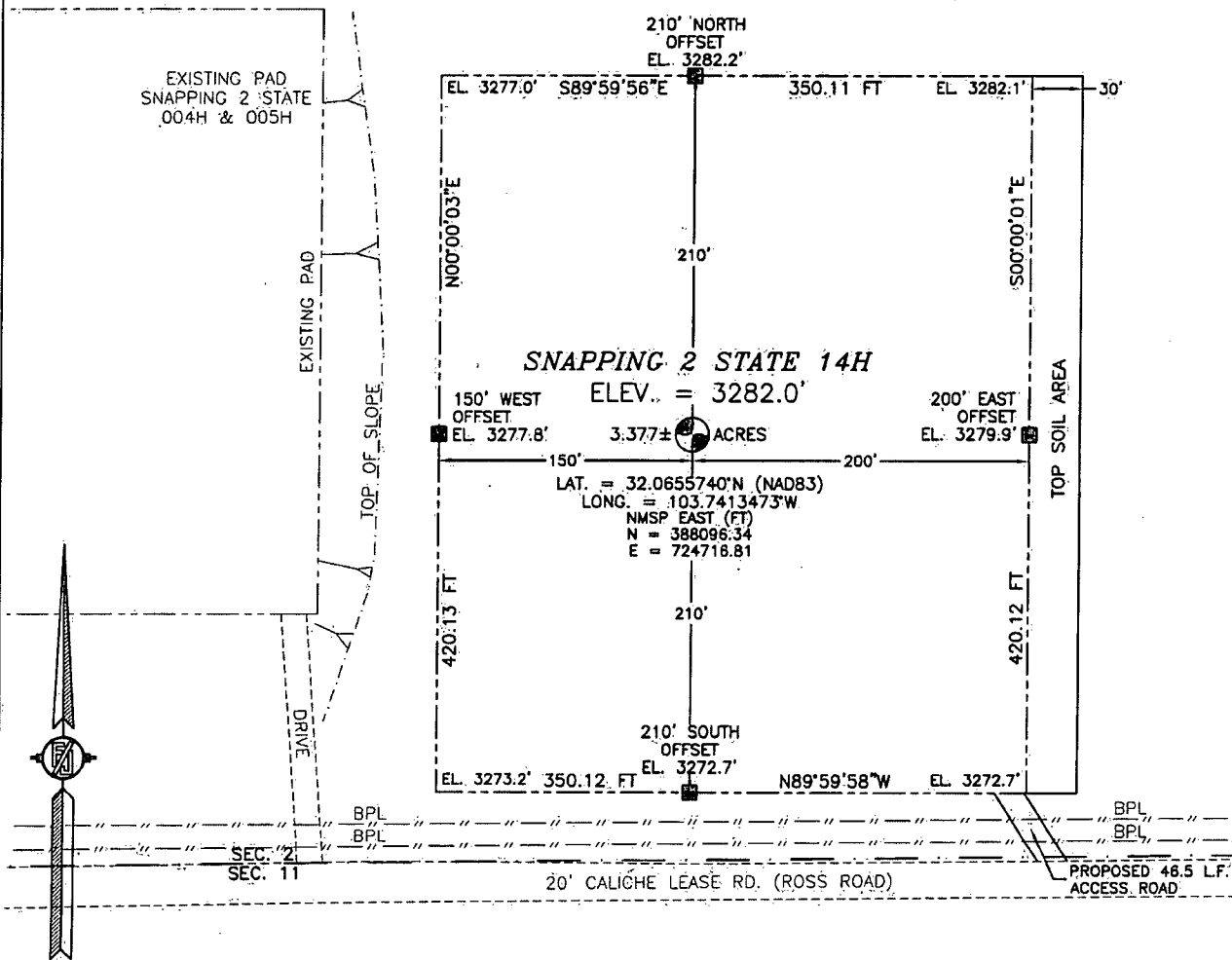
¹² Dedicated Acres 160 ac	¹³ Joint or Infill.	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N89°33'35"E 2661.22 FT N89°32'50"E 2662.17 FT NW CORNER SEC. 2 LAT. = 32.0794668°N LONG. = 103.7574356°W NMSP EAST (FT) N = 393123.30 E = 719706.10 W/4 CORNER SEC. 2 LAT. = 32.0721403°N LONG. = 103.7574402°W NMSP EAST (FT) N = 390458.06 E = 719718.90 SW CORNER SEC. 2 LAT. = 32.0648111°N LONG. = 103.7574377°W NMSP EAST (FT) N = 387791.85 E = 719733.91 N/4 CORNER SEC. 2 LAT. = 32.0794837°N LONG. = 103.7488454°W NMSP EAST (FT) N = 393143.74 E = 722366.68 BOTTOM OF HOLE LAT. = 32.0785902°N LONG. = 103.7423848°W NMSP EAST (FT) N = 392829.63 E = 724369.49 SE CORNER SEC. 2 LAT. = 32.0648918°N LONG. = 103.7401835°W NMSP EAST (FT) N = 387449.98 E = 725477.32 Project Area → Producing Area → SNAPPING 2 STATE 14H ELEV. = 3282.0' LAT. = 32.0655740°N (NAD83) LONG. = 103.7413473°W NMSP EAST (FT) N = 388096.34 E = 724716.81 SCALED SURFACE LOCATION	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. <i>Trina C. Couch</i> 9/29/14 Signature Date Trina C. Couch, Regulatory Analyst 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 equal surveys made by me or under my supervision and that the same is true and correct to the best of my belief. AUGUST 20 2014 (12797) Date of Survey <i>Elmon F. Jaramillo</i> Signature and Seal of Professional Surveyor Certificate Number: ELMON F. JARAMILLO, PLS 12797 SURVEY NO. 3221
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**SECTION 2, TOWNSHIP 26 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP**

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.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM HIGHWAY 128 (JAL HWY) AND ORLA ROAD (CR-1) GO SOUTH ON ORLA ROAD 10.3 MILES TO ROSS ROAD ON RIGHT (UNPAVED) GO WEST 3.92 MILES SITE IS ON RIGHT ABOUT 280 FT.

**DEVON ENERGY PRODUCTION COMPANY, L.P.
SNAPPING 2 STATE 14H**

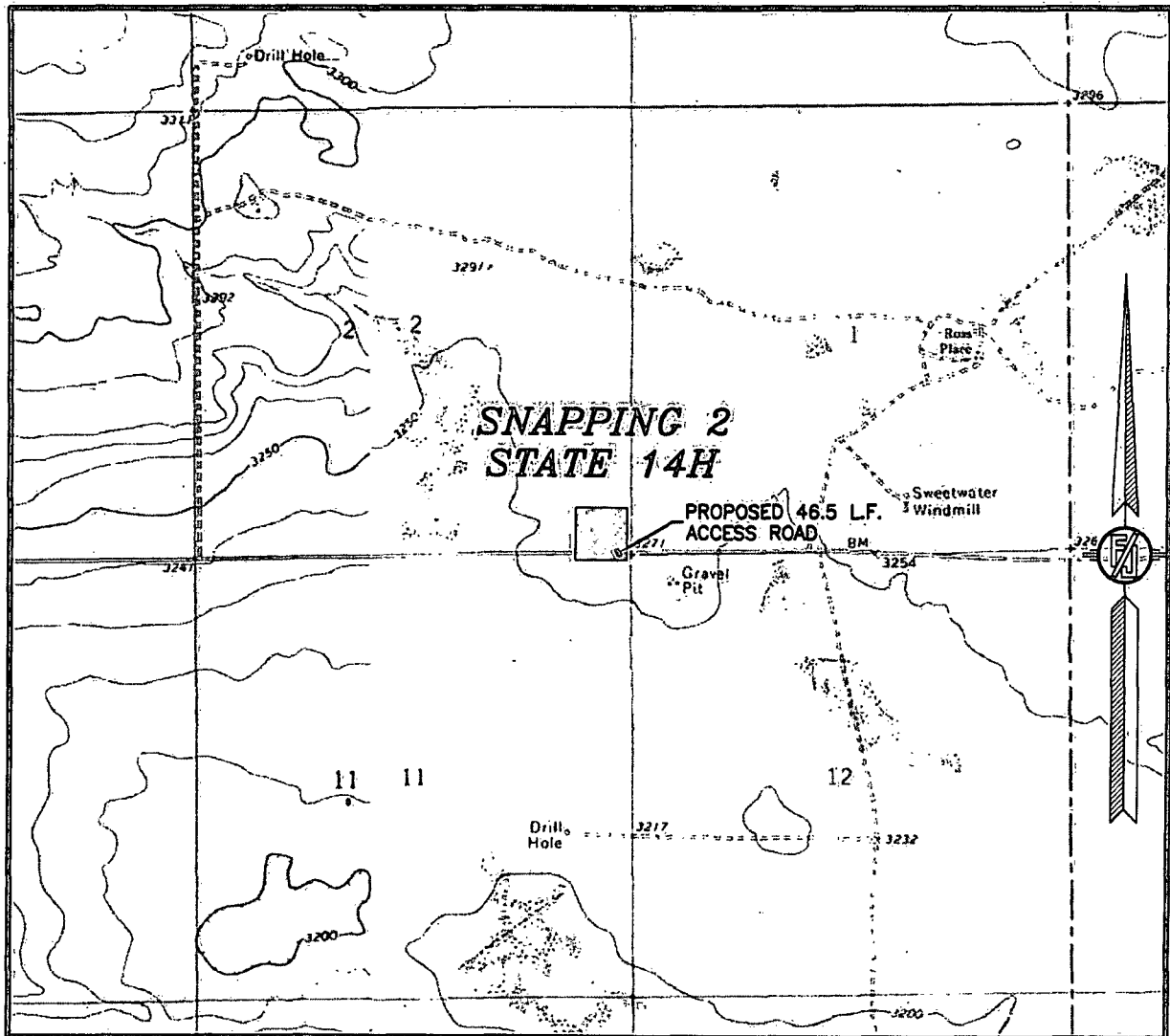
**LOCATED 250 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 2, TOWNSHIP 26 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO**

AUGUST 20, 2014

SURVEY NO. 3221

MADRON SURVEYING, INC. 301 SOUTH CANAL (975) 234-3341 CARLSBAD, NEW MEXICO

SECTION 2, TOWNSHIP 26 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
PADUCA BREAKS WEST

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
SNAPPING 2 STATE 14H

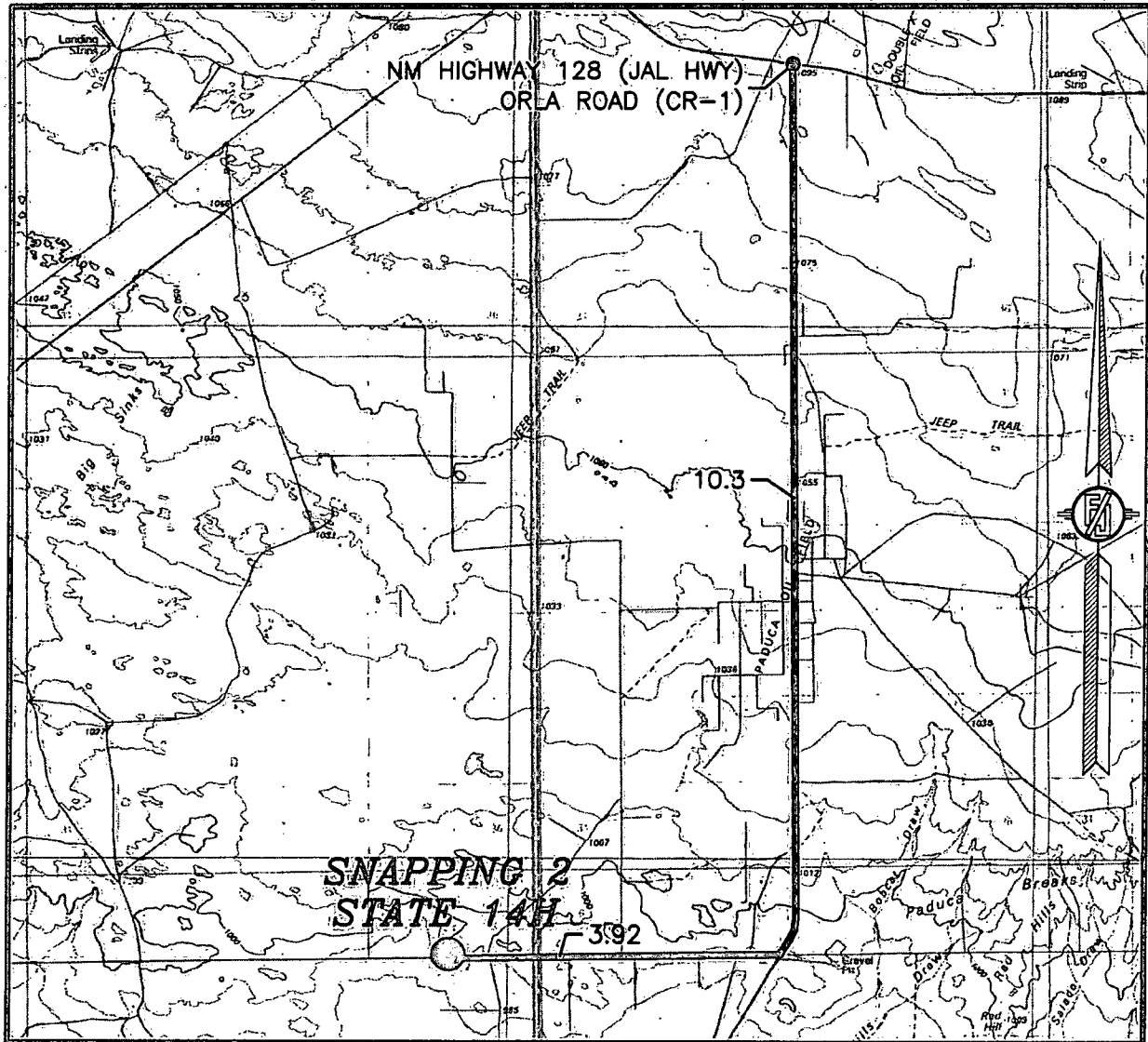
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EDDY COUNTY, STATE OF NEW MEXICO

AUGUST 20, 2014

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

SURVEY NO. 3221

SECTION 2, TOWNSHIP 26 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 THE INTERSECTION OF NM HIGHWAY 128 (JAL HWY) AND ORLA ROAD (CR-1) GO SOUTH ON ORLA ROAD 10.3 MILES TO ROSS ROAD ON RIGHT (UNPAVED) GO WEST 3.92 MILES SITE IS ON RIGHT ABOUT 280 FT.

DEVON ENERGY PRODUCTION COMPANY, L.P.
SNAPPING 2 STATE 14H

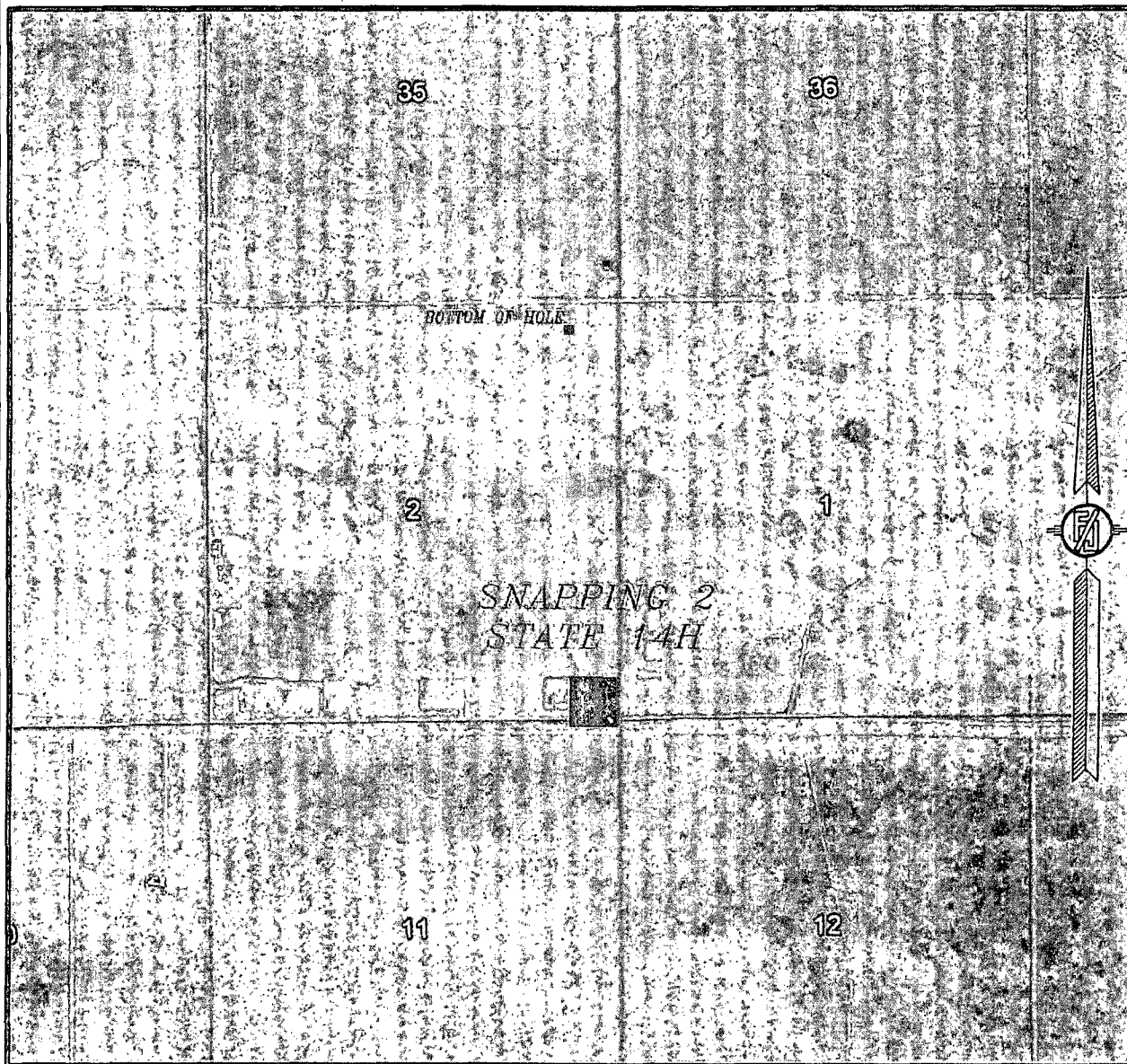
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SECTION 2, TOWNSHIP 26 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AUGUST 20, 2014

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

SURVEY NO. 3221
CARLSBAD, NEW MEXICO

SECTION 2, TOWNSHIP 26 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APR. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
SNAPPING 2 STATE 14H

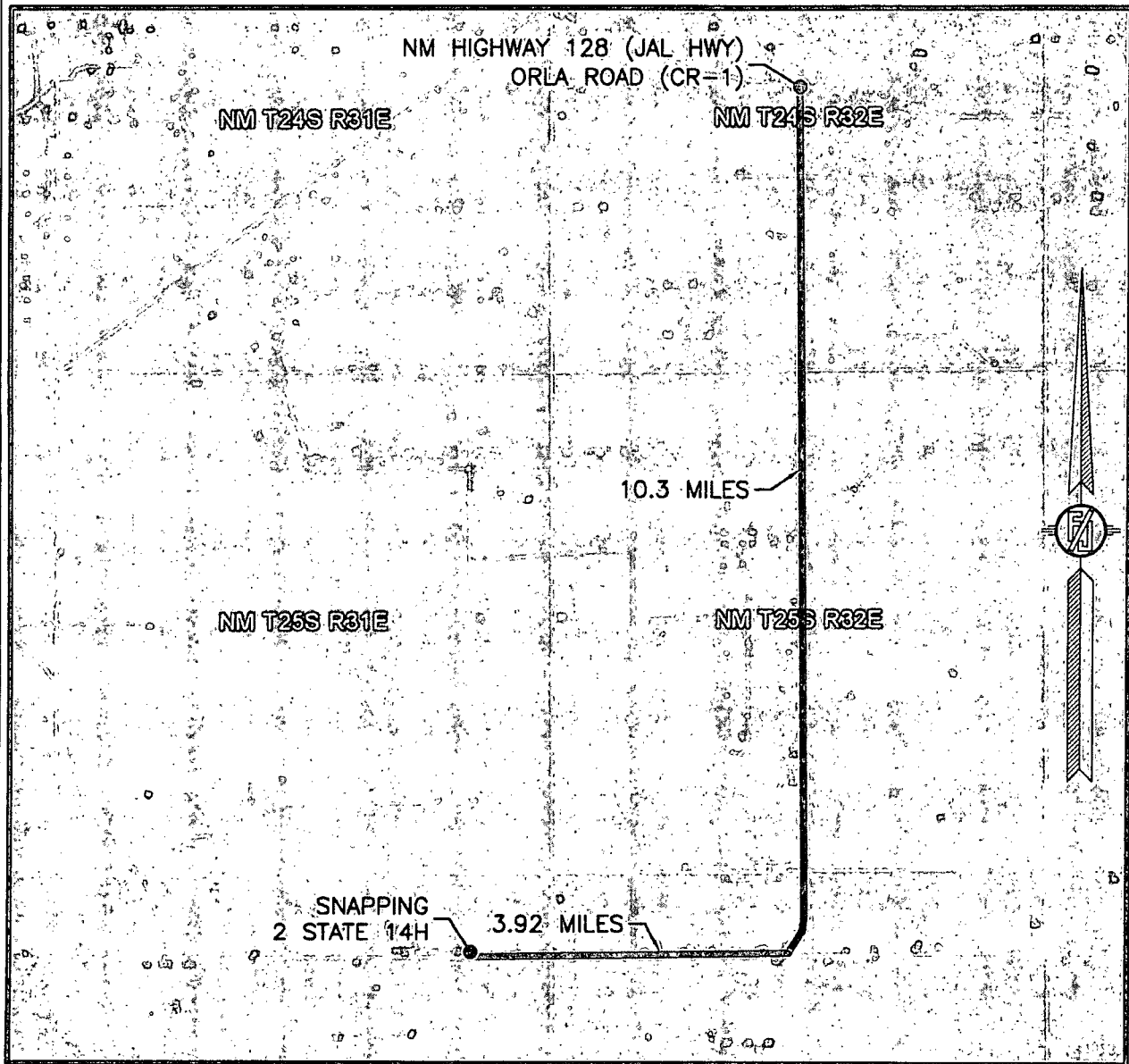
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SECTION 2, TOWNSHIP 26 SOUTH,
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EDDY COUNTY, STATE OF NEW MEXICO

AUGUST 20, 2014

SURVEY NO. 3221

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

SECTION 2, TOWNSHIP 26 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APR. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
SNAPPING 2 STATE 14H

LOCATED 250 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 2, TOWNSHIP 26 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AUGUST 20, 2014

SURVEY NO. 3221

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

Devon Energy, Snapping 2 State 14H

1. Geologic Formations

TVD of target	11948	Pilot hole depth	13500
MD at TD:	16489	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	923		
Salado	1273		
Base of Salt	4003		
Delaware	4213		
Bell Canyon	4238		
Cherry Canyon	5143		
Brushy Canyon	6568		
1st BSPG Lime	8288		
1st BSPG Sand	9205		
2nd BSPG Lime	9515		
2nd BSPG Sand	9868		
3rd BSPG Lime	10410		
3rd BSPG Sand	11160		
Wolfcamp	11575		
Target Zone Top	11915		
Wolfcamp B Shale	11995		
Top Mid Sh MKR	13015		
Base Mid Sh Mkr	13125		
PILOT HOLE TD	13500		

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

Devon Energy, Snapping 2 State 14H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
26"	0	1000	20"	117	J55	BTC	1.10	1.46	6.29
17.5"	0	4100	13-3/8"	80.7	P-110	BTC	1.14	2.43	6.15
12.25"	0	5250	9-5/8"	40	P-110	BTC	1.4	1.75	4.95
8-3/4"	0	11900	7"	32	P-110	BTC	2.14	1.25	2.43
6"	11200	16489	4.5"	13.5	P-110	BTC	1.2	2.21	3.10
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 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Devon Energy, Snapping 2 State 14H

3. Cementing Program

Casing	# Sks	Wt. lb/gal	H ₂ O gal/sk	Yld ft ³ /sack	500# Comp. Strength (hours)	Slurry Description
20" Surf.	880	13.5	9.07	1.7 2	12	Lead: Class C Cement + 4% Bentonite Gel + 0.125 lbs/sack Poly-E-Flake
	1190	14.8	6.32	1.3 3	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13-3/8" Inter.	1930	12.9	9.81	1.8 5	17	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	940	14.8	6.32	1.3 3	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	640	11	14.81	2.5 5	14	1st stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	770	14.4	5.8	1.2 4	22	Tail: (50:50)Premium H: PozMix + 0.3% BWOC Halad-9 + 0.15% BWOC HR-601 + 0.1% BWOC FWCA
	DV Tool = 4150ft					
	70	12.9	9.81	1.8 5	17	2 nd Stage Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	60	14.8	6.32	1.3 3	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
7" Inter.	100	11	14.81	2.5 5	14	Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	240	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
4-1/2" Liner	640	14.5	5.31	1.2	25	Primary: (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 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.

Devon Energy, Snapping 2 State 14H

Casing String	TOC	% Excess
20" Surface	0'	100%
13-3/8" Intermediate	0'	75%
9-5/8" Intermediate	1 st Stage = 4150' / 2 nd Stage = 3600'	50%
7" Intermediate	9100'	25%
Production Liner	11200'	25%

Include Pilot Hole Cementing specs:

Pilot hole depth 13500ft

KOP 11470ft

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft ³ /sack	Water gal/sk	Slurry Description and Cement Type
11270	13500	10	865	15.6	1.19	5.42	Class H + 0.3% Halad-9 + 0.5% HR-601

4. Pressure Control Equipment

	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:
17.5"	13-5/8"	3M	Annular	x	50% of working pressure 3M
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		
12.25"	13-5/8"	3M	Annular	x	50% testing pressure 3M
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		
8.75"	13-5/8"	10M	Annular	X	7.5M
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

Devon Energy, Snapping 2 State 14H

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.	
N	Are anchors required by manufacturer?	
Y	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 10,000 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	1000'	FW Gel	8.6-8.8	28-34	N/C
1000'	4100'	Saturated Brine	10.0-10.2	28-34	N/C
4100'	9600'	Cut Brine	8.5-9.2	28-34	N/C
9600'	13500' (PH)	Cut Brine	9-10	28-34	N/C
KOP	11900'	Cut Brine	9-10	28-34	N/C
11900'	16490'	OBM	12.5-15	40-60	10

Devon Energy, Snapping 2 State 14H

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 from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
x	Will be taking side wall cores from the 3 rd BSSS & Wolfcamp PH along with a GC Tracer.

Additional logs planned		Interval
X	Resistivity	Int. shoe to PH
x	Density	Int. shoe to PH
X	CBL	Int. shoe to PH
X	Mud log	Intermediate shoe to TD
x	PEX	Int. shoe to PH

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4732 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S is detected in concentrations greater than 100 ppm, the operator will comply with the
--

Devon Energy, Snapping 2 State 14H

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

☒ Directional Plan

☐ Other, describe

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
 Site: Snapping
 Well: 2 State 14H
 Wellbore: ST 1
 Design: Plan #1



Azimuths to Grid North
 True North: -0.31°
 Magnetic North: 7.10°
 Magnetic Field
 Strength: 48134.1snT
 Dip Angle: 59.92°
 Date: 9/22/2014
 Model: BGGM2014

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



DESIGN TARGET DETAILS

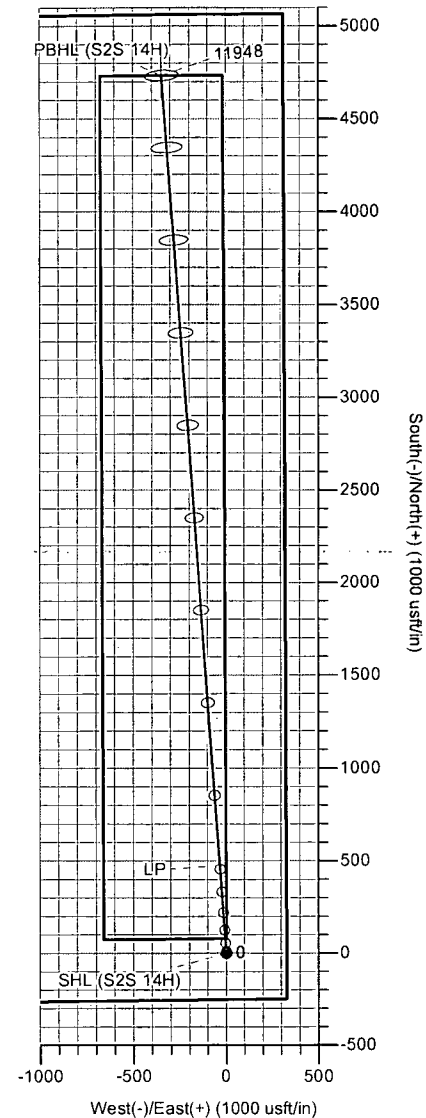
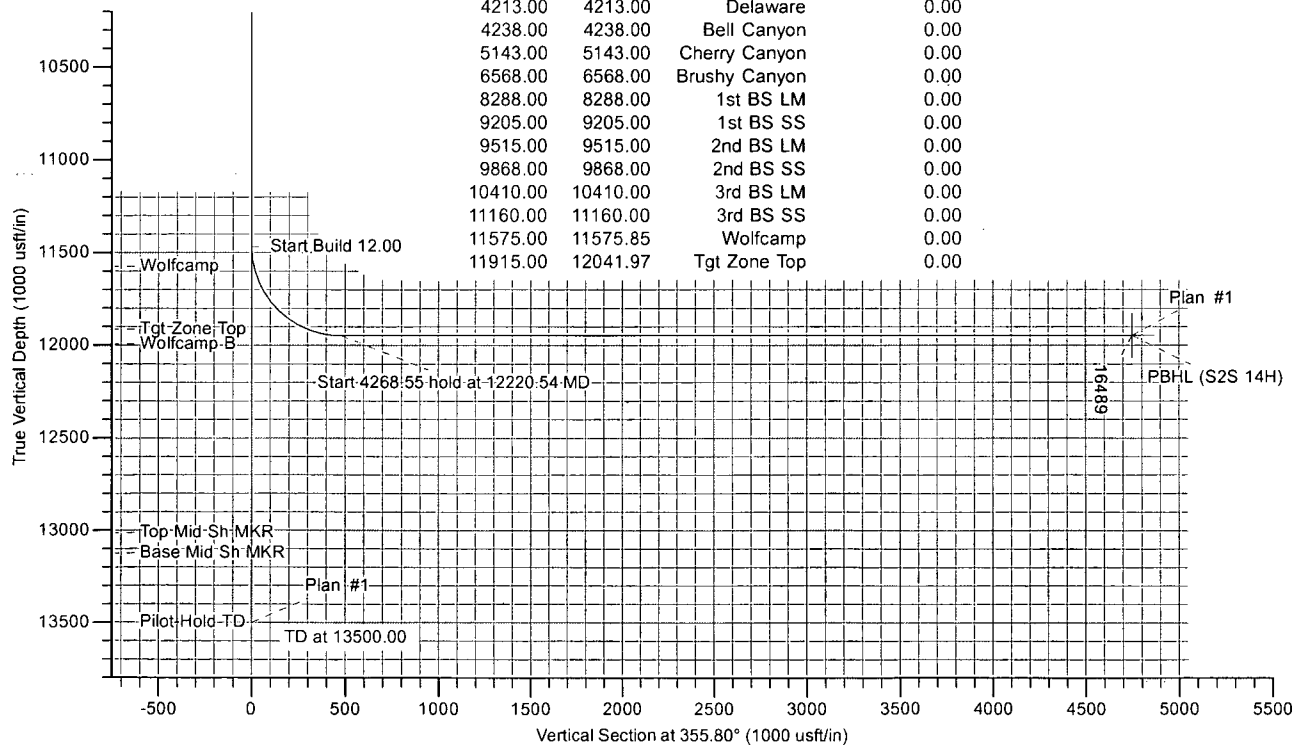
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (S2S 14H)	0.00	0.00	0.00	388096.34	724716.81	32° 3' 56.067 N	103° 44' 28.850 W
PBHL (S2S 14H)	11948.00	4733.29	-347.32	392829.63	724369.49	32° 4' 42.925 N	103° 44' 32.585 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	11470.54	0.00	0.00	11470.54	0.00	0.00	0.00	0.00	0.00	
2	12220.54	90.00	355.80	11948.00	476.19	-34.94	12.00	355.80	477.47	
3	16489.09	90.00	355.80	11948.00	4733.29	-347.32	0.00	0.00	4746.02	

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation	DipAngle	DipDir
923.00	923.00	Ruslter	0.00	
1273.00	1273.00	Salado	0.00	
4003.00	4003.00	Base Salt	0.00	
4213.00	4213.00	Delaware	0.00	
4238.00	4238.00	Bell Canyon	0.00	
5143.00	5143.00	Cherry Canyon	0.00	
6568.00	6568.00	Brushy Canyon	0.00	
8288.00	8288.00	1st BS LM	0.00	
9205.00	9205.00	1st BS SS	0.00	
9515.00	9515.00	2nd BS LM	0.00	
9868.00	9868.00	2nd BS SS	0.00	
10410.00	10410.00	3rd BS LM	0.00	
11160.00	11160.00	3rd BS SS	0.00	
11575.00	11575.85	Wolfcamp	0.00	
11915.00	12041.97	Tgt Zone Top	0.00	



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

Plan: Plan #1 (2 State 14H/ST 1)
 Created By: Brady Deaver
 Date: 13:37, September 22 2014
 Approved: _____

DEVON ENERGY

Eddy County, NM (NAD-83)

Snapping

2 State 14H

Pilot Hole

Plan: Plan #1

Standard Planning Report

22 September, 2014

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #1		

Project:	Eddy 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:	Snapping		
Site Position:		Northing:	382,635.86 usft
From:	Map	Easting:	716,691.80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 2.457 N
		Longitude:	103° 46' 2.442 W
		Grid Convergence:	0.30 °

Well:	2 State 14H, Wolfcamp		
Well Position	+N/-S 5,460.48 usft	Northing:	388,096.34 usft
	+E/-W 8,025.01 usft	Easting:	724,716.81 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,307.00 usft
		Latitude:	32° 3' 56.066 N
		Longitude:	103° 44' 28.850 W
		Ground Level:	3,282.00 usft

Wellbore		Pilot Hole			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	9/22/2014	7.41	59.92	48,134

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	0.00

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	
13,500.00	0.00	0.00	13,500.00	0.00	0.00	0.00	0.00	0.00	0.00	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
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 (S2S 14H)									
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
923.00	0.00	0.00	923.00	0.00	0.00	0.00	0.00	0.00	0.00
Ruslter									
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
1,273.00	0.00	0.00	1,273.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
4,003.00	0.00	0.00	4,003.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
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
4,213.00	0.00	0.00	4,213.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State: 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105 3282' GL +25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105 3282' GL +25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
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)
Delaware									
4,238.00	0.00	0.00	4,238.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
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
5,143.00	0.00	0.00	5,143.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
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
6,568.00	0.00	0.00	6,568.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
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
8,288.00	0.00	0.00	8,288.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BS LM									
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

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
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)	
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,205.00	0.00	0.00	9,205.00	0.00	0.00	0.00	0.00	0.00	0.00	
1st BS SS										
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,515.00	0.00	0.00	9,515.00	0.00	0.00	0.00	0.00	0.00	0.00	
2nd BS LM										
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,868.00	0.00	0.00	9,868.00	0.00	0.00	0.00	0.00	0.00	0.00	
2nd BS SS										
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,410.00	0.00	0.00	10,410.00	0.00	0.00	0.00	0.00	0.00	0.00	
3rd BS LM										
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,160.00	0.00	0.00	11,160.00	0.00	0.00	0.00	0.00	0.00	0.00	
3rd BS SS										
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,575.00	0.00	0.00	11,575.00	0.00	0.00	0.00	0.00	0.00	0.00	
Wolfcamp										
11,600.00	0.00	0.00	11,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,915.00	0.00	0.00	11,915.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tgt Zone Top										
11,948.00	0.00	0.00	11,948.00	0.00	0.00	0.00	0.00	0.00	0.00	
PBHL (S2S 14H)										

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105 3282' GL +25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105 3282' GL +25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
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)	
11,995.00	0.00	0.00	11,995.00	0.00	0.00	0.00	0.00	0.00	0.00	
Wolfcamp B										
12,000.00	0.00	0.00	12,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,100.00	0.00	0.00	12,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,200.00	0.00	0.00	12,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,300.00	0.00	0.00	12,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,400.00	0.00	0.00	12,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,500.00	0.00	0.00	12,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,600.00	0.00	0.00	12,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,700.00	0.00	0.00	12,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,800.00	0.00	0.00	12,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,900.00	0.00	0.00	12,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,000.00	0.00	0.00	13,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,015.00	0.00	0.00	13,015.00	0.00	0.00	0.00	0.00	0.00	0.00	
Top Mid Sh MKR										
13,100.00	0.00	0.00	13,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,125.00	0.00	0.00	13,125.00	0.00	0.00	0.00	0.00	0.00	0.00	
Base Mid Sh MKR										
13,200.00	0.00	0.00	13,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,300.00	0.00	0.00	13,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,400.00	0.00	0.00	13,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
13,500.00	0.00	0.00	13,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pilot Hole TD										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (S2S 14H)	- plan hits target center	0.00	0.00	0.00	0.00	0.00	388,096.34	724,716.81	32° 3' 56.066 N	103° 44' 28.850 W
	- Point									
PBHL (S2S 14H)	- plan misses target center by 4746.02usft at 11948.00usft MD (11948.00 TVD, 0.00 N, 0.00 E)	0.00	0.00	11,948.00	4,733.29	-347.32	392,829.63	724,369.49	32° 4' 42.925 N	103° 44' 32.585 W
	- Point									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
923.00	923.00	Rusiter		0.00		
1,273.00	1,273.00	Salado		0.00		
4,003.00	4,003.00	Base Salt		0.00		
4,213.00	4,213.00	Delaware		0.00		
4,238.00	4,238.00	Bell Canyon		0.00		
5,143.00	5,143.00	Cherry Canyon		0.00		
6,568.00	6,568.00	Brushy Canyon		0.00		
8,288.00	8,288.00	1st BS LM		0.00		
9,205.00	9,205.00	1st BS SS		0.00		
9,515.00	9,515.00	2nd BS LM		0.00		
9,868.00	9,868.00	2nd BS SS		0.00		
10,410.00	10,410.00	3rd BS LM		0.00		
11,160.00	11,160.00	3rd BS SS		0.00		
11,575.00	11,575.00	Wolfcamp		0.00		
11,915.00	11,915.00	Tgt Zone Top		0.00		
11,995.00	11,995.00	Wolfcamp B		0.00		
13,015.00	13,015.00	Top Mid Sh MKR		0.00		
13,125.00	13,125.00	Base Mid Sh MKR		0.00		
13,500.00	13,500.00	Pilot Hold TD		0.00		

DEVON ENERGY

Eddy County, NM (NAD-83)

Snapping

2 State 14H

ST 1

Plan: Plan #1

Standard Planning Report

22 September, 2014

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
Design:	Plan #1		

Project	Eddy 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	Snapping		
Site Position:		Northing:	382,635.86 usft
From:	Map	Easting:	716,691.80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 2.457 N
		Longitude:	103° 46' 2.442 W
		Grid Convergence:	0.30 °

Well	2 State 14H, Wolfcamp		
Well Position	+N/-S	5,460.48 usft	Northing:
	+E/-W	8,025.01 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,307.00 usft
		Latitude:	32° 3' 56.066 N
		Longitude:	103° 44' 28.850 W
		Ground Level:	3,282.00 usft

Wellbore	ST 1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2014	9/22/2014	7.41
			Dip Angle
			(°)
			Field Strength
			(nT)
			48,134

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			11,470.54
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			355.80

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
11,470.54	0.00	0.00	11,470.54	0.00	0.00	0.00	0.00	0.00	0.00	
12,220.54	90.00	355.80	11,948.01	476.19	-34.94	12.00	12.00	0.00	355.80	
16,489.09	90.00	355.80	11,948.00	4,733.29	-347.32	0.00	0.00	0.00	0.00	PBHL (S2S 14H)

LEAM Drilling Systems LLC

Planning Report

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Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
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 (S2S 14H)									
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

LEAM Drilling Systems LLC

Planning Report

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Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
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)
5,100.00	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
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
8,288.00	0.00	0.00	8,288.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BS LM									
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,205.00	0.00	0.00	9,205.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BS SS									
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,515.00	0.00	0.00	9,515.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd BS LM									
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

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Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
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)
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,868.00	0.00	0.00	9,868.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd BS SS									
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,410.00	0.00	0.00	10,410.00	0.00	0.00	0.00	0.00	0.00	0.00
3rd BS LM									
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,160.00	0.00	0.00	11,160.00	0.00	0.00	0.00	0.00	0.00	0.00
3rd BS SS									
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
11,470.54	0.00	0.00	11,470.54	0.00	0.00	0.00	0.00	0.00	0.00
11,475.00	0.54	355.80	11,475.00	0.02	0.00	0.02	12.00	12.00	0.00
11,500.00	3.54	355.80	11,499.98	0.91	-0.07	0.91	12.00	12.00	0.00
11,525.00	6.54	355.80	11,524.88	3.09	-0.23	3.10	12.00	12.00	0.00
11,550.00	9.54	355.80	11,549.63	6.58	-0.48	6.60	12.00	12.00	0.00
11,575.00	12.54	355.80	11,574.17	11.35	-0.83	11.38	12.00	12.00	0.00
11,575.85	12.64	355.80	11,575.00	11.54	-0.85	11.57	12.00	12.00	0.00
Wolfcamp									
11,600.00	15.54	355.80	11,598.42	17.40	-1.28	17.44	12.00	12.00	0.00
11,625.00	18.54	355.80	11,622.32	24.70	-1.81	24.77	12.00	12.00	0.00
11,650.00	21.54	355.80	11,645.80	33.24	-2.44	33.33	12.00	12.00	0.00
11,675.00	24.54	355.80	11,668.81	43.00	-3.15	43.11	12.00	12.00	0.00
11,700.00	27.54	355.80	11,691.27	53.94	-3.96	54.08	12.00	12.00	0.00
11,725.00	30.54	355.80	11,713.12	66.04	-4.85	66.22	12.00	12.00	0.00
11,750.00	33.54	355.80	11,734.32	79.26	-5.82	79.48	12.00	12.00	0.00
11,775.00	36.54	355.80	11,754.78	93.57	-6.87	93.83	12.00	12.00	0.00
11,800.00	39.54	355.80	11,774.47	108.94	-7.99	109.23	12.00	12.00	0.00
11,825.00	42.54	355.80	11,793.33	125.30	-9.19	125.64	12.00	12.00	0.00
11,850.00	45.54	355.80	11,811.30	142.63	-10.47	143.01	12.00	12.00	0.00
11,875.00	48.54	355.80	11,828.33	160.87	-11.80	161.31	12.00	12.00	0.00
11,900.00	51.54	355.80	11,844.39	179.98	-13.21	180.47	12.00	12.00	0.00
11,925.00	54.54	355.80	11,859.42	199.90	-14.67	200.44	12.00	12.00	0.00
11,950.00	57.54	355.80	11,873.39	220.58	-16.19	221.17	12.00	12.00	0.00
11,975.00	60.54	355.80	11,886.25	241.95	-17.75	242.61	12.00	12.00	0.00
12,000.00	63.54	355.80	11,897.97	263.97	-19.37	264.68	12.00	12.00	0.00
12,025.00	66.54	355.80	11,908.52	286.57	-21.03	287.35	12.00	12.00	0.00
12,041.97	68.57	355.80	11,915.00	302.22	-22.18	303.03	12.00	12.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
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)
Tgt Zone Top									
12,050.00	69.54	355.80	11,917.87	309.70	-22.72	310.53	12.00	12.00	0.00
12,075.00	72.54	355.80	11,925.99	333.27	-24.45	334.17	12.00	12.00	0.00
12,100.00	75.54	355.80	11,932.87	357.24	-26.21	358.20	12.00	12.00	0.00
12,125.00	78.54	355.80	11,938.48	381.54	-28.00	382.56	12.00	12.00	0.00
12,150.00	81.54	355.80	11,942.80	406.09	-29.80	407.18	12.00	12.00	0.00
12,175.00	84.54	355.80	11,945.83	430.84	-31.61	431.99	12.00	12.00	0.00
12,200.00	87.54	355.80	11,947.56	455.71	-33.44	456.93	12.00	12.00	0.00
12,220.54	90.00	355.80	11,948.01	476.19	-34.94	477.47	12.00	12.00	0.00
12,300.00	90.00	355.80	11,948.01	555.43	-40.76	556.92	0.00	0.00	0.00
12,400.00	90.00	355.80	11,948.00	655.16	-48.07	656.92	0.00	0.00	0.00
12,500.00	90.00	355.80	11,948.00	754.90	-55.39	756.92	0.00	0.00	0.00
12,600.00	90.00	355.80	11,948.00	854.63	-62.71	856.92	0.00	0.00	0.00
12,700.00	90.00	355.80	11,948.00	954.36	-70.03	956.92	0.00	0.00	0.00
12,800.00	90.00	355.80	11,948.00	1,054.09	-77.35	1,056.92	0.00	0.00	0.00
12,900.00	90.00	355.80	11,948.00	1,153.82	-84.67	1,156.92	0.00	0.00	0.00
13,000.00	90.00	355.80	11,948.00	1,253.55	-91.98	1,256.92	0.00	0.00	0.00
13,100.00	90.00	355.80	11,948.00	1,353.29	-99.30	1,356.92	0.00	0.00	0.00
13,200.00	90.00	355.80	11,948.00	1,453.02	-106.62	1,456.92	0.00	0.00	0.00
13,300.00	90.00	355.80	11,948.00	1,552.75	-113.94	1,556.92	0.00	0.00	0.00
13,400.00	90.00	355.80	11,948.00	1,652.48	-121.26	1,656.92	0.00	0.00	0.00
13,500.00	90.00	355.80	11,948.00	1,752.21	-128.57	1,756.92	0.00	0.00	0.00
13,600.00	90.00	355.80	11,948.00	1,851.95	-135.89	1,856.92	0.00	0.00	0.00
13,700.00	90.00	355.80	11,948.00	1,951.68	-143.21	1,956.92	0.00	0.00	0.00
13,800.00	90.00	355.80	11,948.00	2,051.41	-150.53	2,056.92	0.00	0.00	0.00
13,900.00	90.00	355.80	11,948.00	2,151.14	-157.85	2,156.92	0.00	0.00	0.00
14,000.00	90.00	355.80	11,948.00	2,250.87	-165.16	2,256.92	0.00	0.00	0.00
14,100.00	90.00	355.80	11,948.00	2,350.61	-172.48	2,356.92	0.00	0.00	0.00
14,200.00	90.00	355.80	11,948.00	2,450.34	-179.80	2,456.92	0.00	0.00	0.00
14,300.00	90.00	355.80	11,948.00	2,550.07	-187.12	2,556.92	0.00	0.00	0.00
14,400.00	90.00	355.80	11,948.00	2,649.80	-194.44	2,656.92	0.00	0.00	0.00
14,500.00	90.00	355.80	11,948.00	2,749.53	-201.76	2,756.92	0.00	0.00	0.00
14,600.00	90.00	355.80	11,948.00	2,849.26	-209.07	2,856.92	0.00	0.00	0.00
14,700.00	90.00	355.80	11,948.00	2,949.00	-216.39	2,956.92	0.00	0.00	0.00
14,800.00	90.00	355.80	11,948.00	3,048.73	-223.71	3,056.92	0.00	0.00	0.00
14,900.00	90.00	355.80	11,948.00	3,148.46	-231.03	3,156.92	0.00	0.00	0.00
15,000.00	90.00	355.80	11,948.00	3,248.19	-238.35	3,256.92	0.00	0.00	0.00
15,100.00	90.00	355.80	11,948.00	3,347.92	-245.66	3,356.92	0.00	0.00	0.00
15,200.00	90.00	355.80	11,948.00	3,447.66	-252.98	3,456.92	0.00	0.00	0.00
15,300.00	90.00	355.80	11,948.00	3,547.39	-260.30	3,556.92	0.00	0.00	0.00
15,400.00	90.00	355.80	11,948.00	3,647.12	-267.62	3,656.92	0.00	0.00	0.00
15,500.00	90.00	355.80	11,948.00	3,746.85	-274.94	3,756.92	0.00	0.00	0.00
15,600.00	90.00	355.80	11,948.00	3,846.58	-282.26	3,856.92	0.00	0.00	0.00
15,700.00	90.00	355.80	11,948.00	3,946.32	-289.57	3,956.92	0.00	0.00	0.00
15,800.00	90.00	355.80	11,948.00	4,046.05	-296.89	4,056.92	0.00	0.00	0.00
15,900.00	90.00	355.80	11,948.00	4,145.78	-304.21	4,156.92	0.00	0.00	0.00
16,000.00	90.00	355.80	11,948.00	4,245.51	-311.53	4,256.92	0.00	0.00	0.00
16,100.00	90.00	355.80	11,948.00	4,345.24	-318.85	4,356.92	0.00	0.00	0.00
16,200.00	90.00	355.80	11,948.00	4,444.97	-326.16	4,456.92	0.00	0.00	0.00
16,300.00	90.00	355.80	11,948.00	4,544.71	-333.48	4,556.92	0.00	0.00	0.00
16,400.00	90.00	355.80	11,948.00	4,644.44	-340.80	4,656.92	0.00	0.00	0.00
16,489.09	90.00	355.80	11,948.00	4,733.29	-347.32	4,746.02	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 2 State 14H
Company:	DEVON ENERGY	TVD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Project:	Eddy County, NM (NAD-83)	MD Reference:	Cactus 105: 3282' GL + 25' RKB @ 3307.00usft (Original Well Elev)
Site:	Snapping	North Reference:	Grid
Well:	2 State 14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST 1		
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)
PBHL (S2S 14H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (S2S 14H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	388,096.34	724,716.81	32° 3' 56.066 N	103° 44' 28.850 W
PBHL (S2S 14H) - plan hits target center - Point	0.00	0.00	11,948.00	4,733.29	-347.32	392,829.63	724,369.49	32° 4' 42.925 N	103° 44' 32.585 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
923.00	923.00	Ruslter		0.00	
1,273.00	1,273.00	Salado		0.00	
4,003.00	4,003.00	Base Salt		0.00	
4,213.00	4,213.00	Delaware		0.00	
4,238.00	4,238.00	Bell Canyon		0.00	
5,143.00	5,143.00	Cherry Canyon		0.00	
6,568.00	6,568.00	Brushy Canyon		0.00	
8,288.00	8,288.00	1st BS LM		0.00	
9,205.00	9,205.00	1st BS SS		0.00	
9,515.00	9,515.00	2nd BS LM		0.00	
9,868.00	9,868.00	2nd BS SS		0.00	
10,410.00	10,410.00	3rd BS LM		0.00	
11,160.00	11,160.00	3rd BS SS		0.00	
11,575.85	11,575.00	Wolfcamp		0.00	
12,041.97	11,915.00	Tgt Zone Top		0.00	