

NM OIL CONSERVATION

ARTESIA DISTRICT

MAR 12 2015

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
RECEIVED
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 30-015-42974	² Pool Code 96409	³ Pool Name Joseph and Ranch; Holfcamp, SW
¹ Property Code 314245	² Property Name STERLING POUND 20 STATE	
² OGRID No. 6137	² Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	² Elevation 3184.8

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
D	20	23 S	27 E		150	NORTH	710	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
M	20	23 S	27 E		660	SOUTH	710	WEST	EDDY

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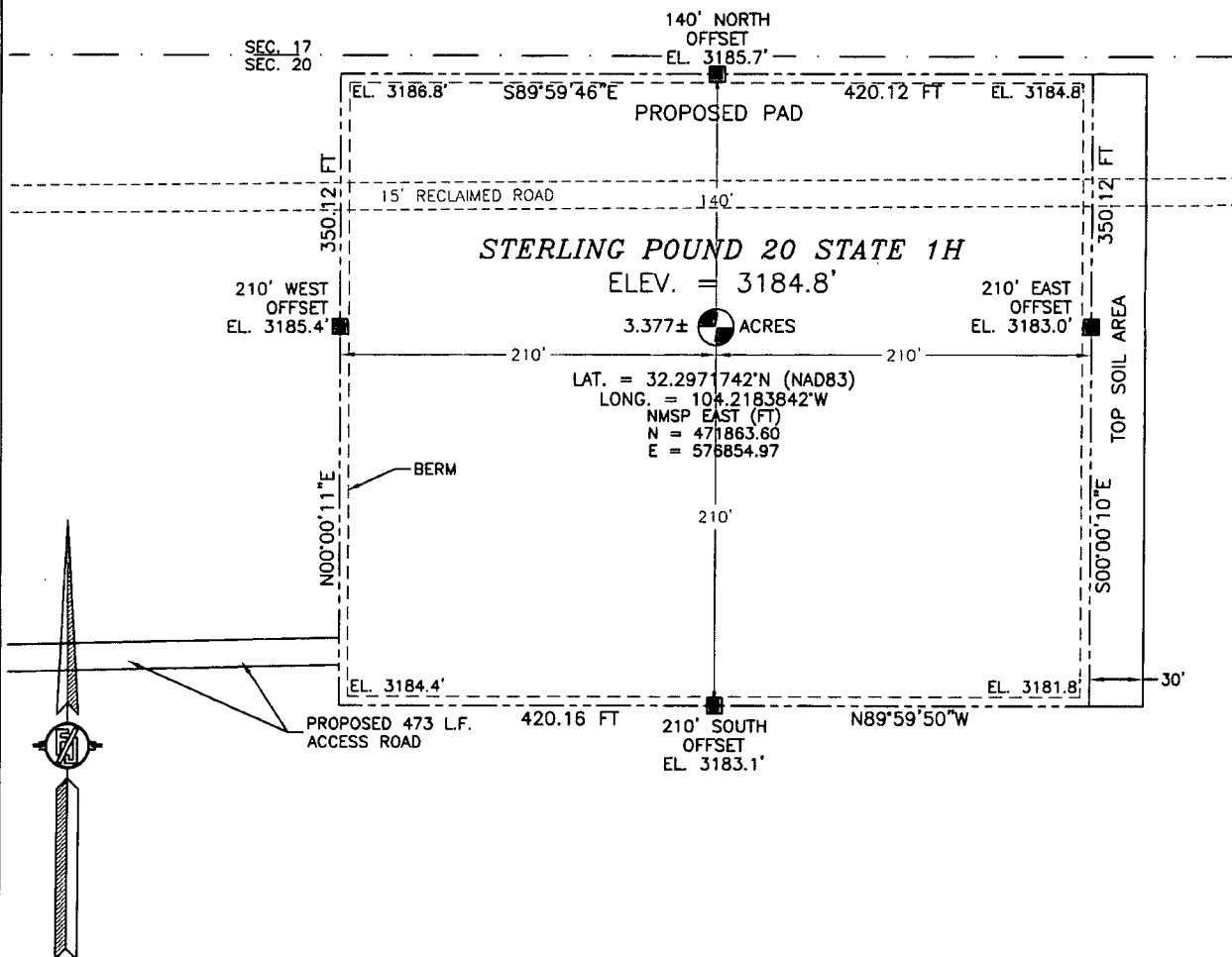
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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.	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 undivided 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. Signature: <i>Tami Laird</i> Date: 3/10/15 Printed Name: Tami Laird, Regulatory Professional E-mail Address: tami.laird@dvn.com
	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. Signature and Seal of Professional Surveyor: <i>[Signature]</i> Certificate Number: 11797

SURVEY NO. 3317C

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 27 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.



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF BLACK RIVER VILLAGE ROAD (CR 720) AND OLD CAVERN HWY (CR 748) GO NORTH ON OLD CAVERN HWY 4.55 MILES SITE IS 473 FT EAST TO SOUTHWEST CORNER OF PROPOSED PAD

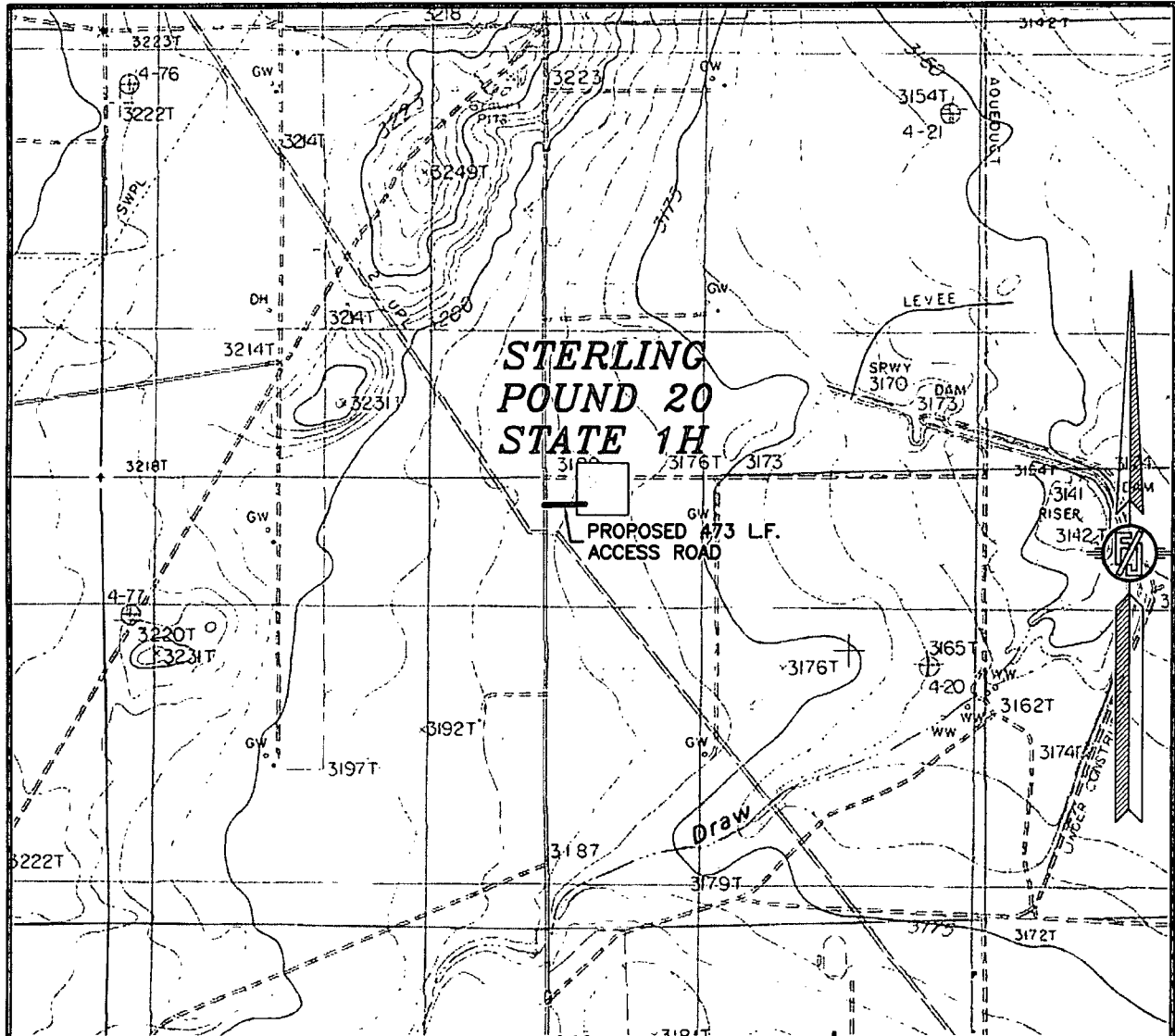
DEVON ENERGY PRODUCTION COMPANY, L.P.
STERLING POUND 20 STATE 1H
LOCATED 150 FT. FROM THE NORTH LINE
AND 710 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 23 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 6, 2015

SURVEY NO. 3317C

MADRON SURVEYING, INC. 301 SOUTH CANAL (505) 234-3341 CARLSBAD, NEW MEXICO

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
OTIS

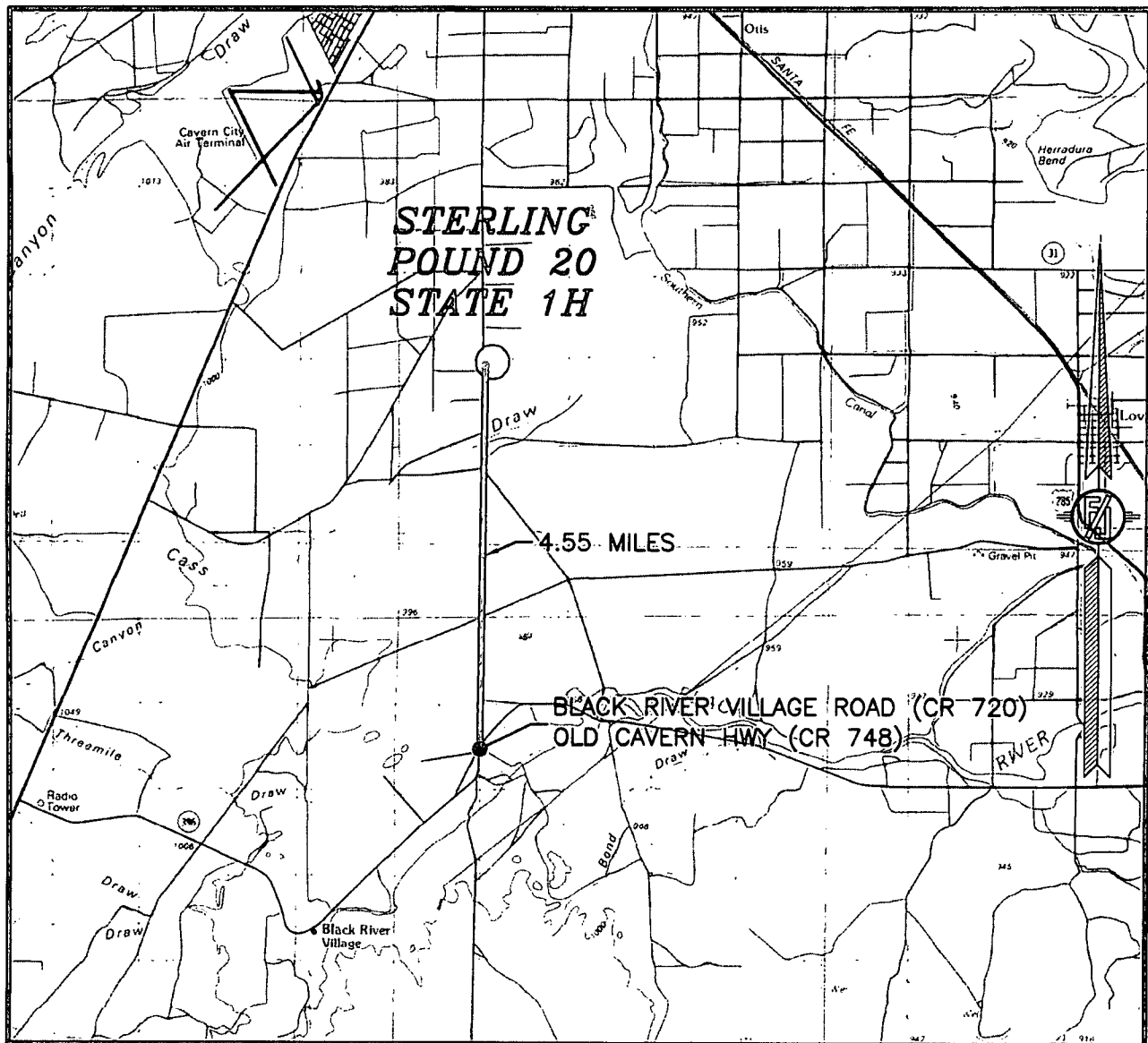
NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
STERLING POUND 20 STATE 1H
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SECTION 20, TOWNSHIP 23 SOUTH,
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EDDY COUNTY, STATE OF NEW MEXICO

MARCH 6, 2015

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO SURVEY NO. 3317C

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF BLACK RIVER VILLAGE ROAD (CR 720)
AND OLD CAVERN HWY (CR 748) GO NORTH ON OLD CAVERN HWY
4.55 MILES SITE IS 473 FT EAST TO SOUTHWEST CORNER OF
PROPOSED PAD

DEVON ENERGY PRODUCTION COMPANY, L.P.

STERLING POUND 20 STATE 1H

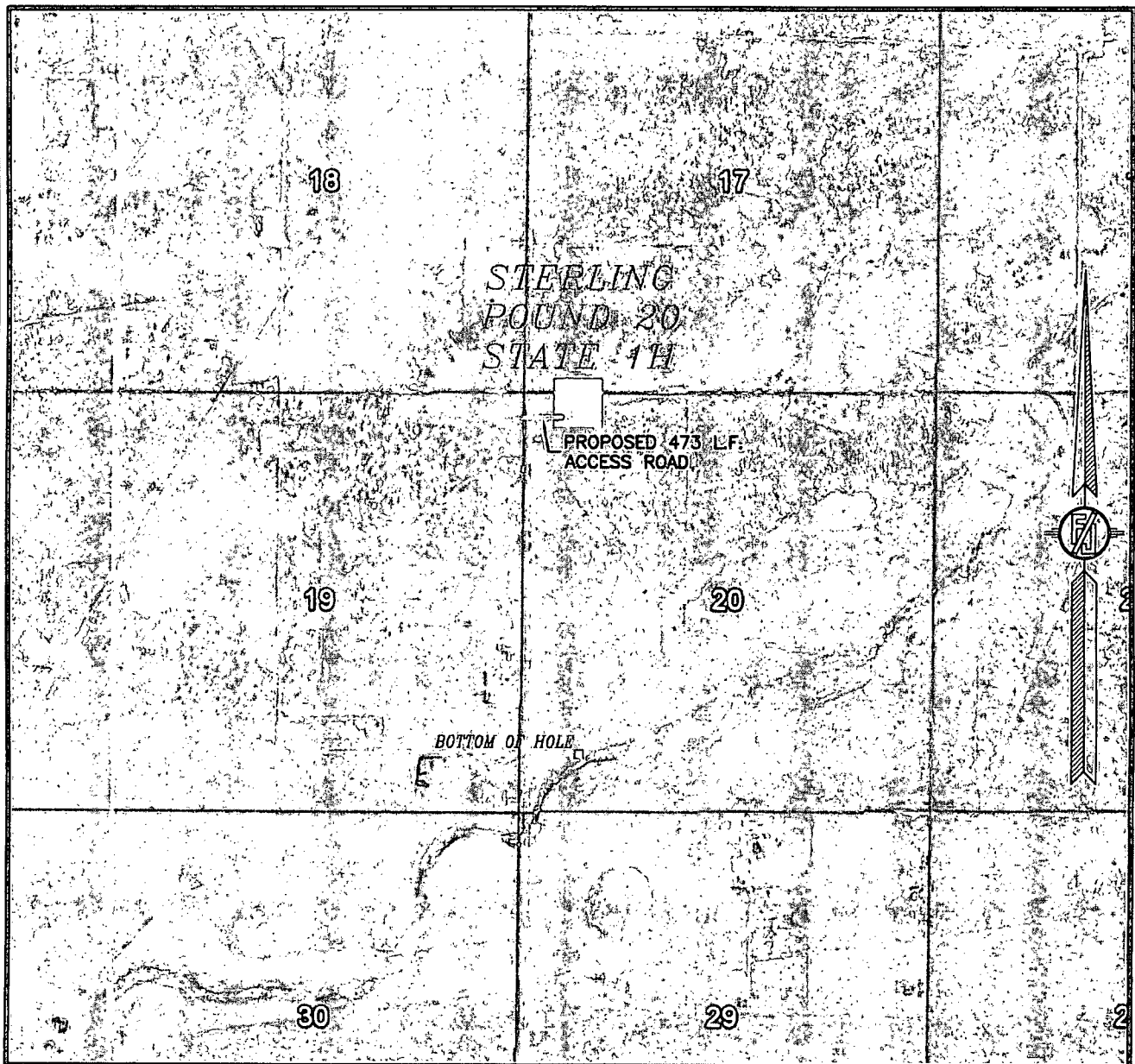
LOCATED 150 FT. FROM THE NORTH LINE
AND 710 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 23 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 6, 2015

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

SURVEY NO. 3317C
CARLSBAD, NEW MEXICO

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APR. 2013

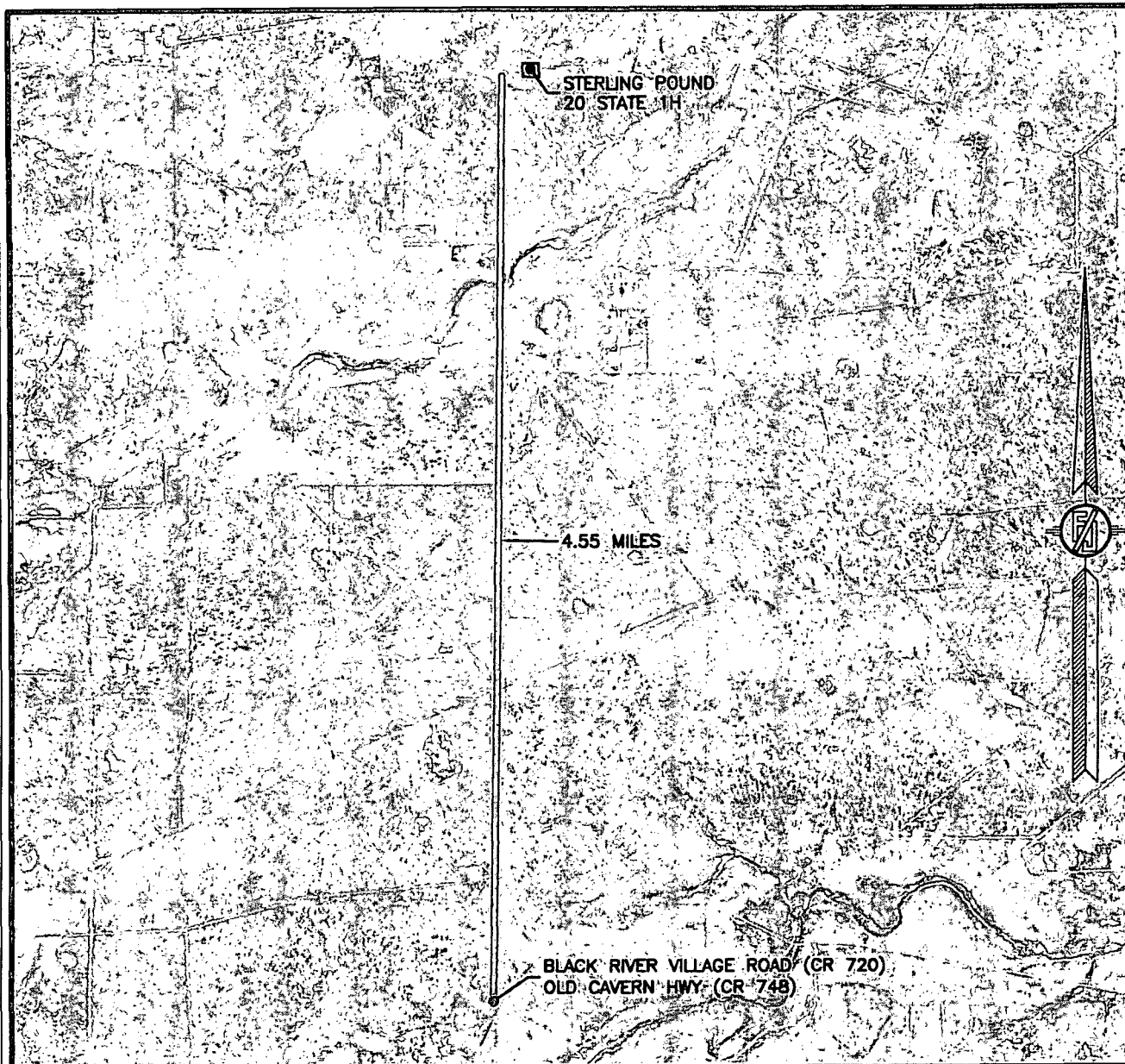
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SECTION 20, TOWNSHIP 23 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 6, 2015

SURVEY NO. 3317C

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

SECTION 20, TOWNSHIP 23 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APR. 2013

DEVON ENERGY PRODUCTION COMPANY, L.P.
STERLING POUND 20 STATE 1H
LOCATED 150 FT. FROM THE NORTH LINE
AND 710 FT. FROM THE WEST LINE OF
SECTION 20, TOWNSHIP 23 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 6, 2015

SURVEY NO. 3317C

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

MAR 12 2015

PERMIT CONDITIONS OF APPROVAL

RECEIVED

Operator Name and Address: DEVON ENERGY PRODUCTION COMPANY, LP [6137] 333 W. Sheridan Avenue Oklahoma City, OK 73102	API Number: Well: Sterling Pound 20 State #001H
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OCD Reviewer	Condition
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District I1625 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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170**District IV**1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico
Energy, Minerals and Natural
Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505**

Form APD Comments

Permit 201152

PERMIT COMMENTS

Operator Name and Address: DEVON ENERGY PRODUCTION COMPANY, LP [6137]	API Number: Well: Sterling Pound 20 State #001H
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Created By	Comment	Comment Date
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MAR 12 2015

Devon Energy, Sterling Pound 20 State 1H

1. Geologic Formations

RECEIVED

TVD of target	9,774'	Pilot hole depth	10,800'
MD at TD:	13,941'	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	130	Barren	
Top of Salt	500	Barren	
Base of Salt	1,739	Barren	
Delaware	2,054	Barren	
Cherry Canyon	2,696	Barren	
Brushy Canyon	3,825	Barren	
Bone Spring	5,359	Barren	
1 st Bone Spring Sand	6,416	Oil	
2 nd Bone Spring Lime	6,650	Oil	
2 nd Bone Spring Sand	6,913	Oil	
3 rd Bone Spring Lime	7,111	Oil	
Wolfbone	8,839	Oil	
Wolfcamp A	8,869	Oil	
Wolfcamp B Shale	9,170	Oil	
Wolfcamp C	9,551	Oil	
UPS	10,216	Oil	
Cisco	10,415	Oil	
Strawn	10,618	Oil	

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

Devon Energy, Sterling Pound 20 State 1H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn	SF Collapse	SF Burst	SF Tension
	From	To							
26"	0	200'	20"	64	J-55	BTC	5.81	23.59	74.57
17.5"	0	2,100'	13.375"	68	J-55	BTC	1.734	3.07	7.98
12.25"	0	6,600'	9.625"	40	HCK-55	BTC	1.23	1.15	3.51
8.75"	0	13,941'	5.5"	17	P-110	BTC	1.78	2.20	3.42
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, Sterling Pound 20 State 1H

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.	520	14.8	6.34	1.34	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake + 1% BWOC Calcium Chloride
13.375" Inter	1170	12.9	9.81	1.85	15	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	560	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13.375" Inter Two Stage Option	1020	12.9	9.81	1.85	15	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	560	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 250'					
	210	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Inter.	980	12.9	9.81	1.85	15	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	640	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Inter Two Stage Option	1030	12.9	9.81	1.85	15	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 2150'					
	70	12.9	9.81	1.85	15	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	70	14.8	1.33	6.32	7	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	410	11.9	12.89	2.31	n/a	Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	1270	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

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, Sterling Pound 20 State 1H

Pilot Hole depth 10800ft
KOP 9141ft

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type
8941	10800	10	720	15.6	1.19	5.42	Class H + 0.5% BWOC HR-601 + 0.2% Halad-9

Casing String	TOC	% Excess
20" Surface	0'	100%
13.375" Intermediate	0'	100%
13.375" Intermediate Two Stage Option	1 st Stage = 250' / 2 nd Stage = 0'	100%
9.625" Intermediate	1650'	75%
9.625" Intermediate Two Stage Option	1 st Stage = 2150' / 2 nd Stage = 1650'	75%
5.5" Production	6100'	25%

4. Pressure Control Equipment

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		
			Annular	x	
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

Devon Energy, Sterling Pound 20 State 1H

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Devon proposes using a multi-bowl wellhead assembly (FMC Uni-head). This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. - Wellhead will be installed by FMC's representatives. - If the welding is performed by a third party, the FMC's representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. - FMC representative will install the test plug for the initial BOP test. - FMC will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. - If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. - Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. - Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

Devon Energy, Sterling Pound 20 State 1H

	After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the FMC Uni-head wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. After running the 9-5/8" intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the FMC Uni-head. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP. Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns See attached schematic.
--	--

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	200'	FW Gel	8.6-8.8	28-34	N/C
1,030'	2,100'	Saturated Brine	10.0-10.2	28-34	N/C
2,100'	6,600'	Cut Brine	8.5-9.1	28-34	N/C
6,600'	13,941'	Cut Brine	8.5-9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	Will run GR/CNL 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

Devon Energy, Sterling Pound 20 State 1H

	Coring? If yes, explain
--	-------------------------

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

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	2847 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 provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? No.

Will be pre-setting casing? No.

Attachments

 x Directional Plan

 Other, describe

NM OIL CONSERVATION ARTESIA DISTRICT

MAR 12 2015

RECEIVED

DEVON ENERGY

Project: Eddy County, NM (NAD-83)
Site: Sterling Pound 20 State
Well: 1H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.06°
Magnetic North: 7.55°

Magnetic Field
Strength: 48162.6nT
Dip Angle: 60.04°
Date: 2/27/2015
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

devon

DESIGN TARGET DETAILS

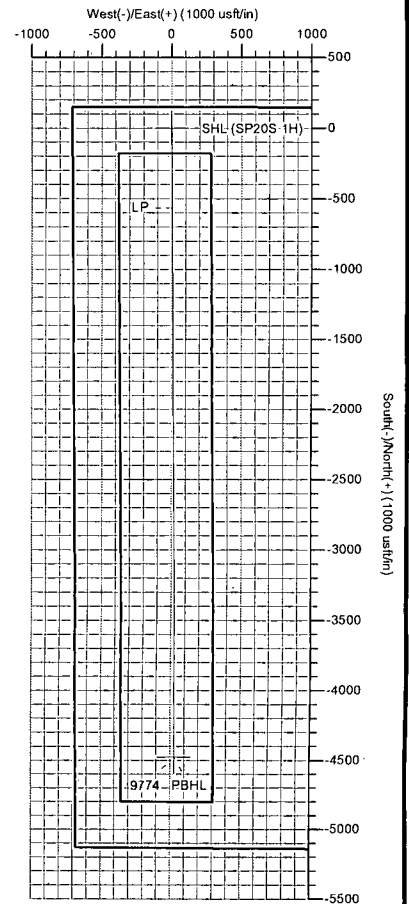
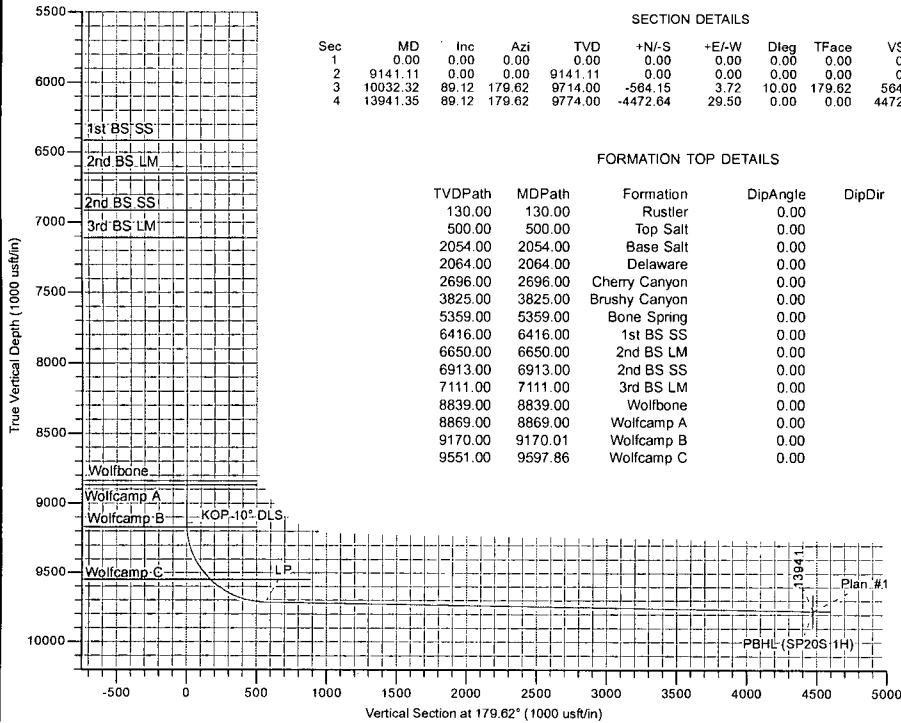
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
SHL (SP20S 1H)	0.00	0.00	0.00	471863.60	576854.97	32° 17' 49.827 N	104° 13' 6.183 W
PBHL (SP20S 1H)	9774.00	-4472.64	29.50	467390.96	576884.47	32° 17' 5.566 N	104° 13' 5.895 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9141.11	0.00	0.00	9141.11	0.00	0.00	0.00	0.00	0.00	KOP 10° DLS
3	10032.32	89.12	179.62	9714.00	-564.15	3.72	10.00	179.62	564.16	LP
4	13941.35	89.12	179.62	9774.00	-4472.64	29.50	0.00	0.00	4472.74	TD

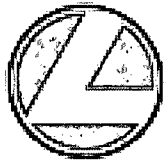
FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation	DipAngle	DipDir
130.00	130.00	Rustler	0.00	
500.00	500.00	Top Salt	0.00	
2054.00	2054.00	Base Salt	0.00	
2064.00	2064.00	Delaware	0.00	
2696.00	2696.00	Cherry Canyon	0.00	
3825.00	3825.00	Brushy Canyon	0.00	
5359.00	5359.00	Bone Spring	0.00	
6416.00	6416.00	1st BS SS	0.00	
6650.00	6650.00	2nd BS LM	0.00	
6913.00	6913.00	2nd BS SS	0.00	
7111.00	7111.00	3rd BS LM	0.00	
8839.00	8839.00	Wolfcamp	0.00	
8869.00	8869.00	Wolfcamp A	0.00	
9170.00	9170.01	Wolfcamp B	0.00	
9551.00	9597.86	Wolfcamp C	0.00	



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

Plan: Plan #1 (1H/CH)
Sterling Pound 20 State
Created By: Brandy Deaver Date: 10/45, March 09 2015
Date: _____
Approved: _____ Date: _____



LEAM
Drilling Systems, Inc.

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 12 2015

RECEIVED

DEVON ENERGY

Eddy County, NM (NAD-83)

Sterling Pound 20 State

1H

OH

Plan: Plan #1

Standard Planning Report

09 March, 2015

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devon

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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	Sterling Pound 20 State		
Site Position:		Northing:	471,863.60 usft
From:	Map	Easting:	576,854.97 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 17' 49.827 N
		Longitude:	104° 13' 6.183 W
		Grid Convergence:	0.06 °

Well	1H, Wolfcamp		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,211.90 usft
		Latitude:	32° 17' 49.827 N
		Longitude:	104° 13' 6.183 W
		Ground Level:	3,186.90 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	BGGM2014	2/27/2015	7.61
			Dip Angle
			60.04
			Field Strength
			48,163

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			179.62

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,141.11	0.00	0.00	9,141.11	0.00	0.00	0.00	0.00	0.00	0.00	
10,032.32	89.12	179.62	9,714.00	-564.15	3.72	10.00	10.00	20.15	179.62	
13,941.35	89.12	179.62	9,774.00	-4,472.64	29.50	0.00	0.00	0.00	0.00	PBHL (SP20S 1H)



LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SP20S 1H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
Top Salt									
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
2,054.00	0.00	0.00	2,054.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
2,064.00	0.00	0.00	2,064.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
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
2,696.00	0.00	0.00	2,696.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
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
3,825.00	0.00	0.00	3,825.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
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



LEAM Drilling Systems LLC

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,359.00	0.00	0.00	5,359.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
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
6,416.00	0.00	0.00	6,416.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BS SS									
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
6,650.00	0.00	0.00	6,650.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd BS LM									
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
6,913.00	0.00	0.00	6,913.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd BS SS									
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
7,111.00	0.00	0.00	7,111.00	0.00	0.00	0.00	0.00	0.00	0.00
3rd BS LM									
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
8,839.00	0.00	0.00	8,839.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfbone									
8,869.00	0.00	0.00	8,869.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfcamp A									
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
9,141.11	0.00	0.00	9,141.11	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS									
9,150.00	0.89	179.62	9,150.00	-0.07	0.00	0.07	10.00	10.00	0.00
9,170.01	2.89	179.62	9,170.00	-0.73	0.00	0.73	10.00	10.00	0.00
Wolfcamp B									
9,200.00	5.89	179.62	9,199.90	-3.02	0.02	3.02	10.00	10.00	0.00
9,250.00	10.89	179.62	9,249.35	-10.32	0.07	10.32	10.00	10.00	0.00
9,300.00	15.89	179.62	9,297.97	-21.89	0.14	21.89	10.00	10.00	0.00
9,350.00	20.89	179.62	9,345.40	-37.66	0.25	37.66	10.00	10.00	0.00
9,400.00	25.89	179.62	9,391.28	-57.50	0.38	57.50	10.00	10.00	0.00
9,450.00	30.89	179.62	9,435.25	-81.26	0.54	81.27	10.00	10.00	0.00
9,500.00	35.89	179.62	9,476.99	-108.77	0.72	108.77	10.00	10.00	0.00
9,550.00	40.89	179.62	9,516.17	-139.81	0.92	139.81	10.00	10.00	0.00
9,597.86	45.68	179.62	9,551.00	-172.62	1.14	172.62	10.00	10.00	0.00
Wolfcamp C									
9,600.00	45.89	179.62	9,552.49	-174.15	1.15	174.15	10.00	10.00	0.00
9,650.00	50.89	179.62	9,585.68	-211.52	1.40	211.52	10.00	10.00	0.00
9,700.00	55.89	179.62	9,615.49	-251.64	1.66	251.64	10.00	10.00	0.00
9,750.00	60.89	179.62	9,641.69	-294.21	1.94	294.21	10.00	10.00	0.00
9,800.00	65.89	179.62	9,664.08	-338.89	2.24	338.90	10.00	10.00	0.00
9,850.00	70.89	179.62	9,682.49	-385.36	2.54	385.37	10.00	10.00	0.00
9,900.00	75.89	179.62	9,696.78	-433.26	2.86	433.27	10.00	10.00	0.00
9,950.00	80.89	179.62	9,706.84	-482.22	3.18	482.23	10.00	10.00	0.00
10,000.00	85.89	179.62	9,712.59	-531.87	3.51	531.88	10.00	10.00	0.00
10,032.32	89.12	179.62	9,714.00	-564.16	3.72	564.17	10.00	10.00	0.00
LP									
10,100.00	89.12	179.62	9,715.04	-631.83	4.17	631.84	0.00	0.00	0.00
10,200.00	89.12	179.62	9,716.57	-731.81	4.83	731.83	0.00	0.00	0.00
10,300.00	89.12	179.62	9,718.11	-831.80	5.49	831.82	0.00	0.00	0.00
10,400.00	89.12	179.62	9,719.64	-931.78	6.15	931.80	0.00	0.00	0.00
10,500.00	89.12	179.62	9,721.18	-1,031.77	6.81	1,031.79	0.00	0.00	0.00
10,600.00	89.12	179.62	9,722.71	-1,131.76	7.46	1,131.78	0.00	0.00	0.00
10,700.00	89.12	179.62	9,724.25	-1,231.74	8.12	1,231.77	0.00	0.00	0.00
10,800.00	89.12	179.62	9,725.78	-1,331.73	8.78	1,331.76	0.00	0.00	0.00
10,900.00	89.12	179.62	9,727.32	-1,431.71	9.44	1,431.75	0.00	0.00	0.00
11,000.00	89.12	179.62	9,728.85	-1,531.70	10.10	1,531.73	0.00	0.00	0.00
11,100.00	89.12	179.62	9,730.39	-1,631.69	10.76	1,631.72	0.00	0.00	0.00
11,200.00	89.12	179.62	9,731.92	-1,731.67	11.42	1,731.71	0.00	0.00	0.00
11,300.00	89.12	179.62	9,733.46	-1,831.66	12.08	1,831.70	0.00	0.00	0.00
11,400.00	89.12	179.62	9,734.99	-1,931.65	12.74	1,931.69	0.00	0.00	0.00
11,500.00	89.12	179.62	9,736.53	-2,031.63	13.40	2,031.68	0.00	0.00	0.00
11,600.00	89.12	179.62	9,738.06	-2,131.62	14.06	2,131.66	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,700.00	89.12	179.62	9,739.60	-2,231.60	14.72	2,231.65	0.00	0.00	0.00	
11,800.00	89.12	179.62	9,741.13	-2,331.59	15.38	2,331.64	0.00	0.00	0.00	
11,900.00	89.12	179.62	9,742.67	-2,431.58	16.04	2,431.63	0.00	0.00	0.00	
12,000.00	89.12	179.62	9,744.20	-2,531.56	16.70	2,531.62	0.00	0.00	0.00	
12,100.00	89.12	179.62	9,745.74	-2,631.55	17.36	2,631.60	0.00	0.00	0.00	
12,200.00	89.12	179.62	9,747.27	-2,731.53	18.02	2,731.59	0.00	0.00	0.00	
12,300.00	89.12	179.62	9,748.81	-2,831.52	18.68	2,831.58	0.00	0.00	0.00	
12,400.00	89.12	179.62	9,750.34	-2,931.51	19.34	2,931.57	0.00	0.00	0.00	
12,500.00	89.12	179.62	9,751.88	-3,031.49	19.99	3,031.56	0.00	0.00	0.00	
12,600.00	89.12	179.62	9,753.41	-3,131.48	20.65	3,131.55	0.00	0.00	0.00	
12,700.00	89.12	179.62	9,754.95	-3,231.46	21.31	3,231.53	0.00	0.00	0.00	
12,800.00	89.12	179.62	9,756.48	-3,331.45	21.97	3,331.52	0.00	0.00	0.00	
12,900.00	89.12	179.62	9,758.02	-3,431.44	22.63	3,431.51	0.00	0.00	0.00	
13,000.00	89.12	179.62	9,759.55	-3,531.42	23.29	3,531.50	0.00	0.00	0.00	
13,100.00	89.12	179.62	9,761.09	-3,631.41	23.95	3,631.49	0.00	0.00	0.00	
13,200.00	89.12	179.62	9,762.62	-3,731.39	24.61	3,731.48	0.00	0.00	0.00	
13,300.00	89.12	179.62	9,764.16	-3,831.38	25.27	3,831.46	0.00	0.00	0.00	
13,400.00	89.12	179.62	9,765.69	-3,931.37	25.93	3,931.45	0.00	0.00	0.00	
13,500.00	89.12	179.62	9,767.23	-4,031.35	26.59	4,031.44	0.00	0.00	0.00	
13,600.00	89.12	179.62	9,768.76	-4,131.34	27.25	4,131.43	0.00	0.00	0.00	
13,700.00	89.12	179.62	9,770.30	-4,231.32	27.91	4,231.42	0.00	0.00	0.00	
13,800.00	89.12	179.62	9,771.83	-4,331.31	28.57	4,331.40	0.00	0.00	0.00	
13,900.00	89.12	179.62	9,773.37	-4,431.30	29.23	4,431.39	0.00	0.00	0.00	
13,941.35	89.12	179.62	9,774.00	-4,472.64	29.50	4,472.74	0.00	0.00	0.00	
TD - PBHL (SP20S 1H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL (SP20S 1H)	0.00	0.00	0.00	0.00	0.00	471,863.60	576,854.97	32° 17' 49.827 N	104° 13' 6.183 W	
- hit/miss target										
- Shape										
- Point										
PBHL (SP20S 1H)	0.00	0.00	9,774.00	-4,472.64	29.50	467,390.96	576,884.47	32° 17' 5.566 N	104° 13' 5.895 W	
- plan hits target center										
- Point										

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 1H
Company:	DEVON ENERGY	TVD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3186.9' GL + 25' RKB @ 3211.90usft
Site:	Sterling Pound 20 State	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
130.00	130.00	Rustler		0.00		
500.00	500.00	Top Salt		0.00		
2,054.00	2,054.00	Base Salt		0.00		
2,064.00	2,064.00	Delaware		0.00		
2,696.00	2,696.00	Cherry Canyon		0.00		
3,825.00	3,825.00	Brushy Canyon		0.00		
5,359.00	5,359.00	Bone Spring		0.00		
6,416.00	6,416.00	1st BS SS		0.00		
6,650.00	6,650.00	2nd BS LM		0.00		
6,913.00	6,913.00	2nd BS SS		0.00		
7,111.00	7,111.00	3rd BS LM		0.00		
8,839.00	8,839.00	Wolfbone		0.00		
8,869.00	8,869.00	Wolfcamp A		0.00		
9,170.01	9,170.00	Wolfcamp B		0.00		
9,597.86	9,551.00	Wolfcamp C		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,141.11	9,141.11	0.00	0.00	KOP 10° DLS	
10,032.32	9,714.00	-564.16	3.72	LP	
13,941.35	9,774.00	-4,472.64	29.50	TD	