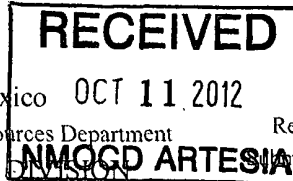


District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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 October 15, 2009
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-40786		2 Pool Code		3 Pool Name Lost Tank; Wolfcamp	
4 Property Code 39494		5 Property Name LAVA TUBE "27" STATE			6 Well Number 1H
7 OGRID No. 6137		8 Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			9 Elevation 3491.5

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
B	34	21 S	31 E		1015	NORTH	1655	EAST	EDDY

11 Bottom Hole Location If Different From Surface

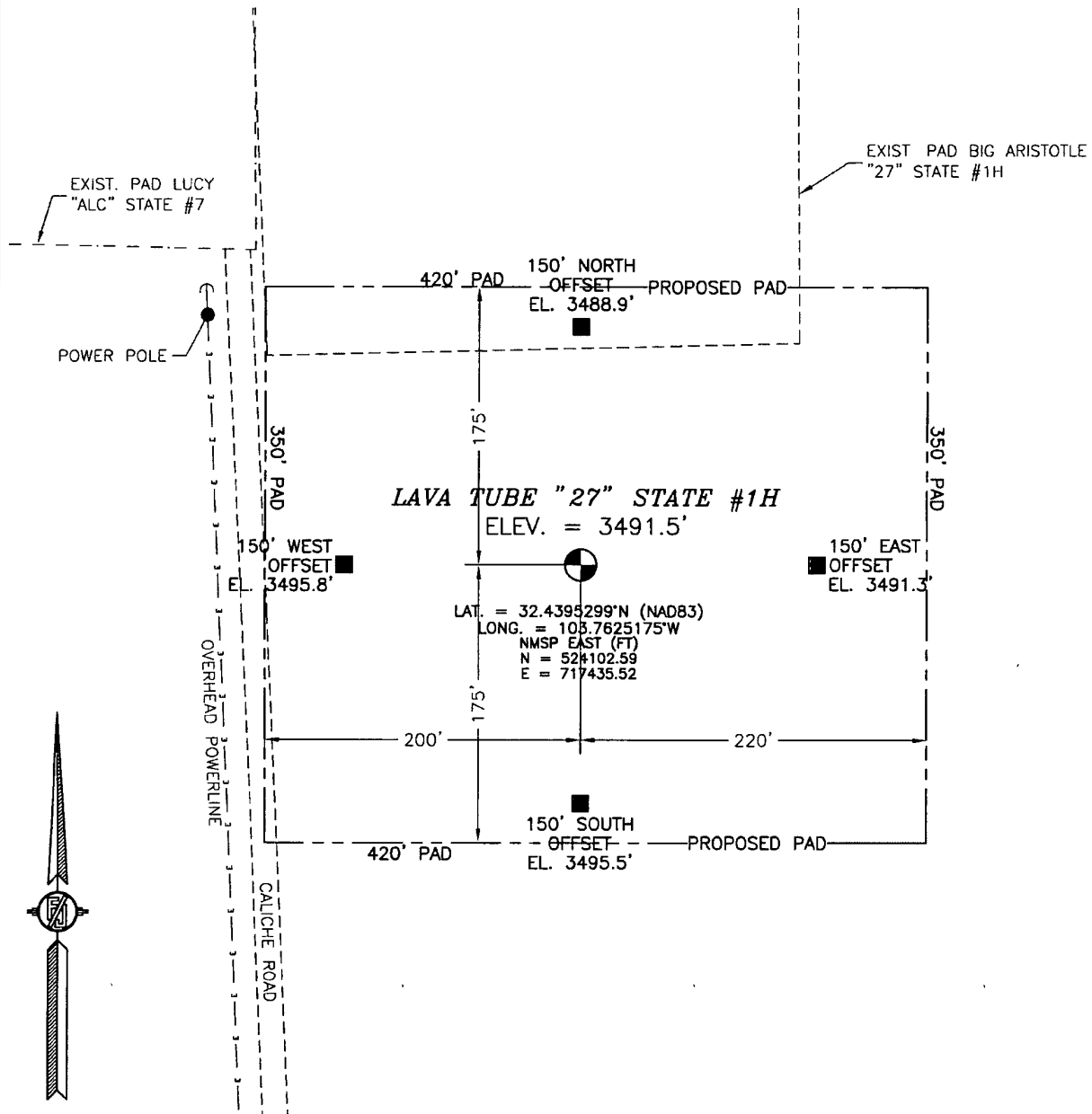
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	27	21 S	31 E		330	NORTH	1980	EAST	EDDY

12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order No.
----------------------------------	--------------------	-----------------------	--------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division <i>Patti Riechers</i> Signature _____ Date _____ Printed Name Patti Riechers 10/10/2012 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 JUNE 5, 2012 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number 20110004 JARAMILLO PLS 12797 SURVEY NO. 1073
--	--

SECTION 34, TOWNSHIP 21 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HOBBS HIGHWAY 62/180 AND LOUIS WHITLOCK ROAD GO SOUTH ON LOUIS WHITLOCK ROAD 7.75 MILES (0.69 MILES PAST MILE MARKER 6) TO CALICHE LEASE ROAD ON LEFT, GO EAST ON CALICHE LEASE ROAD 0.1 MILES TO FIRST CALICHE ROAD ON LEFT, GO NORTH ON CALICHE LEASE ROAD 0.7 MILES, SITE IS ABOUT 200 FT ON RIGHT (EAST).

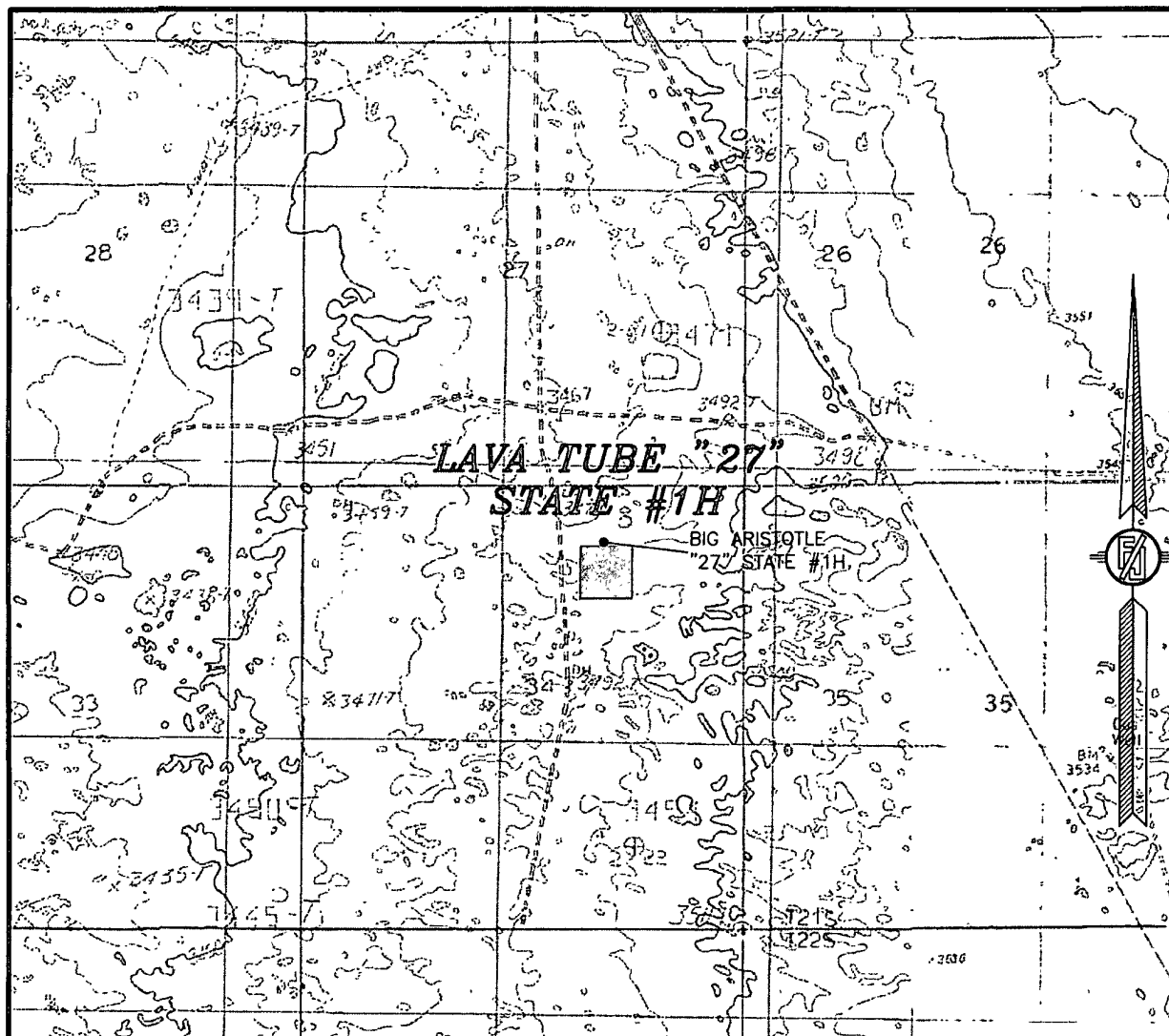
DEVON ENERGY PRODUCTION COMPANY, L.P.
LAVA TUBE "27" STATE #1H
LOCATED 1015 FT. FROM THE NORTH LINE
AND 1655 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 21 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 5, 2012

SURVEY NO. 1073

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

SECTION 34, TOWNSHIP 21 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
LIVINGSTON RIDGE

NOT TO SCALE

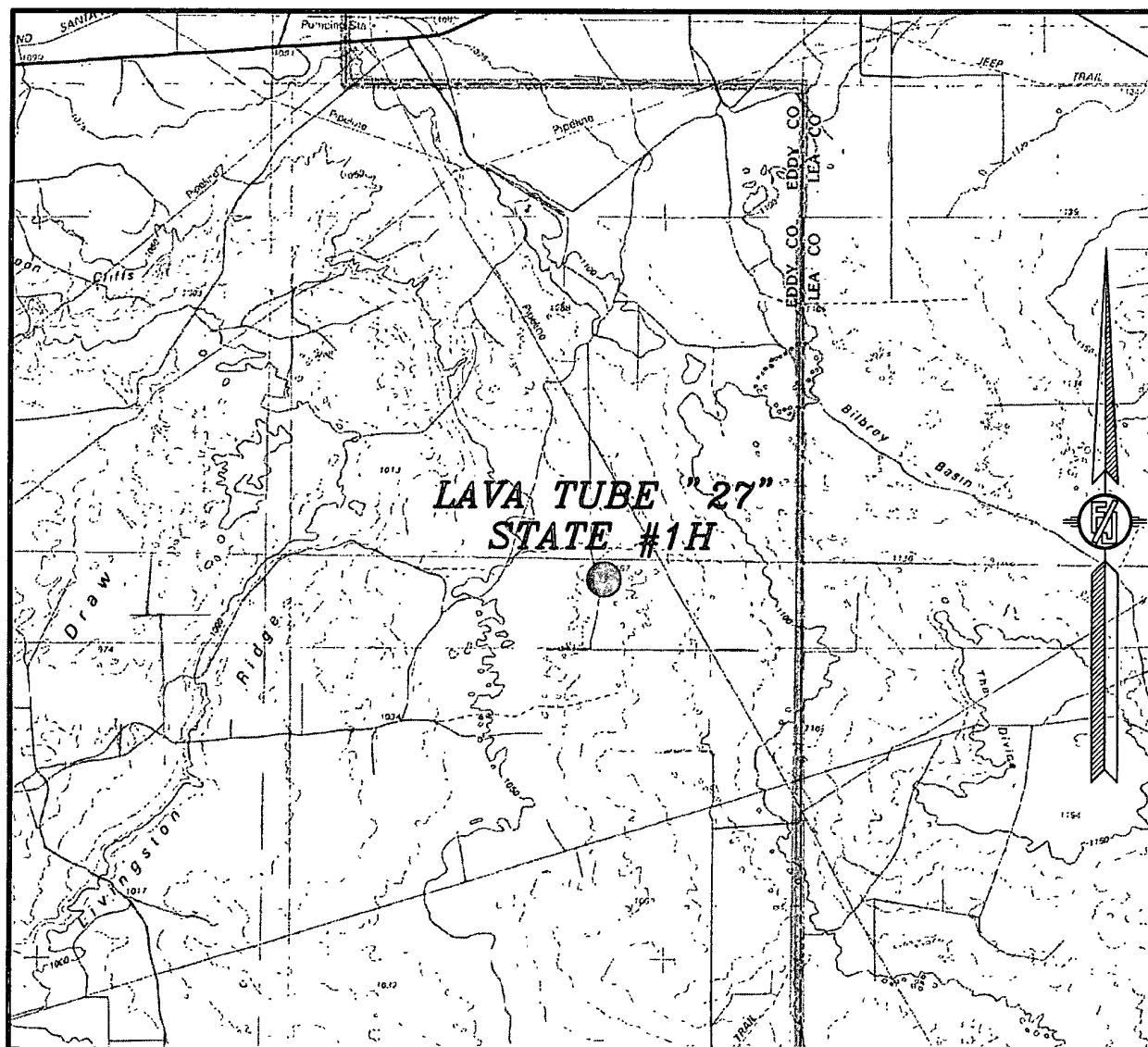
DEVON ENERGY PRODUCTION COMPANY, L.P.
LAVA TUBE "27" STATE #1H
LOCATED 1015 FT. FROM THE NORTH LINE
AND 1655 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 21 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 5, 2012

SURVEY NO. 1073

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

SECTION 34, TOWNSHIP 21 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

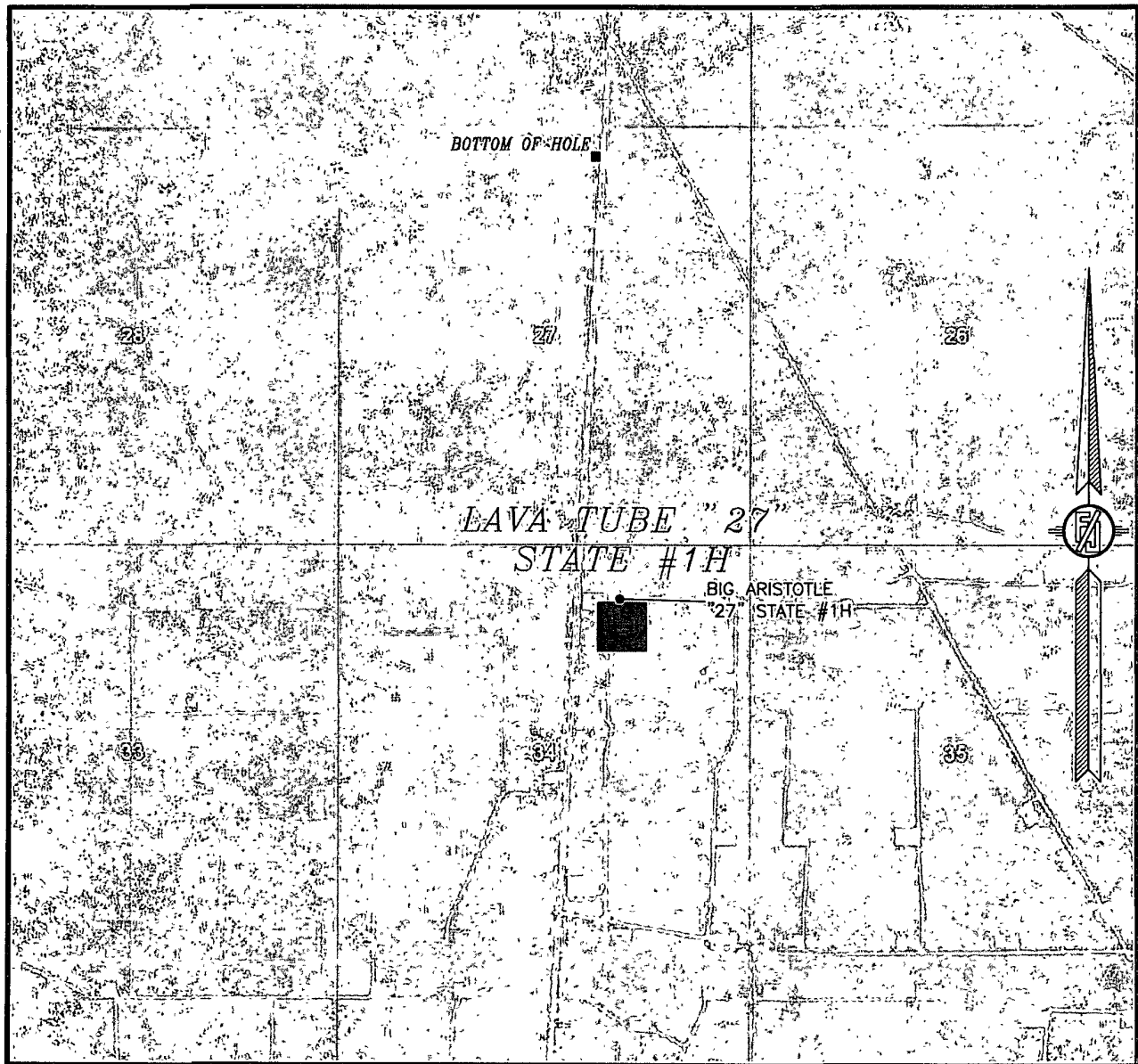
DEVON ENERGY PRODUCTION COMPANY, L.P.
LAVA TUBE "27" STATE #1H
LOCATED 1015 FT. FROM THE NORTH LINE
AND 1655 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 21 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 5, 2012

SURVEY NO. 1073

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

SECTION 34, TOWNSHIP 21 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.

LAVA TUBE "27" STATE #1H

LOCATED 1015 FT. FROM THE NORTH LINE
AND 1655 FT. FROM THE EAST LINE OF
SECTION 34, TOWNSHIP 21 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 5, 2012

SURVEY NO. 1073

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

Lava Tube 1H- APD DRILLING PLAN
KKS 8-26-12

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0 – 750	13-3/8"	0 – 750	48#	STC	H-40
12-1/4"	750– 4,900	9-5/8"	0 – 4,900	40#	LTC	HCK-55
8-3/4"	4,900– 11,400	5-1/2"	0 – 11,400	20#	LTC	P-110
8-3/4"	11,400– 17,981	5-1/2"	11,400 – 17,981	17#	BTC	HCP-110

Max TVD in lateral: 12,250'

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 – 750	8.4 – 9.0	30 – 34	N/C	FW
750– 4,900	9.6 – 10.0	28 – 32	N/C	Brine
4,900 – 17,981	8.6 – 9.0	28 – 32	N/C-12	FW

Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as a 3M system prior to drilling out the intermediate casing shoe.

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.

Cementing Program (cement volumes based on at least 25% excess)

13-3/8" Surface

Lead: 875 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.1% Fresh Water, 13.5 ppg

Yield: 1.75 cf/sk

TOC @ surface

Tail: 335 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 63.1% Fresh Water, 14.8 ppg

Yield: 1.35 cf/sk

9-5/8" Intermediate

Lead: 1115 sacks (65:35) Class C Cement:Poz (Fly Ash): + 5% bwow Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 6% bwoc Bentonite + 70.9% Fresh Water, 12.9 ppg

Yield: 1.85 cf/sk

TOC @ surface

Tail: 425 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Water, 14.8 ppg

Yield: 1.33 cf/sk

5-1/2" Production

1st Stage

Lead: 1105 sacks (65:35) Class H Cement:Poz (Fly Ash) + 6% bwoc Bentonite + 0.2% bwoc HR-601 + 74.1% Fresh Water, 12.5 ppg

Yield: 1.95 cf/sk

Tail: 1640 sacks (50:50) Class H Cement:Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg

Yield: 1.22 cf/sk

DV TOOL at 6,000 ft

2nd Stage

Tail: 330 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33cf/sk

TOC @ 4,400 ft

TOC for All Strings:

Surface:	0
Intermediate:	0
Production:	4,400 ft

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

Devon Energy Corporation

HALLIBURTON | Sperry Drilling



Project: Eddy County, NM (NAD 83)
Site: Lava Tube 27 State
Well: Lava Tube 27 State 1H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: Original Well Elev

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: GL 3491.5' + 25'KB @ 3516.50ft (Original Well Elev)
Northing 524102.59 **Easting** 717435.532° **Latitude** 26° 22.308 N **Longitude** 103° 45' 45.063 W

CASING DETAILS

No casing data is available

SECTION DETAILS

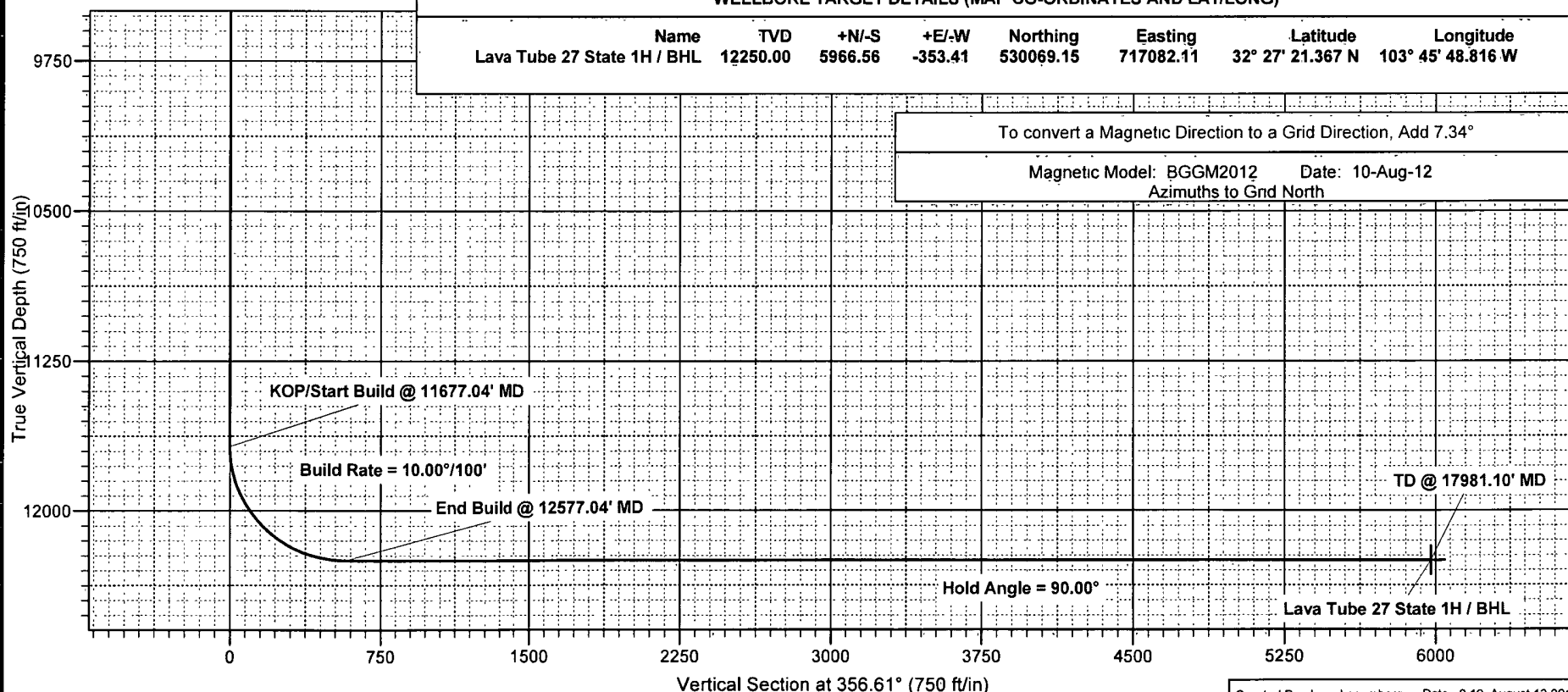
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11677.04	0.00	0.00	11677.04	0.00	0.00	0.00	0.00	0.00	KOP/Start Build
12577.04	90.00	356.61	12250.00	571.96	-33.88	10.00	356.61	572.96	End Build
17981.10	90.00	356.61	12250.00	5966.56	-353.41	0.00	0.00	5977.02	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Lava Tube 27 State 1H / BHL	12250.00	5966.56	-353.41	530069.15	717082.11	32° 27' 21.367 N	103° 45' 48.816 W

To convert a Magnetic Direction to a Grid Direction, Add 7.34°

Magnetic Model: BGGM2012 Date: 10-Aug-12
 Azimuths to Grid North



Created By Irma Lecumberry Date 8 19, August 13 2012

Project: Eddy County, NM (NAD 83)
Site: Lava Tube 27 State
Well: Lava Tube 27 State 1H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: Original Well Elev

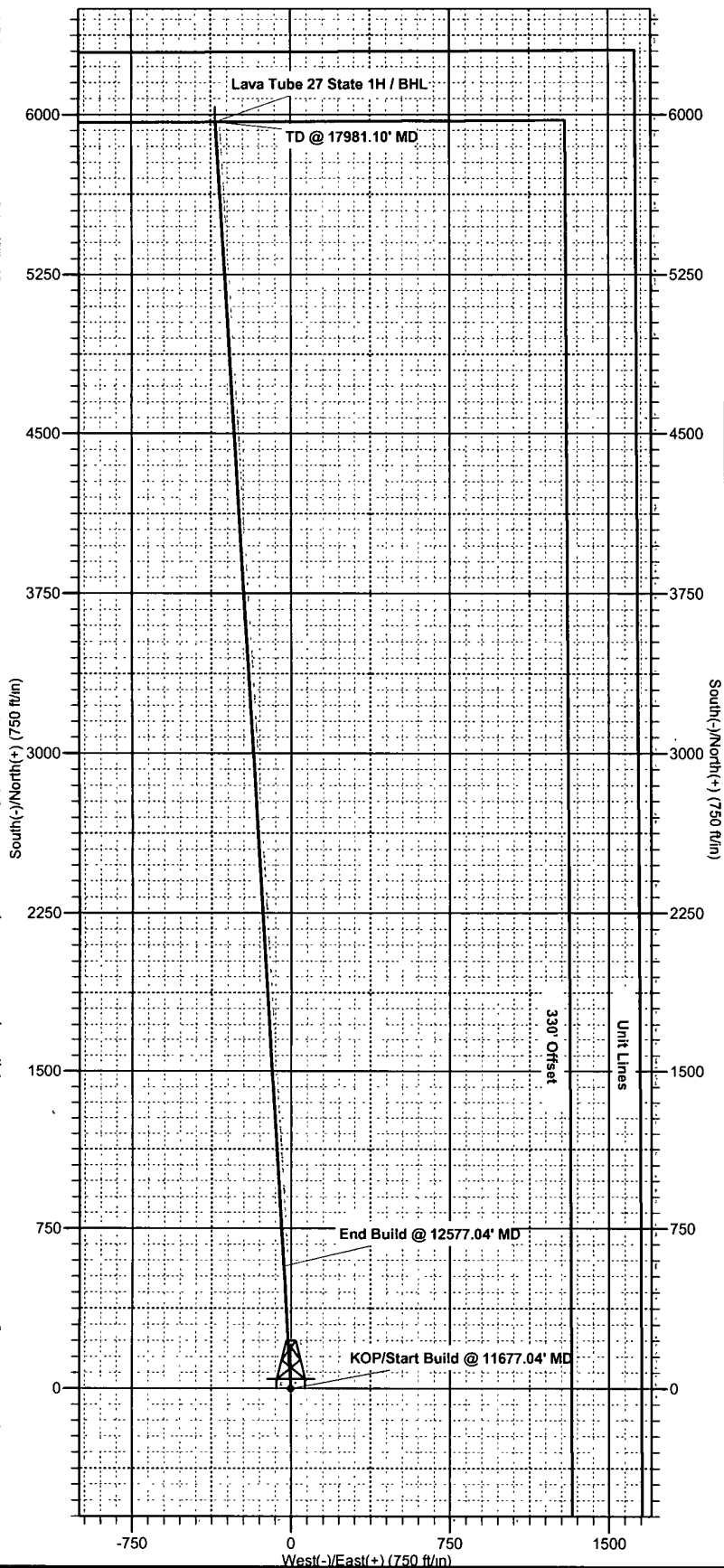
SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation GL 3491 5' + 25"KB @ 3516 50ft (Original Well Elev)
 Northing Easting Latitude Longitude
 524102 59 717435 52 32° 26' 22 308 N 103° 45' 45 063 W

To convert a Magnetic Direction to a Grid Direction, Add 7 34°

Magnetic Model: BGGM2012 Date: 10-Aug-12
 Azimuths to Grid North

devon



Devon Energy Corporation

Eddy County, NM (NAD 83)

Lava Tube 27 State

Lava Tube 27 State 1H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Proposal Report

13 August, 2012

Well Coordinates 524,102 59 N, 717,435 52 E (32° 26' 22 31" N, 103° 45' 45 06" W)
Ground Level 3,491 50 ft

Local Coordinate Origin	Centered on Well Lava Tube 27 State 1H
Viewing Datum:	GL 3491 5' + 25'KB @ 3516 50ft (Original Well Elev)
TVDs to System:	N
North Reference:	Gnd
Unit System	API - US Survey Feet

Version 2003 16 Build 431

HALLIBURTON

Plan Report for Lava Tube 27 State 1H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0 00	0 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
11,677.04	0 00	0.00	11,677.04	0 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP/Start Build @ 11677.04' MD										
11,677.05	0 00	356.61	11,677.05	0 00	0 00	0 00	0 00	0 00	0 00	356.61
Build Rate = 10.00°/100'										
11,700.00	2.30	356.61	11,699.99	0.46	-0.03	0.46	10.00	10.00	0 00	356.61
11,800.00	12.30	356.61	11,799.06	13.12	-0.78	13.14	10.00	10.00	0.00	0.00
11,900.00	22.30	356.61	11,894.42	42.76	-2.53	42.84	10.00	10.00	0 00	0.00
12,000.00	32.30	356.61	11,983.17	88.48	-5.24	88.64	10.00	10.00	0 00	0.00
12,100.00	42.30	356.61	12,062.62	148.89	-8.82	149.15	10.00	10.00	0 00	0.00
12,200.00	52.30	356.61	12,130.35	222.16	-13.16	222.55	10.00	10.00	0 00	0.00
12,300.00	62.30	356.61	12,184.32	306.05	-18.13	306.59	10.00	10.00	0 00	0.00
12,400.00	72.30	356.61	12,222.86	398.02	-23.58	398.72	10.00	10.00	0 00	0.00
12,500.00	82.30	356.61	12,244.83	495.28	-29.34	496.15	10.00	10.00	0 00	0.00
12,577.04	90.00	356.61	12,250.00	571.96	-33.88	572.96	10.00	10.00	0 00	0.00
End Build @ 12577.04' MD - Hold Angle = 90.00°										
12,600.00	90.00	356.61	12,250.00	594.87	-35.24	595.92	0.00	0.00	0 00	0.00
12,700.00	90.00	356.61	12,250.00	694.70	-41.15	695.92	0.00	0.00	0 00	0.00
12,800.00	90.00	356.61	12,250.00	794.52	-47.06	795.92	0.00	0.00	0 00	0.00
12,900.00	90.00	356.61	12,250.00	894.35	-52.97	895.92	0.00	0.00	0 00	0.00
13,000.00	90.00	356.61	12,250.00	994.17	-58.89	995.92	0.00	0.00	0 00	0.00
13,100.00	90.00	356.61	12,250.00	1,094.00	-64.80	1,095.92	0.00	0.00	0 00	0.00
13,200.00	90.00	356.61	12,250.00	1,193.82	-70.71	1,195.92	0.00	0.00	0 00	0.00
13,300.00	90.00	356.61	12,250.00	1,293.65	-76.63	1,295.92	0.00	0.00	0 00	0.00
13,400.00	90.00	356.61	12,250.00	1,393.47	-82.54	1,395.92	0.00	0.00	0 00	0.00
13,500.00	90.00	356.61	12,250.00	1,493.30	-88.45	1,495.92	0.00	0.00	0 00	0.00
13,600.00	90.00	356.61	12,250.00	1,593.12	-94.36	1,595.92	0.00	0.00	0 00	0.00
13,700.00	90.00	356.61	12,250.00	1,692.95	-100.28	1,695.92	0.00	0.00	0 00	0.00
13,800.00	90.00	356.61	12,250.00	1,792.77	-106.19	1,795.92	0.00	0.00	0 00	0.00
13,900.00	90.00	356.61	12,250.00	1,892.60	-112.10	1,895.92	0.00	0.00	0 00	0.00
14,000.00	90.00	356.61	12,250.00	1,992.42	-118.01	1,995.92	0.00	0.00	0 00	0.00
14,100.00	90.00	356.61	12,250.00	2,092.25	-123.93	2,095.92	0.00	0.00	0 00	0.00
14,200.00	90.00	356.61	12,250.00	2,192.07	-129.84	2,195.92	0.00	0.00	0 00	0.00
14,300.00	90.00	356.61	12,250.00	2,291.90	-135.75	2,295.92	0.00	0.00	0 00	0.00
14,400.00	90.00	356.61	12,250.00	2,391.72	-141.67	2,395.92	0.00	0.00	0 00	0.00
14,500.00	90.00	356.61	12,250.00	2,491.55	-147.58	2,495.92	0.00	0.00	0 00	0.00
14,600.00	90.00	356.61	12,250.00	2,591.37	-153.49	2,595.92	0.00	0.00	0 00	0.00
14,700.00	90.00	356.61	12,250.00	2,691.20	-159.40	2,695.92	0.00	0.00	0 00	0.00
14,800.00	90.00	356.61	12,250.00	2,791.02	-165.32	2,795.92	0.00	0.00	0 00	0.00
14,900.00	90.00	356.61	12,250.00	2,890.85	-171.23	2,895.92	0.00	0.00	0 00	0.00
15,000.00	90.00	356.61	12,250.00	2,990.67	-177.14	2,995.92	0.00	0.00	0 00	0.00
15,100.00	90.00	356.61	12,250.00	3,090.50	-183.06	3,095.92	0.00	0.00	0 00	0.00
15,200.00	90.00	356.61	12,250.00	3,190.32	-188.97	3,195.92	0.00	0.00	0 00	0.00
15,300.00	90.00	356.61	12,250.00	3,290.15	-194.88	3,295.92	0.00	0.00	0 00	0.00
15,400.00	90.00	356.61	12,250.00	3,389.97	-200.79	3,395.92	0.00	0.00	0 00	0.00
15,500.00	90.00	356.61	12,250.00	3,489.80	-206.71	3,495.92	0.00	0.00	0 00	0.00
15,600.00	90.00	356.61	12,250.00	3,589.62	-212.62	3,595.92	0.00	0.00	0 00	0.00
15,700.00	90.00	356.61	12,250.00	3,689.45	-218.53	3,695.92	0.00	0.00	0 00	0.00
15,800.00	90.00	356.61	12,250.00	3,789.27	-224.45	3,795.92	0.00	0.00	0 00	0.00
15,900.00	90.00	356.61	12,250.00	3,889.10	-230.36	3,895.92	0.00	0.00	0 00	0.00
16,000.00	90.00	356.61	12,250.00	3,988.92	-236.27	3,995.92	0.00	0.00	0 00	0.00
16,100.00	90.00	356.61	12,250.00	4,088.75	-242.18	4,095.92	0.00	0.00	0 00	0.00
16,200.00	90.00	356.61	12,250.00	4,188.57	-248.10	4,195.92	0.00	0.00	0 00	0.00
16,300.00	90.00	356.61	12,250.00	4,288.40	-254.01	4,295.92	0.00	0.00	0 00	0.00
16,400.00	90.00	356.61	12,250.00	4,388.22	-259.92	4,395.92	0.00	0.00	0 00	0.00
16,500.00	90.00	356.61	12,250.00	4,488.05	-265.84	4,495.92	0.00	0.00	0 00	0.00
16,600.00	90.00	356.61	12,250.00	4,587.87	-271.75	4,595.92	0.00	0.00	0 00	0.00
16,700.00	90.00	356.61	12,250.00	4,687.70	-277.66	4,695.92	0.00	0.00	0 00	0.00

Plan Report for Lava Tube 27 State 1H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
16,800.00	90.00	356.61	12,250.00	4,787.52	-283.57	4,795.92	0.00	0.00	0.00	0.00
16,900.00	90.00	356.61	12,250.00	4,887.35	-289.49	4,895.92	0.00	0.00	0.00	0.00
17,000.00	90.00	356.61	12,250.00	4,987.17	-295.40	4,995.92	0.00	0.00	0.00	0.00
17,100.00	90.00	356.61	12,250.00	5,087.00	-301.31	5,095.92	0.00	0.00	0.00	0.00
17,200.00	90.00	356.61	12,250.00	5,186.82	-307.22	5,195.92	0.00	0.00	0.00	0.00
17,300.00	90.00	356.61	12,250.00	5,286.65	-313.14	5,295.92	0.00	0.00	0.00	0.00
17,400.00	90.00	356.61	12,250.00	5,386.47	-319.05	5,395.92	0.00	0.00	0.00	0.00
17,500.00	90.00	356.61	12,250.00	5,486.30	-324.96	5,495.92	0.00	0.00	0.00	0.00
17,600.00	90.00	356.61	12,250.00	5,586.12	-330.88	5,595.92	0.00	0.00	0.00	0.00
17,700.00	90.00	356.61	12,250.00	5,685.95	-336.79	5,695.92	0.00	0.00	0.00	0.00
17,800.00	90.00	356.61	12,250.00	5,785.78	-342.70	5,795.92	0.00	0.00	0.00	0.00
17,900.00	90.00	356.61	12,250.00	5,885.60	-348.61	5,895.92	0.00	0.00	0.00	0.00
17,981.10	90.00	356.61	12,250.00	5,966.56	-353.41	5,977.02	0.00	0.00	0.00	0.00

Lava Tube 27 State 1H / BHL

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,677.04	11,677.04	0.00	0.00	KOP/Start Build @ 11677.04' MD
11,677.05	11,677.05	0.00	0.00	Build Rate = 10.00°/100'
12,577.04	12,250.00	571.95	-33.88	End Build @ 12577.04' MD
12,577.04	12,250.00	571.96	-33.88	Hold Angle = 90.00°
17,981.10	12,250.00	5,966.56	-353.41	TD @ 17981.10' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
TD	No Target (Freehand)	356.61	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	17,981.10	Plan #1	MWD

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Lava Tube 27 State 1H / BHL	12,250.00	5,966.56	-353.41	Point

North Reference Sheet for Lava Tube 27 State - Lava Tube 27 State 1H - Wellbore #1

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

Vertical Depths are relative to GL 3491 5' + 25'KB @ 3516 50ft (Original Well Elev). Northing and Easting are relative to Lava Tube 27 State 1H

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

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104 33°, Longitude Origin 0° 0' 0 000 E°, Latitude Origin 0° 0' 0 000 N°

False Easting 541,337 50ft, False Northing, 0 00ft, Scale Reduction: 0 99994460

Grid Coordinates of Well 524,102 59 ft N, 717,435 52 ft E

Geographical Coordinates of Well: 32° 26' 22.31" N, 103° 45' 45 06" W

Grid Convergence at Surface is: 0 31°

Based upon Minimum Curvature type calculations, at a Measured Depth of 17,981 10ft
the Bottom Hole Displacement is 5,977 02ft in the Direction of 356 61° (Grid).

Magnetic Convergence at surface is -7.34° (10 August 2012, BGGM2012)

