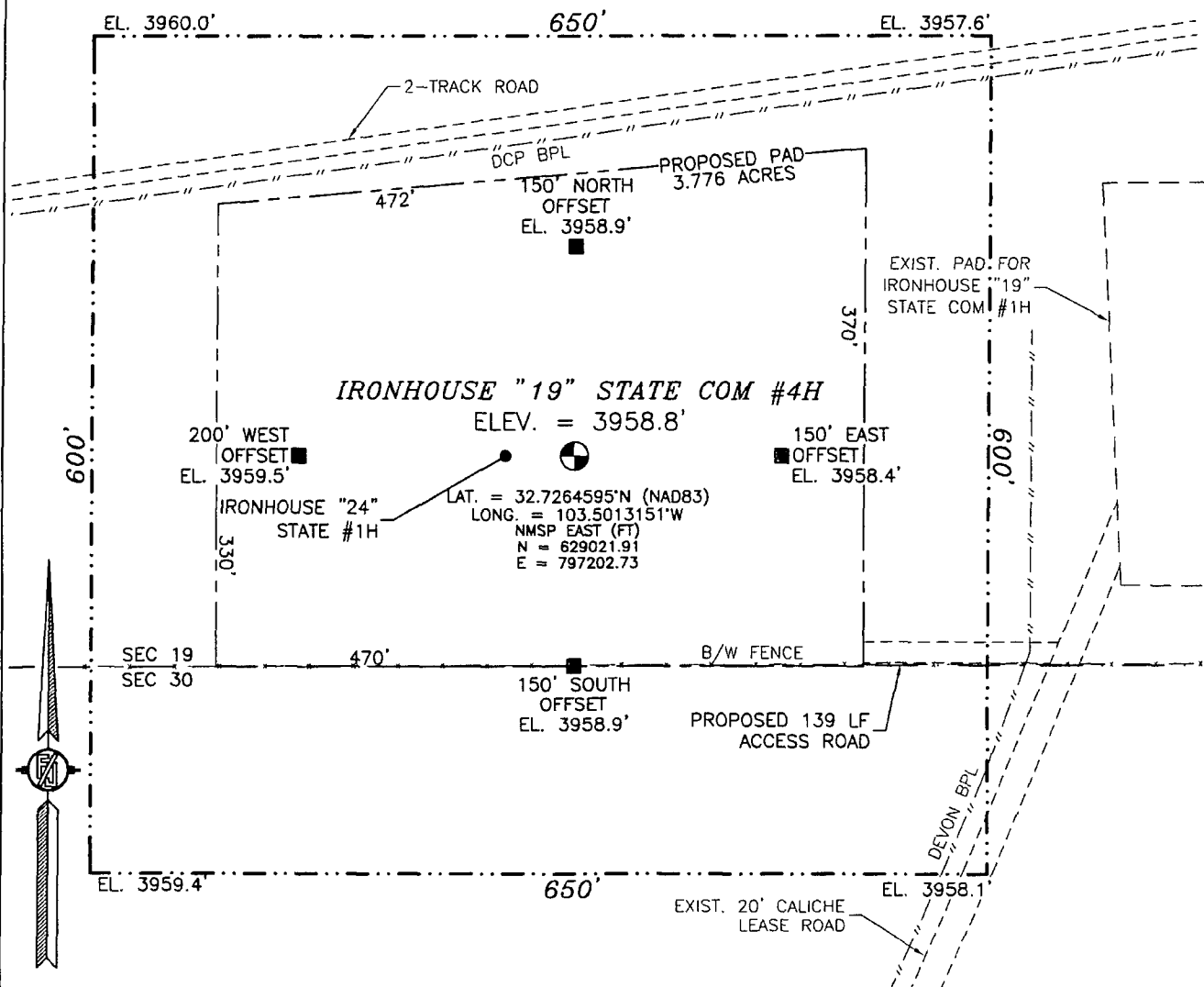


JUN 27 2013

SECTION 19, TOWNSHIP 18 SOUTH, RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) IN DEGREES, MINUTES AND DECIMAL SECONDS FORMAT. BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST (NAD83) COORDINATES MODIFIED TO SURFACE.



012 60 120 240

SCALE 1" = 120'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 529 AND STATE HIGHWAY 238 GO WEST ON STATE HIGHWAY 529 5.5 MILES. GO NORTHEAST ON CALICHE LEASE ROAD (200'± EAST OF MILE POST 23) FOR APPROX. 0.6 OF A MILE. CONTINUE EAST APPROX. 0.25 OF A MILE. CONTINUE NORTHEAST APPROX. 0.7 OF A MILE. CONTINUE NORTHEAST APPROX. 0.4 OF A MILE TO IRONHOUSE "19" STATE COM #1H WELL LOCATION IS APPROX. 586 FT WEST.

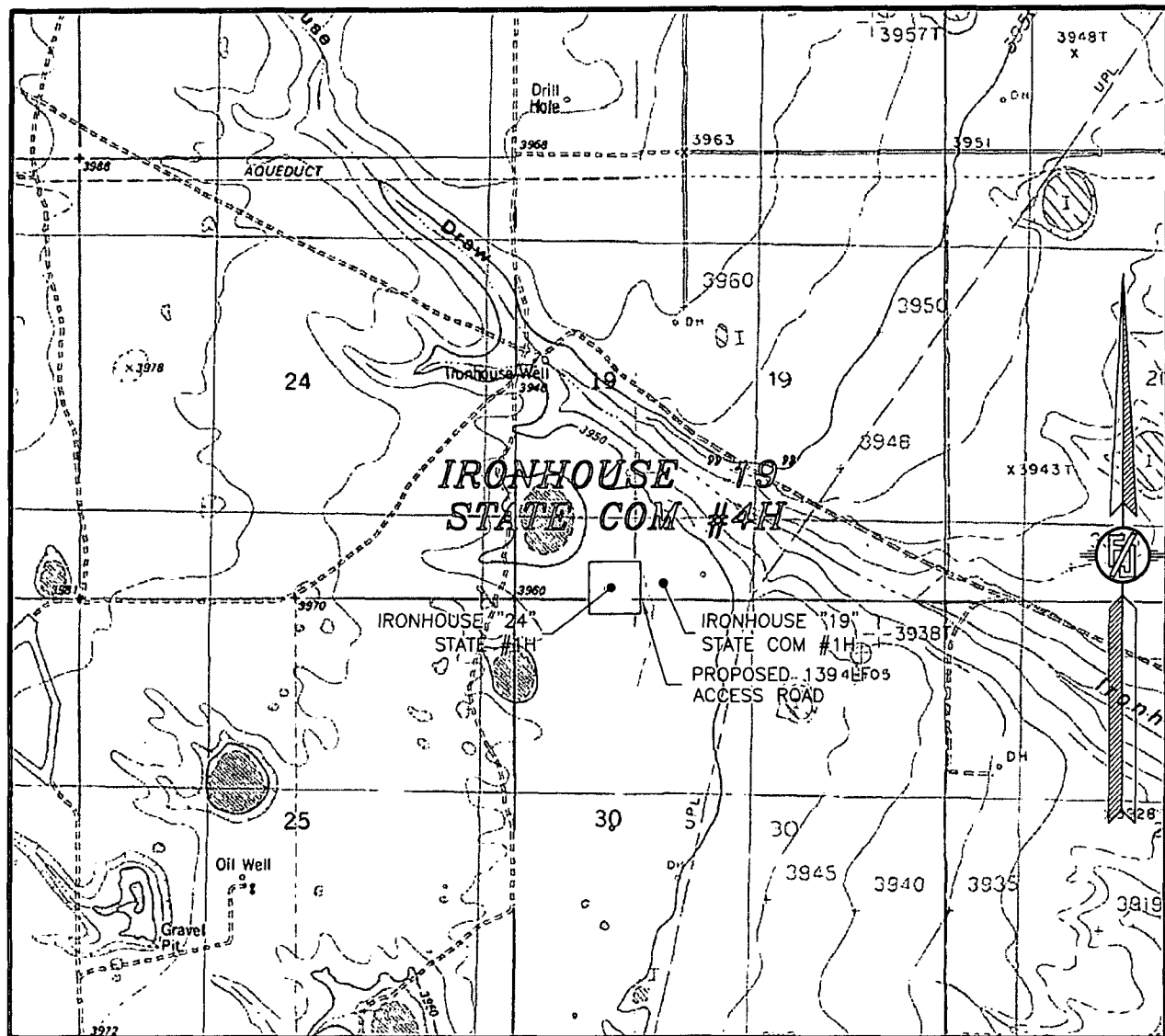
DEVON ENERGY PRODUCTION COMPANY, L.P.
IRONHOUSE "19" STATE COM #4H
LOCATED 150 FT. FROM THE SOUTH LINE
AND 1215 FT. FROM THE WEST LINE OF
SECTION 19, TOWNSHIP 18 SOUTH,
RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 27, 2013

SURVEY NO. 1633

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

SECTION 19, TOWNSHIP 18 SOUTH, RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
IRONHOUSE DRAW

NOT TO SCALE

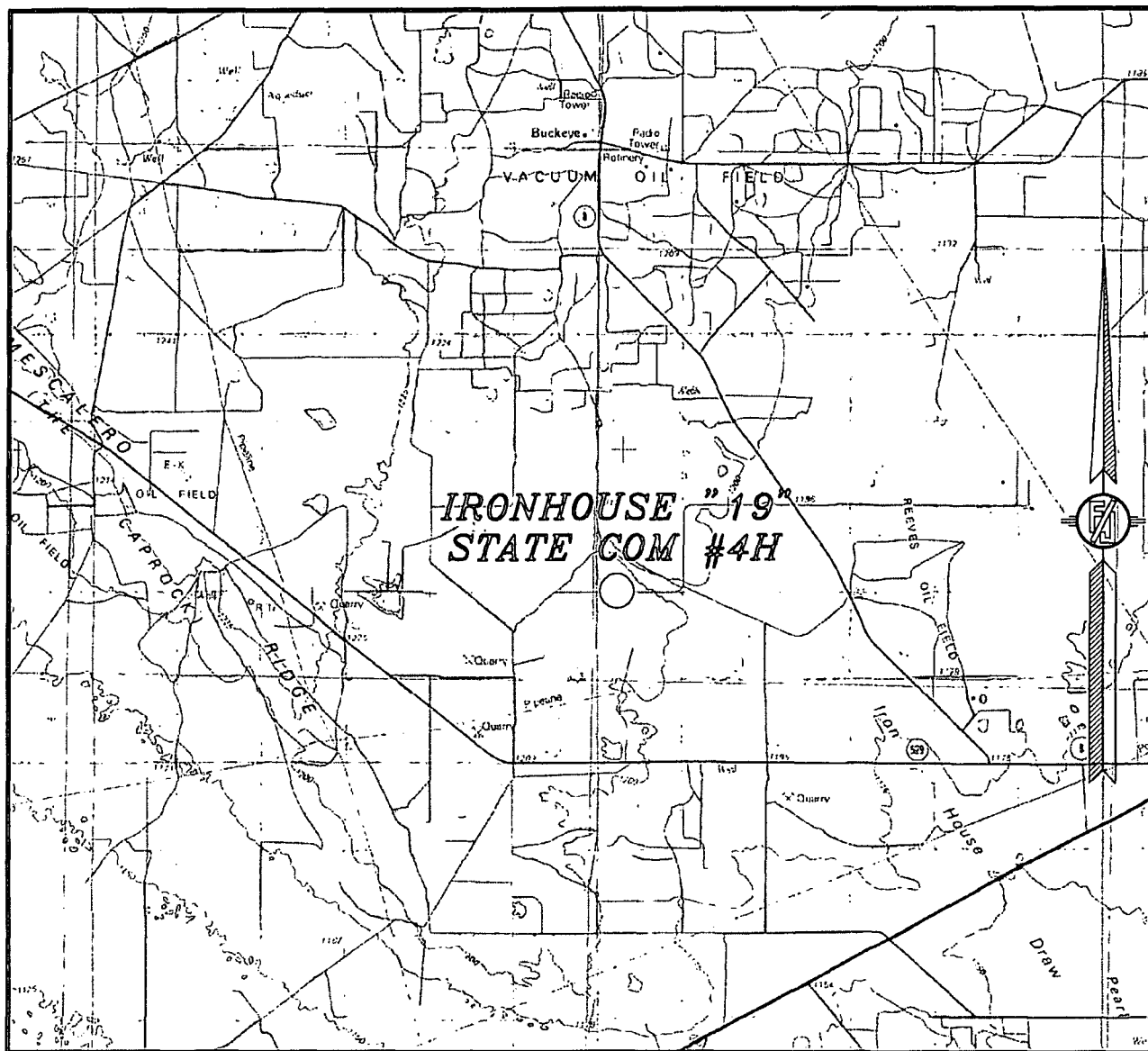
DEVON ENERGY PRODUCTION COMPANY, L.P.
IRONHOUSE "19" STATE COM #4H
LOCATED 150 FT. FROM THE SOUTH LINE
AND 1215 FT. FROM THE WEST LINE OF
SECTION 19, TOWNSHIP 18 SOUTH,
RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 27, 2013

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

SURVEY NO. 1633
CARLSBAD, NEW MEXICO

SECTION 19, TOWNSHIP 18 SOUTH, RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

IRONHOUSE "19" STATE COM #4H

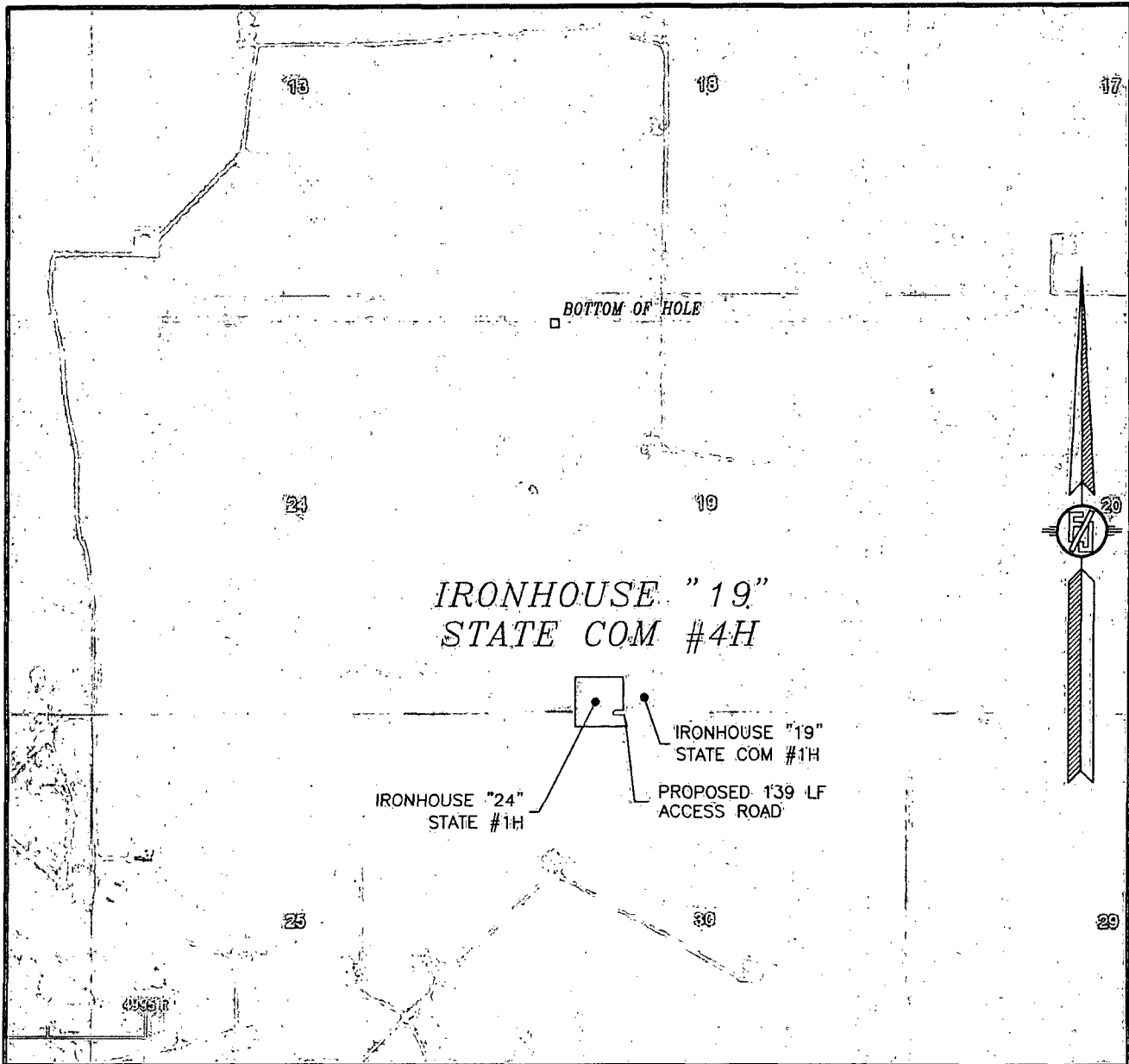
LOCATED 150 FT. FROM THE SOUTH LINE
AND 1215 FT. FROM THE WEST LINE OF
SECTION 19, TOWNSHIP 18 SOUTH,
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LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 27, 2013

SURVEY NO. 1633

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

SECTION 19, TOWNSHIP 18 SOUTH, RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.
IRONHOUSE "19" STATE COM #4H
LOCATED 150 FT. FROM THE SOUTH LINE
AND 1215 FT. FROM THE WEST LINE OF
SECTION 19, TOWNSHIP 18 SOUTH,
RANGE 35 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 27, 2013

SURVEY NO. 1633

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

DEVON ENERGY

Project: Lea County, NM (NAD-83)
Site: Ironhouse "19" State Com
Well: 4H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.89°

Magnetic Field
Strength: 48719.4snT
Dip Angle: 60.61°
Date: 06/24/2013
Model: IGRF2010

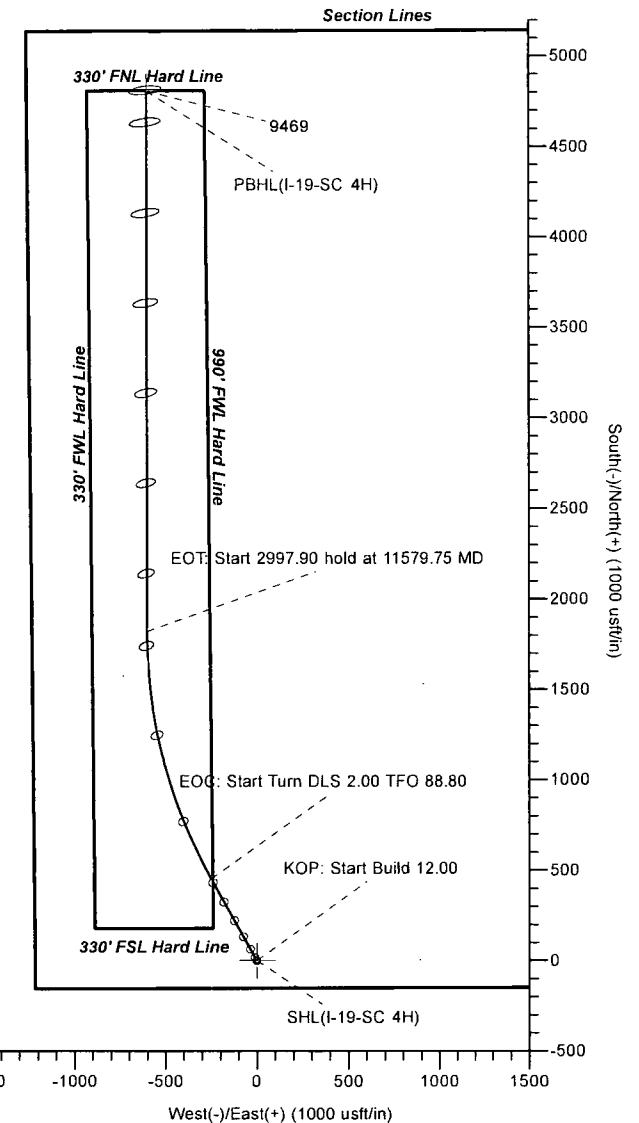
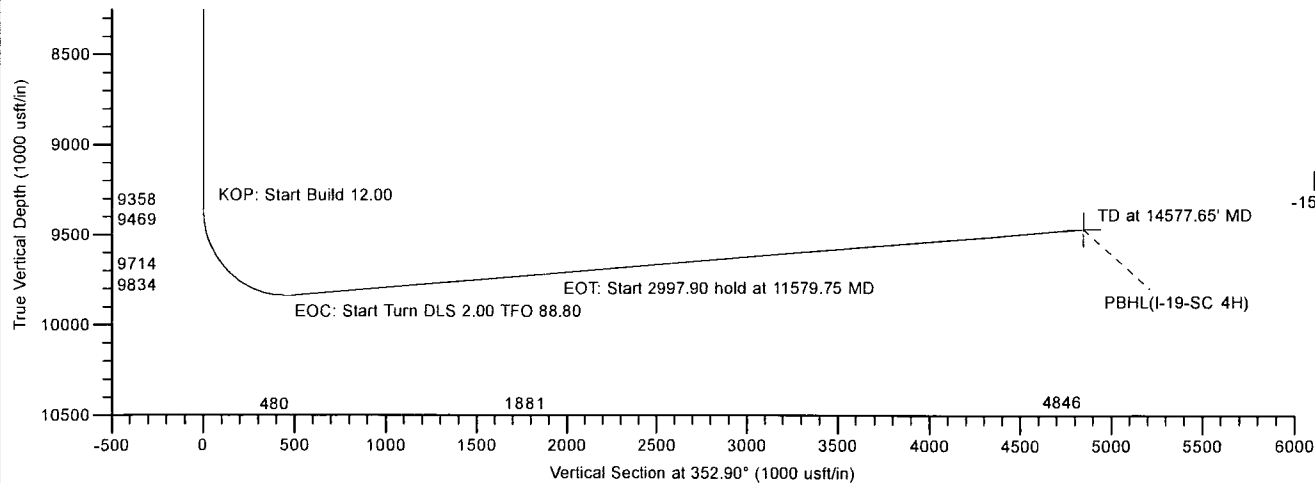


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9358.22	0.00	0.00	9358.22	0.00	0.00	0.00	0.00	0.00	KOP: Start Build 12.00
3	10147.34	94.69	331.25	9834.08	452.88	-248.43	12.00	331.25	480.12	EOC: Start Turn DLS 2.00 TFO 88.80
4	11579.75	94.69	0.00	9714.34	1821.13	-599.05	2.00	88.80	1881.22	EOT: Start 2997.90 hold at 11579.75 MD
5	14577.65	94.69	0.00	9469.00	4808.98	-599.05	0.00	0.00	4846.15	TD at 14577.65' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(I-19-SC 4H)	0.00	0.00	0.00	629021.91	797202.73	32° 43' 35.254 N	103° 30' 4.734 W
PBHL(I-19-SC 4H)	9469.00	4808.98	-599.05	633830.89	796603.68	32° 44' 22.882 N	103° 30' 11.305 W



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

Plan: Plan #1 (4H/OH)
Ironhouse "19" State Com
Created By: Tyler Carlson
Date: 15:50, June 24 2013
Approved: _____ Date: _____

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	GE 3959' + KB 18' @ 3977.00usft (Permitting)
Project:	Lea County, NM (NAD-83)	MD Reference:	GE 3959' + KB 18' @ 3977.00usft (Permitting)
Site:	Ironhouse "19" State Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Site	Ironhouse "19" State Com		
Site Position:		Northing:	629,052.98 usft
From:	Map	Easting:	799,462.79 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 43' 35.385 N
		Longitude:	103° 29' 38.277 W
		Grid Convergence:	0.45 °

Well	4H		
Well Position	+N/-S	-31.07 usft	Northing: 629,021.91 usft
	+E/-W	-2,260.06 usft	Easting: 797,202.73 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Latitude: 32° 43' 35.254 N
			Longitude: 103° 30' 4.734 W
			Ground Level: 3,946.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	06/24/13	7.34
			Dip Angle
			(°)
			60.61
			Field Strength
			(nT)
			48,719

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
			(°)
			352.90

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	
9,358.22	0.00	0.00	9,358.22	0.00	0.00	0.00	0.00	0.00	0.00	
10,147.35	94.70	331.25	9,834.08	452.88	-248.43	12.00	12.00	0.00	331.25	
11,579.75	94.69	0.00	9,714.34	1,821.13	-599.05	2.00	0.00	2.01	88.80	
14,577.65	94.69	0.00	9,469.00	4,808.98	-599.05	0.00	0.00	0.00	0.00	PBHL(I-19-SC 4H)

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Ironhouse "19" State Com
 Well: 4H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 4H
 TVD Reference: GE 3959' + KB 18' @ 3977.00usft
 (Permitting)
 MD Reference: GE 3959' + KB 18' @ 3977.00usft
 (Permitting)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

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 Well: 4H
 Wellbore: OH
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 (Permitting)
 MD Reference: GE 3959' + KB 18' @ 3977.00usft
 (Permitting)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
5,200.00	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
8,300.00	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
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,358.22	0.00	0.00	9,358.22	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start Build 12.00									
9,375.00	2.01	331.25	9,375.00	0.26	-0.14	0.27	12.00	12.00	0.00
9,400.00	5.01	331.25	9,399.95	1.60	-0.88	1.70	12.00	12.00	0.00
9,425.00	8.01	331.25	9,424.78	4.09	-2.24	4.33	12.00	12.00	0.00
9,450.00	11.01	331.25	9,449.44	7.71	-4.23	8.17	12.00	12.00	0.00
9,475.00	14.01	331.25	9,473.84	12.46	-6.83	13.21	12.00	12.00	0.00
9,500.00	17.01	331.25	9,497.93	18.32	-10.05	19.42	12.00	12.00	0.00
9,525.00	20.01	331.25	9,521.63	25.28	-13.87	26.80	12.00	12.00	0.00
9,550.00	23.01	331.25	9,544.88	33.32	-18.28	35.32	12.00	12.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY

Local Co-ordinate Reference: Well 4H
TVD Reference: GE 3959' + KB 18' @ 3977.00usft
(Permitting)

Project: Lea County, NM (NAD-83)

MD Reference: GE 3959' + KB 18' @ 3977.00usft
(Permitting)

Site: Ironhouse "19" State Com

North Reference: Grid
Survey Calculation Method: Minimum Curvature

Well: 4H
Wellbore: OH
Design: Plan #1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,575.00	26.01	331.25	9,567.63	42.41	-23.26	44.96	12.00	12.00	0.00
9,600.00	29.01	331.25	9,589.80	52.53	-28.82	55.69	12.00	12.00	0.00
9,625.00	32.01	331.25	9,611.33	63.66	-34.92	67.49	12.00	12.00	0.00
9,650.00	35.01	331.25	9,632.18	75.76	-41.56	80.32	12.00	12.00	0.00
9,675.00	38.01	331.25	9,652.27	88.80	-48.71	94.14	12.00	12.00	0.00
9,700.00	41.01	331.25	9,671.55	102.75	-56.36	108.93	12.00	12.00	0.00
9,725.00	44.01	331.25	9,689.98	117.56	-64.49	124.63	12.00	12.00	0.00
9,750.00	47.01	331.25	9,707.49	133.19	-73.06	141.20	12.00	12.00	0.00
9,775.00	50.01	331.25	9,724.05	149.61	-82.07	158.61	12.00	12.00	0.00
9,800.00	53.01	331.25	9,739.61	166.77	-91.48	176.80	12.00	12.00	0.00
9,825.00	56.01	331.25	9,754.12	184.61	-101.27	195.72	12.00	12.00	0.00
9,850.00	59.01	331.25	9,767.55	203.10	-111.41	215.31	12.00	12.00	0.00
9,875.00	62.01	331.25	9,779.85	222.18	-121.87	235.54	12.00	12.00	0.00
9,900.00	65.01	331.25	9,791.00	241.79	-132.63	256.33	12.00	12.00	0.00
9,925.00	68.01	331.25	9,800.96	261.89	-143.66	277.64	12.00	12.00	0.00
9,950.00	71.01	331.25	9,809.71	282.42	-154.92	299.41	12.00	12.00	0.00
9,975.00	74.01	331.25	9,817.22	303.33	-166.39	321.57	12.00	12.00	0.00
10,000.00	77.01	331.25	9,823.47	324.55	-178.03	344.07	12.00	12.00	0.00
10,025.00	80.01	331.25	9,828.45	346.03	-189.81	366.83	12.00	12.00	0.00
10,050.00	83.01	331.25	9,832.14	367.70	-201.70	389.81	12.00	12.00	0.00
10,075.00	86.01	331.25	9,834.53	389.52	-213.67	412.94	12.00	12.00	0.00
10,100.00	89.01	331.25	9,835.61	411.41	-225.68	436.15	12.00	12.00	0.00
10,125.00	92.01	331.25	9,835.39	433.33	-237.70	459.39	12.00	12.00	0.00
10,147.35	94.70	331.25	9,834.08	452.88	-248.43	480.12	12.00	12.00	0.00
EOC: Start Turn DLS 2.00 TFO 88.80									
10,200.00	94.72	332.31	9,829.76	499.12	-273.24	529.07	2.00	0.04	2.01
10,300.00	94.75	334.32	9,821.51	588.16	-317.99	622.96	2.00	0.04	2.01
10,400.00	94.78	336.32	9,813.20	678.71	-359.60	717.96	2.00	0.03	2.01
10,500.00	94.81	338.33	9,804.84	770.65	-398.01	813.94	2.00	0.02	2.01
10,600.00	94.83	340.34	9,796.44	863.88	-433.18	910.80	2.00	0.02	2.01
10,700.00	94.84	342.34	9,788.02	958.29	-465.06	1,008.42	2.00	0.01	2.01
10,800.00	94.84	344.35	9,779.58	1,053.74	-493.61	1,106.68	2.00	0.01	2.01
10,900.00	94.85	346.36	9,771.13	1,150.15	-518.80	1,205.46	2.00	0.00	2.01
11,000.00	94.84	348.37	9,762.69	1,247.37	-540.60	1,304.63	2.00	-0.01	2.01
11,100.00	94.83	350.37	9,754.26	1,345.30	-558.98	1,404.08	2.00	-0.01	2.01
11,200.00	94.81	352.38	9,745.86	1,443.81	-573.92	1,503.68	2.00	-0.02	2.01
11,300.00	94.79	354.39	9,737.49	1,542.79	-585.41	1,603.32	2.00	-0.02	2.01
11,400.00	94.76	356.39	9,729.16	1,642.12	-593.41	1,702.88	2.00	-0.03	2.01
11,500.00	94.73	358.40	9,720.89	1,741.67	-597.94	1,802.22	2.00	-0.03	2.01
11,579.75	94.69	0.00	9,714.34	1,821.13	-599.05	1,881.22	2.00	-0.04	2.01
EOT: Start 2997.90 hold at 11579.75 MD									
11,600.00	94.69	0.00	9,712.69	1,841.32	-599.05	1,901.25	0.00	0.00	0.00
11,700.00	94.69	0.00	9,704.50	1,940.98	-599.05	2,000.15	0.00	0.00	0.00
11,800.00	94.69	0.00	9,696.32	2,040.65	-599.05	2,099.05	0.00	0.00	0.00
11,900.00	94.69	0.00	9,688.13	2,140.31	-599.05	2,197.95	0.00	0.00	0.00
12,000.00	94.69	0.00	9,679.95	2,239.98	-599.05	2,296.85	0.00	0.00	0.00
12,100.00	94.69	0.00	9,671.77	2,339.64	-599.05	2,395.75	0.00	0.00	0.00
12,200.00	94.69	0.00	9,663.58	2,439.31	-599.05	2,494.65	0.00	0.00	0.00
12,300.00	94.69	0.00	9,655.40	2,538.97	-599.05	2,593.55	0.00	0.00	0.00
12,400.00	94.69	0.00	9,647.21	2,638.64	-599.05	2,692.45	0.00	0.00	0.00
12,500.00	94.69	0.00	9,639.03	2,738.30	-599.05	2,791.35	0.00	0.00	0.00
12,600.00	94.69	0.00	9,630.85	2,837.97	-599.05	2,890.25	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Ironhouse "19" State Com
 Well: 4H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 4H
 TVD Reference: GE 3959' + KB 18' @ 3977.00usft (Permitting)
 MD Reference: GE 3959' + KB 18' @ 3977.00usft (Permitting)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
12,700.00	94.69	0.00	9,622.66	2,937.63	-599.05	2,989.15	0.00	0.00	0.00
12,800.00	94.69	0.00	9,614.48	3,037.30	-599.05	3,088.05	0.00	0.00	0.00
12,900.00	94.69	0.00	9,606.30	3,136.96	-599.05	3,186.95	0.00	0.00	0.00
13,000.00	94.69	0.00	9,598.11	3,236.62	-599.05	3,285.85	0.00	0.00	0.00
13,100.00	94.69	0.00	9,589.93	3,336.29	-599.05	3,384.75	0.00	0.00	0.00
13,200.00	94.69	0.00	9,581.74	3,435.95	-599.05	3,483.65	0.00	0.00	0.00
13,300.00	94.69	0.00	9,573.56	3,535.62	-599.05	3,582.55	0.00	0.00	0.00
13,400.00	94.69	0.00	9,565.38	3,635.28	-599.05	3,681.45	0.00	0.00	0.00
13,500.00	94.69	0.00	9,557.19	3,734.95	-599.05	3,780.35	0.00	0.00	0.00
13,600.00	94.69	0.00	9,549.01	3,834.61	-599.05	3,879.25	0.00	0.00	0.00
13,700.00	94.69	0.00	9,540.83	3,934.28	-599.05	3,978.15	0.00	0.00	0.00
13,800.00	94.69	0.00	9,532.64	4,033.94	-599.05	4,077.05	0.00	0.00	0.00
13,900.00	94.69	0.00	9,524.46	4,133.61	-599.05	4,175.95	0.00	0.00	0.00
14,000.00	94.69	0.00	9,516.27	4,233.27	-599.05	4,274.85	0.00	0.00	0.00
14,100.00	94.69	0.00	9,508.09	4,332.93	-599.05	4,373.75	0.00	0.00	0.00
14,200.00	94.69	0.00	9,499.91	4,432.60	-599.05	4,472.65	0.00	0.00	0.00
14,300.00	94.69	0.00	9,491.72	4,532.26	-599.05	4,571.55	0.00	0.00	0.00
14,400.00	94.69	0.00	9,483.54	4,631.93	-599.05	4,670.45	0.00	0.00	0.00
14,500.00	94.69	0.00	9,475.35	4,731.59	-599.05	4,769.35	0.00	0.00	0.00
14,577.65	94.69	0.00	9,469.00	4,808.98	-599.05	4,846.15	0.00	0.00	0.00

TD at 14577.65' MD

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(I-19-SC 4H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	629,021.91	797,202.73	32° 43' 35.254 N	103° 30' 4.734 W
PBHL(I-19-SC 4H) - plan hits target center - Point	0.00	0.00	9,469.00	4,808.98	-599.05	633,830.89	796,603.68	32° 44' 22.882 N	103° 30' 11.305 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
9,358.22	9,358.22	0.00	0.00	KOP: Start Build 12.00
10,147.35	9,834.08	452.88	-248.43	EOC: Start Turn DLS 2.00 TFO 88.80
11,579.75	9,714.34	1,821.13	-599.05	EOT: Start 2997.90 hold at 11579.75 MD
14,577.65	9,469.00	4,808.98	-599.05	TD at 14577.65' MD