



Final MWD Survey Certification

County, State: Lea County, New Mexico

Client: Devon Energy

Well Name: Lippizzan 4 Federal #2H

API No: 30-025-45838

Start Date: July 24, 2019

End Date: August 3, 2019

Measure Start Depth: 177.00'

Measured End Depth: 15467.00'

Vertical Section from SHL to TD: 179.61° Azm

I, Jason Turner, MWD Coordinator, hereby certify that; I am employed by Newsco International Energy Services, Inc. and we conducted or supervised the taking of these open hole MWD surveys at the request of this client. This data is true, correct, complete and within the limitations of the tool as set forth by Newsco International Energy Services, Inc. I am authorized and qualified to make this report and have reviewed this report and find that it conforms to the principals and procedures as set forth by Newsco International Energy Services, Inc.

Date: 11/18/2019

Sign: *Jason Turner*



Devon Energy

Lea County, NM (N83-NME)

Lippizzan 4 Fed

Lippizzan 4 Fed 2H

Wellbore #1

Survey: Survey #1

Standard Survey Report

20 November, 2019





Survey Report



Company: Devon Energy
Project: Lea County, NM (N83-NME)
Site: Lippizzan 4 Fed
Well: Lippizzan 4 Fed 2H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well Lippizzan 4 Fed 2H
TVD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
MD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

Project	Lea County, NM (N83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Lippizzan 4 Fed				
Site Position:		Northing:	425,167.23 usft	Latitude:	32° 10' 1.853 N
From:	Map	Easting:	743,172.29 usft	Longitude:	103° 40' 51.773 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	Lippizzan 4 Fed 2H					
Well Position	+N/-S	0.00 usft	Northing:	425,167.23 usft	Latitude:	32° 10' 1.853 N
	+E/-W	0.00 usft	Easting:	743,172.29 usft	Longitude:	103° 40' 51.773 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,492.50 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	07/19/19	6.77	59.97	47,677.93

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.61	

Survey Program	Date 11/18/19				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
177.00	15,527.00	Survey #1 (Wellbore #1)	MWD	OWSG MWD - Standard	

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
	177.00	0.18	67.44	177.00	0.11	0.26	-0.10	0.10	0.10	0.00
	267.00	0.22	95.82	267.00	0.14	0.56	-0.14	0.12	0.04	31.53
	328.00	0.22	115.78	328.00	0.08	0.78	-0.08	0.13	0.00	32.72
	421.00	0.13	126.06	421.00	-0.06	1.03	0.07	0.10	-0.10	11.05
	513.00	0.26	176.60	513.00	-0.33	1.12	0.34	0.22	0.14	54.93
	604.00	0.31	171.50	604.00	-0.78	1.17	0.79	0.06	0.05	-5.60
	695.00	0.44	196.72	694.99	-1.36	1.11	1.36	0.23	0.14	27.71
	787.00	0.44	200.59	786.99	-2.03	0.88	2.03	0.03	0.00	4.21
	880.00	0.53	203.49	879.99	-2.75	0.59	2.76	0.10	0.10	3.12



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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)
1,059.00	0.57	217.80	1,058.98	-4.22	-0.29	4.22	0.08	0.02	7.99
Tie-on Survey - 1059.00' MD, 1058.98' TVD									
1,152.00	0.62	217.27	1,151.98	-4.98	-0.88	4.98	0.05	0.05	-0.57
1,245.00	0.57	226.59	1,244.97	-5.70	-1.52	5.69	0.12	-0.05	10.02
1,337.00	0.35	210.59	1,336.97	-6.26	-1.99	6.24	0.27	-0.24	-17.39
1,430.00	0.22	211.73	1,429.97	-6.65	-2.23	6.64	0.14	-0.14	1.23
1,525.00	0.31	175.26	1,524.97	-7.07	-2.31	7.05	0.20	0.09	-38.39
1,620.00	0.31	163.30	1,619.96	-7.57	-2.21	7.55	0.07	0.00	-12.59
1,716.00	0.18	133.51	1,715.96	-7.92	-2.03	7.91	0.19	-0.14	-31.03
1,811.00	0.04	133.16	1,810.96	-8.05	-1.90	8.03	0.15	-0.15	-0.37
1,906.00	0.13	175.52	1,905.96	-8.18	-1.86	8.16	0.11	0.09	44.59
2,002.00	0.09	200.39	2,001.96	-8.36	-1.88	8.34	0.06	-0.04	25.91
2,097.00	0.13	179.04	2,096.96	-8.53	-1.91	8.52	0.06	0.04	-22.47
2,192.00	0.22	169.54	2,191.96	-8.82	-1.87	8.81	0.10	0.09	-10.00
2,288.00	0.26	192.75	2,287.96	-9.21	-1.89	9.20	0.11	0.04	24.18
2,383.00	0.31	206.28	2,382.96	-9.65	-2.05	9.64	0.09	0.05	14.24
2,478.00	0.13	197.05	2,477.96	-9.99	-2.19	9.97	0.19	-0.19	-9.72
2,574.00	0.13	204.70	2,573.96	-10.19	-2.27	10.18	0.02	0.00	7.97
2,669.00	0.18	165.06	2,668.96	-10.43	-2.28	10.42	0.12	0.05	-41.73
2,764.00	0.35	96.16	2,763.96	-10.61	-1.95	10.59	0.35	0.18	-72.53
2,860.00	0.35	101.52	2,859.96	-10.70	-1.37	10.69	0.03	0.00	5.58
2,955.00	0.35	100.73	2,954.95	-10.81	-0.80	10.80	0.01	0.00	-0.83
3,050.00	0.40	106.00	3,049.95	-10.96	-0.20	10.95	0.06	0.05	5.55
3,145.00	0.26	71.99	3,144.95	-10.98	0.33	10.98	0.25	-0.15	-35.80
3,240.00	0.18	87.19	3,239.95	-10.91	0.68	10.91	0.10	-0.08	16.00
3,336.00	0.31	63.90	3,335.95	-10.78	1.06	10.79	0.17	0.14	-24.26
3,431.00	0.44	53.00	3,430.95	-10.45	1.59	10.46	0.16	0.14	-11.47
3,526.00	0.44	36.13	3,525.94	-9.94	2.09	9.95	0.14	0.00	-17.76
3,621.00	0.62	27.78	3,620.94	-9.19	2.55	9.21	0.21	0.19	-8.79
3,716.00	0.48	28.48	3,715.94	-8.38	2.98	8.40	0.15	-0.15	0.74
3,812.00	0.44	26.72	3,811.93	-7.70	3.33	7.72	0.04	-0.04	-1.83
3,907.00	0.66	86.75	3,906.93	-7.34	4.04	7.37	0.61	0.23	63.19
4,002.00	1.01	102.92	4,001.92	-7.50	5.41	7.54	0.44	0.37	17.02
4,098.00	0.62	80.34	4,097.91	-7.60	6.74	7.65	0.52	-0.41	-23.52
4,193.00	0.92	102.66	4,192.90	-7.68	7.99	7.74	0.44	0.32	23.49
4,288.00	1.76	118.04	4,287.87	-8.54	10.03	8.60	0.95	0.88	16.19
4,384.00	2.46	127.01	4,383.81	-10.47	12.97	10.56	0.80	0.73	9.34
4,479.00	2.02	140.28	4,478.74	-12.99	15.67	13.09	0.71	-0.46	13.97
4,574.00	0.40	165.33	4,573.71	-14.59	16.83	14.71	1.75	-1.71	26.37
4,670.00	0.22	202.15	4,669.71	-15.09	16.84	15.20	0.27	-0.19	38.35
4,765.00	0.44	165.85	4,764.71	-15.61	16.86	15.73	0.31	0.23	-38.21
4,861.00	0.35	180.44	4,860.71	-16.26	16.95	16.38	0.14	-0.09	15.20
4,910.00	0.18	202.77	4,909.71	-16.48	16.92	16.60	0.40	-0.35	45.57
5,046.00	0.40	89.13	5,045.71	-16.67	17.31	16.79	0.37	0.16	-83.56



Survey Report



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Survey

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5,141.00	0.53	78.31	5,140.70	-16.58	18.07	16.70	0.16	0.14	-11.39
5,236.00	0.53	77.61	5,235.70	-16.40	18.93	16.52	0.01	0.00	-0.74
5,332.00	1.05	321.51	5,331.69	-15.61	18.82	15.74	1.43	0.54	-120.94
5,427.00	1.49	315.97	5,426.67	-14.04	17.42	14.16	0.48	0.46	-5.83
5,523.00	1.32	315.36	5,522.64	-12.36	15.77	12.46	0.18	-0.18	-0.64
5,618.00	1.23	310.17	5,617.62	-10.92	14.22	11.02	0.15	-0.09	-5.46
5,713.00	1.49	310.52	5,712.59	-9.46	12.51	9.55	0.27	0.27	0.37
5,808.00	1.49	308.15	5,807.56	-7.90	10.60	7.97	0.06	0.00	-2.49
5,904.00	1.54	302.26	5,903.52	-6.44	8.52	6.49	0.17	0.05	-6.14
5,999.00	1.54	307.97	5,998.49	-4.97	6.44	5.01	0.16	0.00	6.01
6,094.00	1.85	302.88	6,093.45	-3.35	4.14	3.38	0.36	0.33	-5.36
6,189.00	1.93	311.05	6,188.40	-1.47	1.65	1.48	0.30	0.08	8.60
6,285.00	1.89	306.04	6,284.34	0.52	-0.85	-0.53	0.18	-0.04	-5.22
6,380.00	1.98	305.69	6,379.29	2.40	-3.45	-2.43	0.10	0.09	-0.37
6,475.00	2.07	305.51	6,474.23	4.36	-6.18	-4.40	0.09	0.09	-0.19
6,570.00	2.07	305.78	6,569.17	6.36	-8.97	-6.42	0.01	0.00	0.28
6,666.00	1.98	311.49	6,665.11	8.47	-11.62	-8.55	0.23	-0.09	5.95
6,761.00	1.14	330.65	6,760.07	10.38	-13.31	-10.47	1.03	-0.88	20.17
6,856.00	1.14	344.80	6,855.05	12.12	-14.02	-12.21	0.30	0.00	14.89
6,951.00	1.10	349.98	6,950.04	13.93	-14.43	-14.02	0.11	-0.04	5.45
7,046.00	0.92	345.15	7,045.02	15.56	-14.78	-15.66	0.21	-0.19	-5.08
7,142.00	1.05	334.78	7,141.01	17.10	-15.35	-17.21	0.23	0.14	-10.80
7,237.00	1.01	315.36	7,235.99	18.49	-16.31	-18.60	0.37	-0.04	-20.44
7,333.00	1.19	312.46	7,331.97	19.76	-17.64	-19.88	0.20	0.19	-3.02
7,428.00	1.14	306.57	7,426.96	20.99	-19.13	-21.12	0.14	-0.05	-6.20
7,524.00	0.97	310.08	7,522.94	22.08	-20.52	-22.22	0.19	-0.18	3.66
7,619.00	1.01	288.46	7,617.93	22.86	-21.93	-23.01	0.39	0.04	-22.76
7,714.00	0.97	268.51	7,712.91	23.11	-23.52	-23.27	0.36	-0.04	-21.00
7,810.00	1.01	249.44	7,808.90	22.79	-25.13	-22.96	0.34	0.04	-19.86
7,905.00	1.01	250.32	7,903.88	22.21	-26.70	-22.40	0.02	0.00	0.93
8,000.00	1.23	239.65	7,998.86	21.42	-28.37	-21.61	0.32	0.23	-11.23
8,096.00	1.63	226.32	8,094.83	19.95	-30.25	-20.16	0.54	0.42	-13.89
8,191.00	1.58	220.17	8,189.80	18.02	-32.07	-18.24	0.19	-0.05	-6.47
8,286.00	1.67	221.75	8,284.76	15.99	-33.83	-16.22	0.11	0.09	1.66
8,381.00	1.58	217.80	8,379.72	13.92	-35.56	-14.16	0.15	-0.09	-4.16
8,477.00	1.58	216.83	8,475.68	11.81	-37.16	-12.07	0.03	0.00	-1.01
8,572.00	1.63	223.95	8,570.65	9.79	-38.89	-10.06	0.22	0.05	7.49
8,667.00	1.63	231.33	8,665.61	7.98	-40.88	-8.25	0.22	0.00	7.77
8,762.00	1.80	235.64	8,760.57	6.29	-43.17	-6.58	0.22	0.18	4.54
8,857.00	1.49	249.26	8,855.53	5.01	-45.55	-5.32	0.52	-0.33	14.34
8,953.00	1.80	250.40	8,951.49	4.06	-48.14	-4.39	0.32	0.32	1.19
9,048.00	0.75	331.44	9,046.47	4.11	-49.84	-4.45	1.94	-1.11	85.31
9,143.00	1.01	334.25	9,141.46	5.41	-50.50	-5.75	0.28	0.27	2.96



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9,239.00	1.41	17.41	9,237.44	7.30	-50.52	-7.64	1.00	0.42	44.96
9,334.00	1.27	359.48	9,332.41	9.46	-50.18	-9.81	0.46	-0.15	-18.87
9,429.00	1.05	344.27	9,427.39	11.36	-50.42	-11.70	0.40	-0.23	-16.01
9,524.00	1.27	298.83	9,522.38	12.70	-51.58	-13.05	0.97	0.23	-47.83
9,619.00	1.10	81.39	9,617.37	13.35	-51.60	-13.70	2.36	-0.18	150.06
9,714.00	1.67	92.73	9,712.34	13.42	-49.32	-13.75	0.66	0.60	11.94
9,810.00	1.63	103.63	9,808.30	13.03	-46.59	-13.34	0.33	-0.04	11.35
9,905.00	6.07	161.64	9,903.08	7.94	-43.70	-8.24	5.67	4.67	61.06
10,000.00	19.17	175.18	9,995.60	-12.46	-40.79	12.19	14.04	13.79	14.25
10,095.00	27.61	177.82	10,082.72	-50.07	-38.64	49.81	8.95	8.88	2.78
10,191.00	36.76	175.09	10,163.88	-101.03	-35.33	100.79	9.65	9.53	-2.84
10,286.00	46.34	176.67	10,234.90	-163.81	-30.89	163.60	10.14	10.08	1.66
10,382.00	57.07	178.17	10,294.31	-238.97	-27.57	238.78	11.24	11.18	1.56
10,477.00	64.37	177.99	10,340.74	-321.73	-24.79	321.55	7.69	7.68	-0.19
10,572.00	70.17	179.66	10,377.43	-409.29	-23.03	409.12	6.32	6.11	1.76
10,667.00	77.56	180.54	10,403.81	-500.48	-23.20	500.31	7.83	7.78	0.93
10,763.00	87.67	178.52	10,416.14	-595.56	-22.40	595.39	10.74	10.53	-2.10
10,858.00	87.41	178.78	10,420.22	-690.44	-20.16	690.29	0.39	-0.27	0.27
10,954.00	89.16	178.17	10,423.09	-786.36	-17.61	786.22	1.93	1.82	-0.64
11,049.00	90.40	178.43	10,423.45	-881.32	-14.79	881.20	1.33	1.31	0.27
11,144.00	90.04	177.99	10,423.09	-976.27	-11.82	976.17	0.60	-0.38	-0.46
11,239.00	92.07	178.70	10,421.34	-1,071.21	-9.08	1,071.12	2.26	2.14	0.75
11,335.00	91.63	177.90	10,418.24	-1,167.11	-6.23	1,167.05	0.95	-0.46	-0.83
11,430.00	92.33	180.54	10,414.96	-1,262.04	-4.94	1,261.98	2.87	0.74	2.78
11,525.00	91.63	179.57	10,411.68	-1,356.98	-5.03	1,356.92	1.26	-0.74	-1.02
11,621.00	90.13	181.77	10,410.20	-1,452.95	-6.15	1,452.88	2.77	-1.56	2.29
11,716.00	90.22	180.98	10,409.91	-1,547.93	-8.43	1,547.83	0.84	0.09	-0.83
11,811.00	90.13	181.07	10,409.62	-1,642.91	-10.13	1,642.80	0.13	-0.09	0.09
11,907.00	88.99	180.45	10,410.36	-1,738.90	-11.41	1,738.78	1.35	-1.19	-0.65
12,002.00	87.67	179.40	10,413.13	-1,833.85	-11.28	1,833.73	1.78	-1.39	-1.11
12,097.00	90.48	181.07	10,414.66	-1,928.83	-11.67	1,928.70	3.44	2.96	1.76
12,193.00	90.40	180.37	10,413.92	-2,024.82	-12.88	2,024.68	0.73	-0.08	-0.73
12,289.00	89.87	180.01	10,413.70	-2,120.82	-13.20	2,120.68	0.67	-0.55	-0.38
12,384.00	89.96	179.57	10,413.84	-2,215.81	-12.85	2,215.68	0.47	0.09	-0.46
12,480.00	89.87	179.22	10,413.98	-2,311.81	-11.84	2,311.67	0.38	-0.09	-0.36
12,575.00	89.34	177.55	10,414.64	-2,406.76	-9.16	2,406.65	1.84	-0.56	-1.76
12,671.00	89.60	179.84	10,415.52	-2,502.73	-6.97	2,502.62	2.40	0.27	2.39
12,766.00	89.08	180.80	10,416.62	-2,597.72	-7.50	2,597.61	1.15	-0.55	1.01
12,862.00	92.07	180.89	10,415.65	-2,693.69	-8.92	2,693.57	3.12	3.11	0.09
12,958.00	91.45	179.57	10,412.71	-2,789.65	-9.30	2,789.52	1.52	-0.65	-1.38
13,053.00	91.36	180.01	10,410.38	-2,884.62	-8.96	2,884.49	0.47	-0.09	0.46
13,148.00	91.19	179.31	10,408.26	-2,979.59	-8.39	2,979.46	0.76	-0.18	-0.74
13,243.00	91.45	178.52	10,406.07	-3,074.55	-6.59	3,074.43	0.88	0.27	-0.83
13,338.00	91.45	178.17	10,403.67	-3,169.48	-3.85	3,169.38	0.37	0.00	-0.37



Survey Report



Company: Devon Energy
Project: Lea County, NM (N83-NME)
Site: Lippizzan 4 Fed
Well: Lippizzan 4 Fed 2H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well Lippizzan 4 Fed 2H
TVD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
MD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

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)
13,434.00	89.69	179.75	10,402.72	-3,265.45	-2.11	3,265.36	2.46	-1.83	1.65
13,529.00	89.34	179.75	10,403.52	-3,360.45	-1.69	3,360.36	0.37	-0.37	0.00
13,624.00	88.37	178.70	10,405.42	-3,455.41	-0.41	3,455.33	1.50	-1.02	-1.11
13,719.00	88.99	179.14	10,407.61	-3,550.37	1.38	3,550.30	0.80	0.65	0.46
13,815.00	89.34	179.84	10,409.01	-3,646.36	2.23	3,646.29	0.82	0.36	0.73
13,910.00	89.34	180.01	10,410.10	-3,741.35	2.36	3,741.28	0.18	0.00	0.18
14,006.00	89.34	180.19	10,411.21	-3,837.34	2.19	3,837.27	0.19	0.00	0.19
14,101.00	89.52	180.72	10,412.15	-3,932.34	1.44	3,932.26	0.59	0.19	0.56
14,196.00	89.78	181.07	10,412.73	-4,027.32	-0.05	4,027.23	0.46	0.27	0.37
14,292.00	90.84	180.19	10,412.21	-4,123.31	-1.10	4,123.21	1.44	1.10	-0.92
14,387.00	91.36	179.93	10,410.39	-4,218.30	-1.20	4,218.19	0.61	0.55	-0.27
14,483.00	92.42	180.37	10,407.22	-4,314.24	-1.45	4,314.13	1.20	1.10	0.46
14,578.00	90.40	179.40	10,404.88	-4,409.21	-1.26	4,409.10	2.36	-2.13	-1.02
14,673.00	91.28	179.93	10,403.49	-4,504.19	-0.71	4,504.08	1.08	0.93	0.56
14,769.00	91.63	180.45	10,401.05	-4,600.16	-1.02	4,600.05	0.65	0.36	0.54
14,864.00	91.19	179.14	10,398.72	-4,695.13	-0.68	4,695.02	1.45	-0.46	-1.38
14,960.00	89.69	179.22	10,397.98	-4,791.11	0.69	4,791.01	1.56	-1.56	0.08
15,055.00	89.08	180.63	10,399.00	-4,886.11	0.81	4,886.00	1.62	-0.64	1.48
15,150.00	89.69	180.89	10,400.02	-4,981.09	-0.45	4,980.97	0.70	0.64	0.27
15,246.00	89.96	181.77	10,400.31	-5,077.06	-2.67	5,076.93	0.96	0.28	0.92
15,341.00	90.48	182.30	10,399.95	-5,172.00	-6.05	5,171.84	0.78	0.55	0.56
15,436.00	90.66	183.09	10,399.00	-5,266.89	-10.51	5,266.70	0.85	0.19	0.83
15,467.00	90.66	183.44	10,398.64	-5,297.84	-12.28	5,297.63	1.13	0.00	1.13
Last Survey - 15467.00' MD, 10398.64' TVD									
15,527.00	90.66	183.44	10,397.95	-5,357.73	-15.88	5,357.50	0.00	0.00	0.00
PTB									



Survey Report



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Design: Surveys

Local Co-ordinate Reference: Well Lippizzan 4 Fed 2H
TVD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
MD Reference: RKB (GL+30') @ 3522.50usft (Cactus 129)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHL - Lippizzan 4 Fed	0.00	0.00	0.00	0.00	0.00	425,167.23	743,172.29	32° 10' 1.853 N	103° 40' 51.773 W
- survey hits target center									
- Point									
KOP - Lippizzan 4 Fed	0.00	0.00	9,941.00	0.00	-21.00	425,167.23	743,151.29	32° 10' 1.854 N	103° 40' 52.017 W
- survey misses target center by 21.55usft at 9944.50usft MD (9942.11 TVD, 2.08 N, -42.42 E)									
- Point									
FTP - Lippizzan 4 Fed	0.00	0.00	10,371.1	-270.31	-19.15	424,896.92	743,153.14	32° 9' 59.179 N	103° 40' 52.015 W
- survey misses target center by 50.84usft at 10447.21usft MD (10327.32 TVD, -295.15 N, -25.72 E)									
- Point									
PBHL - Lippizzan 4 Fed	0.00	0.00	10,404.0	-5,428.37	16.24	419,738.86	743,188.53	32° 9' 8.135 N	103° 40' 51.967 W
- survey misses target center by 77.84usft at 15527.00usft MD (10397.95 TVD, -5357.73 N, -15.88 E)									
- Point									
LTP - Lippizzan 4 Fed	0.00	0.00	10,404.2	-5,348.37	15.69	419,818.86	743,187.98	32° 9' 8.927 N	103° 40' 51.968 W
- survey misses target center by 31.56usft at 15515.69usft MD (10398.08 TVD, -5346.44 N, -15.20 E)									
- Point									

Survey Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,059.00	1,058.98	-4.22	-0.29	Tie-on Survey - 1059.00' MD, 1058.98' TVD
15,467.00	10,398.64	-5,297.84	-12.28	Last Survey - 15467.00' MD, 10398.64' TVD
15,527.00	10,397.95	-5,357.73	-15.88	PTB