

HOBBS OCD
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CENTENNIAL RESOURCE DEVELOPMENT, LLC

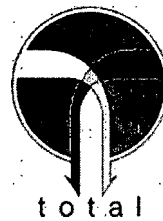
LEA COUNTY, NM (NAD 83 - UTM ZONE 13 - TRUE)

SW SW SEC. 13 T22S T34E

AIRSTREAM 24 STATE COM #501H

12 November, 2018

Survey: FINAL SURVEYS



Survey Report



Company:	CENTENNIAL RESOURCE DEVELOPME	Local Co-ordinate Reference:	Well AIRSTREAM 24 STATE COM #501H
Project:	LEA COUNTY, NM (NAD 83 - UTM ZONE	TVD Reference:	KB 25' @ 3523.30usft (H&P 650)
Site:	SW SW SEC. 13 T22S T34E	MD Reference:	KB 25' @ 3523.30usft (H&P 650)
Well:	AIRSTREAM 24 STATE COM #501H	North Reference:	True
Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Project:	LEA COUNTY, NM (NAD 83 - UTM ZONE 13 - TRUE)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)	Using geodetic scale factor	

Site		SW SW SEC. 13 T22S T34E			
Site Position:		Northing:	11,759,505.51 usft	Latitude:	32.385963
From:	Map	Easting:	2,125,485.31 usft	Longitude:	-103.428183
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.84 °

Well	AIRSTREAM 24 STATE COM #501H					
Well Position	+N/-S	0.00 usft	Northing:	11,759,505.51 usft	Latitude:	32.385963
	+E/-W	0.00 usft	Easting:	2,125,485.31 usft	Longitude:	-103.428183
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,498.30 usft

Wellbore:	JOB #2018-626-650				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/10/2018	6.76	60.22	47,913

Design:	FINAL 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	188.08

Survey Program	Date 12/11/2018				
From (usft)	To (usft)	Survey (Wellbore):	Tool Name	Description	
25.00	15,651.00	FINAL SURVEYS (JOB #2018-626-650)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Survey:										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea 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	3,523.30	0.00	0.00	0.00	0.00	0.00	0.00
25.00	0.00	0.00	25.00	3,498.30	0.00	0.00	0.00	0.00	0.00	0.00
142.00	0.50	295.78	142.00	3,381.30	0.22	-0.46	-0.16	0.43	0.43	0.00
230.00	0.40	277.78	230.00	3,293.30	0.43	-1.11	-0.27	0.20	-0.11	-20.45
316.10	0.50	2.78	316.09	3,207.21	0.85	-1.39	-0.64	0.71	0.12	98.72
410.50	0.20	245.78	410.49	3,112.81	1.19	-1.52	-0.97	0.65	-0.32	-123.94
505.20	1.00	270.78	505.19	3,018.11	1.13	-2.50	-0.77	0.87	0.84	26.40
599.80	1.20	294.78	599.77	2,923.53	1.56	-4.22	-0.95	0.53	0.21	25.37
694.20	1.20	277.78	694.15	2,829.15	2.11	-6.10	-1.23	0.38	0.00	-18.01
788.70	1.40	286.78	788.63	2,734.67	2.58	-8.18	-1.40	0.30	0.21	9.52
883.00	1.10	267.78	882.90	2,640.40	2.87	-10.19	-1.41	0.54	-0.32	-20.15
977.70	1.00	272.78	977.59	2,545.71	2.88	-11.93	-1.17	0.14	-0.11	5.28
1,072.20	1.00	275.78	1,072.07	2,451.23	3.00	-13.57	-1.06	0.06	0.00	3.17

Survey Report



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Project:	LEA COUNTY, NM (NAD 83 - UTM ZONE	TVD Reference:	KB 25' @ 3523.30usft (H&P 650)
Site:	SW SW SEC. 13 T22S T34E	MD Reference:	KB 25' @ 3523.30usft (H&P 650)
Well:	AIRSTREAM 24 STATE COM #501H	North Reference:	True
Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,166.80	1.20	298.78	1,166.66	2,356.64	3.56	-15.26	-1.38	0.51	0.21	24.31
1,261.00	1.40	273.78	1,260.83	2,262.47	4.11	-17.27	-1.64	0.63	0.21	-26.54
1,355.00	1.50	272.78	1,354.80	2,168.50	4.25	-19.65	-1.44	0.11	0.11	-1.06
1,449.00	1.60	278.78	1,448.77	2,074.53	4.51	-22.17	-1.35	0.20	0.11	6.38
1,638.00	1.80	254.78	1,637.69	1,885.61	4.13	-27.64	-0.21	0.39	0.11	-12.70
1,733.10	1.80	270.78	1,732.74	1,790.56	3.76	-30.58	0.57	0.53	0.00	16.82
1,827.00	1.60	275.78	1,826.60	1,696.70	3.91	-33.36	0.81	0.26	-0.21	5.32
1,922.00	1.30	272.78	1,921.57	1,601.73	4.10	-35.75	0.97	0.33	-0.32	-3.16
1,951.00	0.90	273.78	1,950.56	1,572.74	4.13	-36.31	1.01	1.38	-1.38	3.45
SURFACE CASING										
1,965.00	0.92	271.11	1,964.56	1,558.74	4.14	-36.53	1.04	0.35	0.18	-19.09
2,012.00	1.02	263.17	2,011.55	1,511.75	4.09	-37.33	1.19	0.35	0.20	-16.89
2,096.00	2.35	271.28	2,095.52	1,427.78	4.04	-39.79	1.59	1.60	1.58	9.65
2,190.00	6.17	277.88	2,189.24	1,334.06	4.78	-46.72	1.83	4.09	4.06	7.02
2,284.00	9.65	277.24	2,282.33	1,240.97	6.47	-59.55	1.96	3.70	3.70	-0.68
2,378.00	11.01	277.34	2,374.81	1,148.49	8.61	-76.27	2.19	1.45	1.45	0.11
2,472.00	9.59	271.49	2,467.29	1,056.01	9.96	-93.00	3.21	1.87	-1.51	-6.22
2,566.00	8.91	267.93	2,560.07	963.23	9.90	-108.10	5.39	0.95	-0.72	-3.79
2,660.00	9.22	267.65	2,652.89	870.41	9.33	-122.90	8.03	0.33	0.33	-0.30
2,754.00	9.32	267.96	2,745.67	777.63	8.75	-138.03	10.73	0.12	0.11	0.33
2,848.00	8.56	266.42	2,838.52	684.78	8.04	-152.62	13.48	0.85	-0.81	-1.64
2,942.00	7.83	266.56	2,931.56	591.74	7.22	-165.99	16.18	0.78	-0.78	0.15
3,037.00	7.73	266.28	3,025.69	497.61	6.41	-178.83	18.77	0.11	-0.11	-0.29
3,131.00	7.38	267.30	3,118.87	404.43	5.72	-191.17	21.19	0.40	-0.37	1.09
3,225.00	6.81	267.03	3,212.15	311.15	5.15	-202.76	23.39	0.61	-0.61	-0.29
3,319.00	6.76	268.67	3,305.50	217.80	4.73	-213.86	25.36	0.21	-0.05	1.74
3,413.00	6.82	271.13	3,398.84	124.46	4.71	-224.97	26.94	0.32	0.06	2.62
3,507.00	6.60	271.84	3,492.19	31.11	4.99	-235.95	28.20	0.25	-0.23	0.76
3,601.00	6.08	272.56	3,585.62	-62.32	5.39	-246.32	29.27	0.56	-0.55	0.77
3,695.00	6.87	270.55	3,679.02	-155.72	5.67	-256.92	30.48	0.87	0.84	-2.14
3,789.00	7.93	269.82	3,772.23	-248.93	5.70	-269.02	32.15	1.13	1.13	-0.78
3,883.00	7.82	270.32	3,865.35	-342.05	5.72	-281.90	33.95	0.14	-0.12	0.53
3,977.00	7.65	270.59	3,958.49	-435.19	5.82	-294.55	35.62	0.18	-0.18	0.29
4,071.00	7.67	270.65	4,051.65	-528.35	5.95	-307.08	37.25	0.02	0.02	0.06
4,165.00	7.64	272.46	4,144.81	-621.51	6.29	-319.60	38.67	0.26	-0.03	1.93
4,259.00	7.98	271.75	4,237.94	-714.64	6.76	-332.36	40.00	0.38	0.36	-0.76
4,354.00	7.87	274.72	4,332.04	-808.74	7.49	-345.44	41.11	0.45	-0.12	3.13
4,448.00	8.02	277.31	4,425.13	-901.83	8.86	-358.35	41.58	0.41	0.16	2.76
4,541.00	8.43	276.86	4,517.18	-993.88	10.50	-371.56	41.81	0.45	0.44	-0.48
4,635.00	8.25	278.56	4,610.18	-1,086.88	12.32	-385.07	41.90	0.32	-0.19	1.81
4,729.00	8.14	279.62	4,703.22	-1,179.92	14.44	-398.30	41.66	0.20	-0.12	1.13
4,823.00	8.15	277.94	4,796.27	-1,272.97	16.47	-411.46	41.50	0.25	0.01	-1.79
4,917.00	7.93	278.80	4,889.35	-1,366.05	18.39	-424.46	41.43	0.27	-0.23	0.91
5,011.00	7.17	278.87	4,982.54	-1,459.24	20.28	-436.67	41.27	0.81	-0.81	0.07
5,105.00	6.42	277.67	5,075.87	-1,552.57	21.89	-447.67	41.22	0.81	-0.80	-1.28
5,199.00	6.42	277.84	5,169.28	-1,645.98	23.31	-458.09	41.28	0.02	0.00	0.18
5,293.00	6.34	277.60	5,262.70	-1,739.40	24.71	-468.44	41.35	0.09	-0.09	-0.26
5,387.00	6.44	276.81	5,356.12	-1,832.82	26.02	-478.82	41.51	0.14	0.11	-0.84
5,481.00	6.49	275.25	5,449.52	-1,926.22	27.13	-489.34	41.89	0.19	0.05	-1.66
5,570.00	6.44	275.70	5,537.95	-2,014.65	28.09	-499.32	42.34	0.08	-0.06	0.51
ICP										
5,631.00	6.55	275.58	5,598.56	-2,075.26	28.77	-506.18	42.63	0.18	0.18	-0.20
5,654.00	6.59	275.53	5,621.41	-2,098.11	29.02	-508.80	42.75	0.18	0.18	-0.20

Survey Report



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Well:	AIRSTREAM 24 STATE COM #501H	North Reference:	True
Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,748.00	7.83	266.08	5,714.67	-2,191.37	29.10	-520.56	44.32	1.82	1.32	-10.05
5,842.00	7.94	264.44	5,807.78	-2,284.48	28.04	-533.41	47.18	0.27	0.12	-1.74
5,936.00	7.70	263.58	5,900.91	-2,377.61	26.70	-546.13	50.29	0.28	-0.26	-0.91
6,031.00	7.64	264.10	5,995.06	-2,471.76	25.34	-558.74	53.41	0.10	-0.06	0.55
6,125.00	8.80	265.41	6,088.09	-2,564.79	24.12	-572.12	56.49	1.25	1.23	1.39
6,219.00	8.99	266.54	6,180.96	-2,657.66	23.11	-586.62	59.54	0.27	0.20	1.20
6,313.00	9.17	264.94	6,273.78	-2,750.48	22.00	-601.41	62.71	0.33	0.19	-1.70
6,407.00	9.44	265.10	6,366.55	-2,843.25	20.68	-616.55	66.14	0.29	0.29	0.17
6,502.00	8.43	267.17	6,460.39	-2,937.09	19.67	-631.27	69.21	1.12	-1.06	2.18
6,595.00	8.25	266.74	6,552.41	-3,029.11	18.96	-644.74	71.81	0.20	-0.19	-0.46
6,690.00	8.09	268.09	6,646.44	-3,123.14	18.35	-658.22	74.31	0.26	-0.17	1.42
6,784.00	8.09	269.02	6,739.51	-3,216.21	18.01	-671.45	76.50	0.14	0.00	0.99
6,878.00	7.29	266.59	6,832.66	-3,309.36	17.55	-684.02	78.73	0.92	-0.85	-2.59
6,972.00	7.06	265.35	6,925.93	-3,402.63	16.72	-695.73	81.19	0.29	-0.24	-1.32
7,067.00	6.90	264.94	7,020.22	-3,496.92	15.75	-707.23	83.77	0.18	-0.17	-0.43
7,160.00	7.10	264.51	7,112.53	-3,589.23	14.70	-718.52	86.39	0.22	0.22	-0.46
7,255.00	7.34	264.22	7,206.78	-3,683.48	13.53	-730.40	89.22	0.26	0.25	-0.31
7,349.00	6.93	263.97	7,300.05	-3,776.75	12.33	-742.01	92.04	0.44	-0.44	-0.27
7,443.00	6.40	264.42	7,393.41	-3,870.11	11.23	-752.86	94.66	0.57	-0.56	0.48
7,537.00	6.16	264.44	7,486.85	-3,963.55	10.23	-763.10	97.08	0.26	-0.26	0.02
7,631.00	5.99	266.56	7,580.32	-4,057.02	9.44	-773.01	99.25	0.30	-0.18	2.26
7,725.00	5.99	266.34	7,673.81	-4,150.51	8.84	-782.80	101.23	0.02	0.00	-0.23
7,820.00	4.37	265.42	7,768.42	-4,245.12	8.23	-791.36	103.03	1.71	-1.71	-0.97
7,914.00	3.13	256.82	7,862.21	-4,338.91	7.36	-797.43	104.74	1.44	-1.32	-9.15
8,008.00	2.08	255.16	7,956.12	-4,432.82	6.34	-801.58	106.34	1.12	-1.12	-1.77
8,103.00	0.41	289.24	8,051.09	-4,527.79	6.01	-803.56	106.95	1.85	-1.76	35.87
8,197.00	0.16	150.00	8,145.09	-4,621.79	6.01	-803.82	106.98	0.58	-0.27	-148.13
8,291.00	0.12	70.94	8,239.09	-4,715.79	5.92	-803.66	107.04	0.19	-0.04	-84.11
8,385.00	0.25	0.86	8,333.09	-4,809.79	6.16	-803.56	106.79	0.25	0.14	-74.55
8,479.00	0.45	354.09	8,427.09	-4,903.79	6.73	-803.60	106.23	0.22	0.21	-7.20
8,573.00	0.74	2.92	8,521.08	-4,997.78	7.71	-803.60	105.27	0.32	0.31	9.39
8,668.00	0.86	4.47	8,616.07	-5,092.77	9.03	-803.52	103.95	0.13	0.13	1.63
8,762.00	1.42	4.40	8,710.05	-5,186.75	10.89	-803.37	102.08	0.60	0.60	-0.07
8,856.00	1.30	46.43	8,804.03	-5,280.73	12.79	-802.51	100.08	1.04	-0.13	44.71
8,951.00	0.77	83.19	8,899.01	-5,375.71	13.61	-801.10	99.07	0.87	-0.56	38.69
9,045.00	0.70	104.43	8,993.01	-5,469.71	13.54	-799.91	98.97	0.30	-0.07	22.60
9,139.00	0.80	79.57	9,087.00	-5,563.70	13.52	-798.71	98.83	0.36	0.11	-26.45
9,233.00	0.73	48.71	9,180.99	-5,657.69	14.03	-797.62	98.17	0.44	-0.07	-32.83
9,327.00	0.78	45.50	9,274.98	-5,751.68	14.87	-796.71	97.20	0.07	0.05	-3.41
9,421.00	1.04	18.32	9,368.97	-5,845.67	16.13	-795.98	95.86	0.53	0.28	-28.91
KOP										
9,507.00	0.94	118.95	9,454.96	-5,931.66	16.53	-795.12	95.34	1.77	-0.12	117.01
9,516.00	1.06	124.74	9,463.96	-5,940.66	16.45	-794.99	95.40	1.77	1.37	64.36
9,547.00	4.49	151.46	9,494.92	-5,971.62	15.22	-794.18	96.51	11.53	11.06	86.19
9,578.00	8.59	154.30	9,525.71	-6,002.41	12.07	-792.59	99.40	13.26	13.23	9.16
9,609.00	13.22	157.97	9,556.15	-6,032.85	6.69	-790.26	104.40	15.10	14.94	11.84
9,641.00	15.33	163.33	9,587.16	-6,063.86	-0.75	-787.67	111.41	7.77	6.59	16.75
9,672.00	16.37	166.93	9,616.98	-6,093.68	-8.93	-785.51	119.20	4.62	3.35	11.61
9,703.00	18.33	167.33	9,646.57	-6,123.27	-17.95	-783.45	127.84	6.33	6.32	1
9,735.00	20.82	163.13	9,676.72	-6,153.42	-28.30	-780.69	137.70	8.93	7.78	-13.12
9,766.00	23.96	159.57	9,705.38	-6,182.08	-39.47	-776.90	148.23	11.03	10.13	-11.48
9,797.00	27.17	157.99	9,733.34	-6,210.04	-51.94	-772.05	159.89	10.58	10.35	-5.10
9,829.00	30.16	159.91	9,761.41	-6,238.11	-66.26	-766.55	173.30	9.78	9.34	6.00

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Site:	SW SW SEC. 13 T22S T34E	MD Reference:	KB 25' @ 3523.30usft (H&P 650)
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Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,860.00	33.03	165.27	9,787.82	-6,264.52	-81.76	-761.72	187.96	12.95	9.26	17.29
9,892.00	35.28	171.35	9,814.31	-6,291.01	-99.33	-758.11	204.86	12.77	7.03	19.00
9,923.00	37.30	176.25	9,839.30	-6,316.00	-117.56	-756.15	222.63	11.40	6.52	15.81
9,955.00	39.89	181.25	9,864.31	-6,341.01	-137.50	-755.74	242.32	12.66	8.09	15.62
9,986.00	42.04	184.12	9,887.72	-6,364.42	-157.80	-756.70	262.55	9.21	6.94	9.26
10,017.00	44.90	184.53	9,910.22	-6,386.92	-179.06	-758.31	283.82	9.27	9.23	1.32
10,049.00	47.28	184.05	9,932.41	-6,409.11	-202.05	-760.04	306.83	7.52	7.44	-1.50
10,080.00	49.16	183.50	9,953.06	-6,429.76	-225.12	-761.56	329.88	6.21	6.06	-1.77
10,112.00	50.94	183.13	9,973.61	-6,450.31	-249.61	-762.97	354.32	5.63	5.56	-1.16
10,143.00	52.88	182.46	9,992.73	-6,469.43	-273.97	-764.16	378.62	6.49	6.26	-2.16
10,174.00	56.75	182.74	10,010.59	-6,487.29	-299.28	-765.31	403.83	12.51	12.48	0.90
10,206.00	59.73	182.57	10,027.44	-6,504.14	-326.46	-766.57	430.91	9.32	9.31	-0.53
10,237.00	62.14	182.09	10,042.49	-6,519.19	-353.53	-767.67	457.87	7.89	7.77	-1.55
10,269.00	64.77	182.34	10,056.79	-6,533.49	-382.13	-768.78	486.35	8.25	8.22	0.78
10,300.00	67.82	182.07	10,069.26	-6,545.96	-410.49	-769.87	514.58	9.87	9.84	-0.87
10,331.00	71.56	182.31	10,080.01	-6,556.71	-439.54	-770.98	543.49	12.09	12.06	0.77
10,363.00	73.42	182.13	10,089.64	-6,566.34	-470.03	-772.16	573.85	5.84	5.81	-0.56
10,394.00	73.56	181.71	10,098.45	-6,575.15	-499.73	-773.16	603.40	1.38	0.45	-1.35
10,426.00	75.44	181.81	10,107.00	-6,583.70	-530.55	-774.11	634.05	5.88	5.87	0.31
10,457.00	77.31	182.15	10,114.30	-6,591.00	-560.66	-775.15	664.00	6.13	6.03	1.10
10,488.00	79.45	182.34	10,120.55	-6,597.25	-591.00	-776.34	694.21	6.93	6.90	0.61
10,520.00	81.17	182.36	10,125.93	-6,602.63	-622.52	-777.63	725.59	5.38	5.37	0.06
10,551.00	82.15	182.73	10,130.43	-6,607.13	-653.16	-778.99	756.12	3.37	3.16	1.19
10,582.00	83.42	182.66	10,134.32	-6,611.02	-683.88	-780.44	786.74	4.10	4.10	-0.23
10,614.00	86.39	182.73	10,137.17	-6,613.87	-715.71	-781.94	818.47	9.28	9.28	0.22
10,645.00	88.70	182.51	10,138.49	-6,615.19	-746.65	-783.35	849.30	7.49	7.45	-0.71
HZ LANDING										
10,666.00	88.61	182.44	10,138.99	-6,615.69	-767.63	-784.26	870.19	0.54	-0.43	-0.32
10,726.00	88.35	182.25	10,140.58	-6,617.28	-827.55	-786.71	929.87	0.54	-0.43	-0.32
10,739.00	88.17	182.24	10,140.97	-6,617.67	-840.54	-787.22	942.80	1.39	-1.38	-0.08
10,770.00	88.25	182.16	10,141.94	-6,618.64	-871.50	-788.41	973.62	0.36	0.26	-0.26
10,802.00	86.18	181.83	10,143.50	-6,620.20	-903.44	-789.53	1,005.40	6.55	-6.47	-1.03
10,833.00	86.06	181.81	10,145.59	-6,622.29	-934.35	-790.51	1,036.15	0.39	-0.39	-0.06
10,864.00	86.01	181.98	10,147.74	-6,624.44	-965.26	-791.53	1,066.89	0.57	-0.16	0.55
10,896.00	85.95	182.15	10,149.98	-6,626.68	-997.16	-792.68	1,098.64	0.56	-0.19	0.53
10,927.00	86.17	182.29	10,152.11	-6,628.81	-1,028.07	-793.88	1,129.40	0.84	0.71	0.45
11,021.00	86.12	182.42	10,158.43	-6,635.13	-1,121.78	-797.73	1,222.72	0.15	-0.05	0.14
11,115.00	87.00	181.43	10,164.07	-6,640.77	-1,215.55	-800.88	1,316.01	1.41	0.94	-1.05
11,209.00	87.77	180.17	10,168.36	-6,645.06	-1,309.44	-802.19	1,409.16	1.57	0.82	-1.34
11,303.00	88.43	179.36	10,171.48	-6,648.18	-1,403.39	-801.81	1,502.12	1.11	0.70	-0.86
11,397.00	86.51	179.70	10,175.63	-6,652.33	-1,497.29	-801.04	1,594.98	2.07	-2.04	0.36
11,491.00	86.37	180.11	10,181.46	-6,658.16	-1,591.11	-800.88	1,687.84	0.46	-0.15	0.44
11,585.00	86.57	180.53	10,187.25	-6,663.95	-1,684.93	-801.41	1,780.81	0.49	0.21	0.45
11,679.00	87.13	180.44	10,192.41	-6,669.11	-1,778.78	-802.20	1,873.84	0.60	0.60	-0.10
11,773.00	87.39	179.45	10,196.91	-6,673.61	-1,872.67	-802.11	1,966.79	1.09	0.28	-1.05
11,868.00	89.01	179.26	10,199.89	-6,676.59	-1,967.62	-801.04	2,060.64	1.72	1.71	-0.20
11,961.00	89.59	178.72	10,201.03	-6,677.73	-2,060.59	-799.40	2,152.47	0.85	0.62	-0.58
12,056.00	89.65	178.19	10,201.66	-6,678.36	-2,155.56	-796.84	2,246.13	0.56	0.06	-0.56
12,150.00	88.64	177.57	10,203.06	-6,679.76	-2,249.48	-793.37	2,338.63	1.26	-1.07	-0.66
12,243.00	89.99	179.58	10,204.17	-6,680.87	-2,342.44	-791.05	2,430.34	2.60	1.45	2.16
12,337.00	89.90	178.80	10,204.26	-6,680.96	-2,436.43	-789.72	2,523.21	0.84	-0.10	-0.83
12,431.00	89.08	180.46	10,205.10	-6,681.80	-2,530.42	-789.12	2,616.19	1.97	-0.87	1.77
12,525.00	89.58	180.39	10,206.20	-6,682.90	-2,624.41	-789.81	2,709.34	0.54	0.53	-0.07

Survey Report



Company:	CENTENNIAL RESOURCE DEVELOPME	Local Co-ordinate Reference:	Well AIRSTREAM 24 STATE COM #501H
Project:	LEA COUNTY, NM (NAD 83 - UTM ZONE	TVD Reference:	KB 25' @ 3523.30usft (H&P 650)
Site:	SW SW SEC. 13 T22S T34E	MD Reference:	KB 25' @ 3523.30usft (H&P 650)
Well:	AIRSTREAM 24 STATE COM #501H	North Reference:	True
Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,620.00	89.20	181.44	10,207.21	-6,683.91	-2,719.39	-791.33	2,803.59	1.18	-0.40	1.11
12,714.00	89.30	181.79	10,208.44	-6,685.14	-2,813.34	-793.98	2,896.99	0.39	0.11	0.37
12,808.00	89.83	181.65	10,209.16	-6,685.86	-2,907.30	-796.80	2,990.41	0.58	0.56	-0.15
12,902.00	88.96	181.75	10,210.15	-6,686.85	-3,001.25	-799.59	3,083.82	0.93	-0.93	0.11
12,996.00	88.73	181.45	10,212.04	-6,688.74	-3,095.20	-802.21	3,177.20	0.40	-0.24	-0.32
13,090.00	89.72	181.41	10,213.31	-6,690.01	-3,189.16	-804.56	3,270.56	1.05	1.05	-0.04
13,184.00	90.49	180.88	10,213.14	-6,689.84	-3,283.14	-806.44	3,363.87	0.99	0.82	-0.56
13,278.00	87.77	179.14	10,214.57	-6,691.27	-3,377.11	-806.46	3,456.92	3.43	-2.89	-1.85
13,372.00	89.83	178.57	10,216.54	-6,693.24	-3,471.07	-804.58	3,549.68	2.27	2.19	-0.61
13,403.00	89.29	178.06	10,216.78	-6,693.48	-3,502.05	-803.67	3,580.23	2.40	-1.74	-1.65
13,435.00	89.52	177.90	10,217.11	-6,693.81	-3,534.03	-802.54	3,611.73	0.88	0.72	-0.50
13,466.00	90.34	177.83	10,217.15	-6,693.85	-3,565.01	-801.38	3,642.24	2.65	2.65	-0.23
13,497.00	90.04	177.60	10,217.04	-6,693.74	-3,595.99	-800.15	3,672.73	1.22	-0.97	-0.74
13,529.00	90.24	177.97	10,216.96	-6,693.66	-3,627.96	-798.91	3,704.22	1.31	0.62	1.16
13,560.00	90.81	178.17	10,216.68	-6,693.38	-3,658.94	-797.87	3,734.75	1.95	1.84	0.65
13,654.00	91.05	179.55	10,215.15	-6,691.85	-3,752.91	-796.00	3,827.52	1.49	0.26	1.47
13,748.00	91.41	181.24	10,213.14	-6,689.84	-3,846.88	-796.64	3,920.65	1.84	0.38	1.80
13,842.00	92.20	181.57	10,210.18	-6,686.88	-3,940.81	-798.95	4,013.97	0.91	0.84	0.35
13,937.00	90.28	181.87	10,208.12	-6,684.82	-4,035.74	-801.80	4,108.36	2.05	-2.02	0.32
14,030.00	89.31	181.61	10,208.45	-6,685.15	-4,128.69	-804.62	4,200.79	1.08	-1.04	-0.28
14,124.00	88.75	181.18	10,210.04	-6,686.74	-4,222.65	-806.91	4,294.13	0.75	-0.60	-0.46
14,171.00	88.71	181.23	10,211.09	-6,687.79	-4,269.63	-807.90	4,340.78	0.14	-0.09	0.11
14,218.00	87.45	181.11	10,212.66	-6,689.36	-4,316.59	-808.86	4,387.42	2.69	-2.68	-0.26
14,266.00	87.24	181.10	10,214.88	-6,691.58	-4,364.53	-809.78	4,435.01	0.44	-0.44	-0.02
14,312.00	87.17	180.86	10,217.13	-6,693.83	-4,410.47	-810.57	4,480.60	0.54	-0.15	-0.52
14,359.00	87.22	181.13	10,219.43	-6,696.13	-4,457.41	-811.38	4,527.19	0.58	0.11	0.57
14,406.00	87.31	181.09	10,221.67	-6,698.37	-4,504.34	-812.29	4,573.79	0.21	0.19	-0.09
14,451.00	86.88	180.67	10,223.95	-6,700.65	-4,549.28	-812.98	4,618.38	1.33	-0.96	-0.93
14,500.00	84.60	180.27	10,227.59	-6,704.29	-4,598.14	-813.38	4,666.81	4.72	-4.65	-0.82
14,594.00	86.48	180.60	10,234.90	-6,711.60	-4,691.85	-814.10	4,759.69	2.03	2.00	0.35
14,688.00	87.49	180.01	10,239.84	-6,716.54	-4,785.71	-814.60	4,852.69	1.24	1.07	-0.63
14,782.00	88.02	179.53	10,243.53	-6,720.23	-4,879.64	-814.22	4,945.64	0.76	0.56	-0.51
14,876.00	87.42	178.52	10,247.27	-6,723.97	-4,973.55	-812.62	5,038.39	1.25	-0.64	-1.07
14,970.00	87.83	177.90	10,251.16	-6,727.86	-5,067.42	-809.69	5,130.92	0.79	0.44	-0.66
15,064.00	88.00	177.39	10,254.58	-6,731.28	-5,161.28	-805.83	5,223.30	0.57	0.18	-0.54
15,158.00	88.26	176.98	10,257.65	-6,734.35	-5,255.12	-801.21	5,315.56	0.52	0.28	-0.44
15,252.00	88.73	176.71	10,260.12	-6,736.82	-5,348.94	-796.04	5,407.73	0.58	0.50	-0.29
15,346.00	88.89	175.89	10,262.07	-6,738.77	-5,442.73	-789.98	5,499.73	0.89	0.17	-0.87
15,441.00	89.19	176.12	10,263.66	-6,740.36	-5,537.48	-783.36	5,592.62	0.40	0.32	0.24
15,535.00	89.61	175.95	10,264.65	-6,741.35	-5,631.25	-776.86	5,684.54	0.48	0.45	-0.18
LAST SURVEY - NOV 10, 2018										
15,598.00	89.86	175.78	10,264.94	-6,741.64	-5,694.09	-772.32	5,746.12	0.48	0.40	-0.27
PROJECTION TO TD										
15,651.00	90.00	175.70	10,265.00	-6,741.70	-5,746.94	-768.38	5,797.89	0.30	0.26	-0.15

Survey Report



Company:	CENTENNIAL RESOURCE DEVELOPMENT	Local Co-ordinate Reference:	Well AIRSTREAM 24 STATE COM #501H
Project:	LEA COUNTY, NM (NAD 83 - UTM ZONE	TVD Reference:	KB 25' @ 3523.30usft (H&P 650)
Site:	SW SW SEC. 13 T22S T34E	MD Reference:	KB 25' @ 3523.30usft (H&P 650)
Well:	AIRSTREAM 24 STATE COM #501H	North Reference:	True
Wellbore:	JOB #2018-626-650	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Targets										
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)		
KOP - AIRSTREAM 24	- survey misses target center by 38.75usft at 9717.68usft MD (9660.46 TVD, -22.56 N, -782.32 E)	0.00	0.00	9,673.11	9.63	-799.78	11,759,503.38	2,124,685.58	32.385989	-103.430773
- Point										
LTP/BHL - AIRSTREAM	- survey misses target center by 197.92usft at 15633.31usft MD (10264.99 TVD, -5729.30 N, -769.70 E)	0.00	0.00	10,458.00	-5,732.32	-813.41	11,753,762.60	2,124,756.33	32.370207	-103.430817
- Point										
PP/FTP - AIRSTREAM	- survey misses target center by 216.30usft at 10575.79usft MD (10133.60 TVD, -677.72 N, -780.15 E)	0.00	0.00	10,347.02	-649.67	-801.39	11,758,844.22	2,124,693.66	32.384177	-103.430779
- Point										
LTP/BHL - AIRSTREAM	- survey misses target center by 197.92usft at 15633.31usft MD (10264.99 TVD, -5729.30 N, -769.70 E)	0.00	0.00	10,458.00	-5,732.32	-813.41	11,753,762.60	2,124,756.33	32.370207	-103.430817
- Point										
KOP - AIRSTREAM 24	- survey misses target center by 35.35usft at 9719.83usft MD (9662.48 TVD, -23.26 N, -782.14 E)	0.00	0.00	9,673.11	9.64	-774.78	11,759,503.76	2,124,710.57	32.385989	-103.430692
- Point										
LTP/BHL - AIRSTREAM	- survey misses target center by 193.93usft at 15635.23usft MD (10265.00 TVD, -5731.21 N, -769.56 E)	0.00	0.00	10,458.00	-5,732.38	-788.41	11,753,762.91	2,124,781.33	32.370207	-103.430736
- Point										
KOP - AIRSTREAM 24	- survey misses target center by 38.76usft at 9717.68usft MD (9660.46 TVD, -22.56 N, -782.32 E)	0.00	0.00	9,673.11	9.64	-799.78	11,759,503.39	2,124,685.58	32.385989	-103.430773
- Point										
PP/FTP - AIRSTREAM	- survey misses target center by 215.27usft at 10574.68usft MD (10133.47 TVD, -676.62 N, -780.10 E)	0.00	0.00	10,347.02	-649.73	-776.39	11,758,844.53	2,124,718.65	32.384177	-103.430698
- Point										
PP/FTP - AIRSTREAM	- survey misses target center by 29.90usft at 10545.61usft MD (10129.69 TVD, -647.82 N, -778.74 E)	0.00	0.00	10,110.25	-649.67	-801.39	11,758,844.22	2,124,693.66	32.384177	-103.430779
- Point										
LTP/BHL - AIRSTREAM	- survey misses target center by 61.39usft at 15633.03usft MD (10264.99 TVD, -5729.02 N, -769.72 E)	0.00	0.00	10,222.00	-5,732.32	-813.41	11,753,762.60	2,124,756.33	32.370207	-103.430817
- Point										
PP/FTP - AIRSTREAM	- survey misses target center by 216.30usft at 10575.79usft MD (10133.60 TVD, -677.72 N, -780.15 E)	0.00	0.00	10,347.02	-649.67	-801.39	11,758,844.22	2,124,693.66	32.384177	-103.430779
- Point										

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
1,965.00	1,964.56	4.14	-36.53	SURFACE CASING	
5,631.00	5,598.56	28.77	-506.18	ICP	
9,507.00	9,454.96	16.53	-795.12	KOP	
10,666.00	10,138.99	-767.63	-784.26	HZ LANDING	
15,598.00	10,264.94	-5,694.09	-772.32	LAST SURVEY - NOV 10, 2018	
15,651.00	10,265.00	-5,746.94	-768.38	PROJECTION TO TD	

Checked By: _____ Approved By: _____ Date: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/27/2018
Job End Date:	1/3/2019
State:	New Mexico
County:	Lea
API Number:	30-025-45155-00-00
Operator Name:	Centennial Resource Production, LLC
Well Name and Number:	Airstream 24 State Com 501H
Latitude:	32.38596300
Longitude:	-103.42818300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	10,265
Total Base Water Volume (gal):	10,215,114
Total Base Non Water Volume:	0



HOBBS OCD
FEB 22 2019
RECEIVED

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier/Base Fluid	Water	7732-18-5	100.00000	86.65093	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Crystalline Silica (quartz)	14808-60-7	100.00000	13.21817	None
HiRate 600W	Innospec	Friction Reducer	Petroleum distillates	64742-47-8	30.00000	0.01813	None
			Ammonium chloride	12125-02-9	15.00000	0.00906	None
			Ethoxylated alcohol	68002-97-1	5.00000	0.00302	None
			Ethoxylated alcohol	68551-12-2	5.00000	0.00302	None
			Ethoxylated alcohol	68439-50-9	5.00000	0.00302	None
ScaleCease 7103	Innospec	Scale Inhibitor	Mixture	00-00-0	100.00000	0.02227	None
Microbreak GQ 123	Innospec	Biocide	Water	7732-18-5	100.00000	0.01729	None
			Glutaral	111-30-8	15.00000	0.00259	None
			Didecyltrimethylammonium Chloride	7173-51-5	5.00000	0.00086	None

			Quaternary Ammonium Compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.00000	0.00086	None
			Ethanol	64-17-5	1.00000	0.00017	None
PropShield	Hexion Inc	Flow-back control					
			Solvent naphtha (petroleum), heavy arom	64742-94-5	20.00000	0.00528	None
			Naphthalene	91-20-3	3.00000	0.00079	None
ASI-ULT110	A. Schulman	Fracking Diverting Agent					
			proprietary	proprietary	100.00000	0.00453	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Ammonium chloride	12125-02-9	15.00000	0.00906	
			Ethoxylated alcohol	68551-12-2	5.00000	0.00302	
			Ethoxylated alcohol	68002-97-1	5.00000	0.00302	
			Ethoxylated alcohol	68439-50-9	5.00000	0.00302	
			Glutaral	111-30-8	15.00000	0.00259	
			Quaternary Ammonium Compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.00000	0.00086	
			Didecyl dimethyl ammonium Chloride	7173-51-5	5.00000	0.00086	
			Naphthalene	91-20-3	3.00000	0.00079	
			Ethanol	64-17-5	1.00000	0.00017	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)