



Gyrodata Incorporated
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RECEIVED

JUL 23 2018

DISTRICT II-ARTESIA O.C.D.

30-015-43979

State of New Mexico
County of Eddy

I, Kevin Willard, certify that; I am employed by Gyrodata Inc.; that I am authorized and qualified to review the Gyroscopic Multishot survey from a depth of 100 feet to a depth of 15700 feet conducted on the day(s) of 6/28/18 through 6/29/18; that this survey was conducted at the request of SOLARIS MIDSTREAM for the LOBO STATE 285 SWD WELL 1 API No. 30-015-43979 in EDDY COUNTY, NEW MEXICO; that the data is true, correct, complete, and within the limitations of the tool as set forth by Gyrodata Inc.; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Gyrodata Inc.

Kevin Willard
Operations Coordinator

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DISTRICT II-ARTESIA O.C.D.

A Gyrodata Directional Survey
FINAL DEFINITIVE COPY

for

SOLARIS MIDSTREAM

Lease: Lobo Sate 285 SWD Well: 1, 5.5" Casing
Location: Latshaw 8, Eddy County, New Mexico

Job Number: MD0618GVC590

Run Date: 28 Jun 2018
Report Generated: 16 Jul 2018 03:01

Surveyor: Nick Durkin

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Company Man
Survey Latitude: 32 deg 7 min 18 sec N 32.121707 deg. N
Longitude: 104 deg 4 min 13 sec W 104.070229 deg. W

Bearings Correction:

Gyro: 0 deg 8 min 24 sec to Grid North

Depth Reference: Rotary Table

Air Gap (RKB to Ground / RKB to MSL): 32.00

Ground Elevation (Ground to MSL / MSL to Mudline): 2994.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0 0.0	0.00 N 0.00 E

100 - 15700 FT. RATE-GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 5.5" CASING.

ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO LATSHAW #8 RKB HEIGHT OF 32 FT.

100.00	1.91	329.72	1.91	99.98	1.7 329.7	1.44 N 0.84 W
200.00	2.60	327.57	0.70	199.90	5.6 328.8	4.79 N 2.90 W
300.00	3.13	326.38	0.53	299.78	10.6 327.9	8.98 N 5.62 W
400.00	3.30	322.94	0.26	399.62	16.2 326.8	13.54 N 8.86 W
500.00	3.09	325.65	0.26	499.47	21.7 326.1	18.06 N 12.12 W
600.00	2.92	326.38	0.18	599.33	27.0 326.1	22.40 N 15.04 W
700.00	2.89	327.90	0.08	699.20	32.0 326.3	26.65 N 17.79 W
800.00	2.30	319.37	0.70	799.10	36.5 326.0	30.30 N 20.43 W
900.00	1.78	308.90	0.64	899.03	40.0 325.0	32.81 N 22.95 W
1000.00	1.76	305.18	0.12	998.99	43.0 323.8	34.67 N 25.42 W
1100.00	1.75	306.64	0.05	1098.94	45.9 322.6	36.46 N 27.90 W
1200.00	1.24	311.16	0.52	1198.91	48.4 321.8	38.09 N 29.94 W
1300.00	1.00	315.12	0.26	1298.89	50.4 321.5	39.42 N 31.37 W
1400.00	0.99	321.80	0.12	1398.87	52.1 321.4	40.71 N 32.52 W
1500.00	0.96	321.75	0.03	1498.86	53.8 321.4	42.05 N 33.57 W
1600.00	0.79	316.14	0.19	1598.85	55.3 321.3	43.20 N 34.56 W
1700.00	0.70	310.93	0.11	1698.84	56.6 321.2	44.09 N 35.49 W

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1800.00	0.64	317.31	0.09	1798.83	57.8 321.0	44.90 N 36.33 W
1900.00	0.42	13.82	0.54	1898.83	58.5 321.3	45.66 N 36.63 W
2000.00	1.14	74.71	1.01	1998.82	58.4 322.4	46.28 N 35.58 W
2100.00	1.81	85.52	0.72	2098.78	57.2 324.7	46.66 N 33.05 W
2200.00	2.63	92.04	0.85	2198.71	55.1 328.0	46.70 N 29.18 W
2300.00	3.15	96.35	0.57	2298.58	52.2 332.5	46.32 N 24.16 W
2400.00	3.29	98.46	0.19	2398.42	49.2 337.8	45.59 N 18.59 W
2500.00	2.87	101.97	0.46	2498.28	46.6 343.4	44.65 N 13.30 W
2600.00	2.41	103.43	0.47	2598.17	44.5 348.6	43.64 N 8.80 W
2700.00	2.37	103.28	0.04	2698.09	42.9 353.7	42.68 N 4.75 W
2800.00	1.32	110.59	1.07	2798.03	41.8 357.7	41.80 N 1.65 W
2900.00	0.90	108.42	0.42	2898.01	41.1 0.2	41.14 N 0.17 E
3000.00	0.98	108.16	0.07	2998.00	40.7 2.4	40.63 N 1.73 E
3100.00	0.78	100.49	0.23	3097.99	40.4 4.6	40.24 N 3.21 E
3200.00	0.85	97.70	0.08	3197.98	40.3 6.6	40.01 N 4.62 E
3300.00	0.82	98.19	0.03	3297.97	40.3 8.7	39.81 N 6.07 E
3400.00	0.72	97.04	0.10	3397.96	40.3 10.6	39.63 N 7.40 E
3500.00	0.64	96.58	0.08	3497.95	40.4 12.3	39.49 N 8.58 E
3600.00	0.65	100.98	0.05	3597.94	40.5 13.8	39.32 N 9.69 E
3700.00	0.65	103.99	0.03	3697.94	40.5 15.5	39.07 N 10.80 E
3800.00	0.63	103.25	0.02	3797.93	40.6 17.0	38.81 N 11.90 E
3900.00	0.58	98.79	0.07	3897.93	40.7 18.5	38.61 N 12.93 E

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Solaris Midstream

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Location: Latshaw 8, Eddy County, New Mexico

Job Number: MD0618GVC590

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
4000.00	0.55	100.34	0.03	3997.92	40.9 19.9	38.44 N 13.91 E
4100.00	0.55	103.57	0.03	4097.92	41.0 21.2	38.24 N 14.84 E
4200.00	0.47	105.64	0.08	4197.91	41.1 22.4	38.02 N 15.70 E
4300.00	0.47	105.85	0.00	4297.91	41.2 23.6	37.80 N 16.49 E
4400.00	0.41	114.30	0.09	4397.91	41.3 24.6	37.54 N 17.21 E
4500.00	0.46	113.32	0.04	4497.90	41.3 25.7	37.24 N 17.90 E
4600.00	0.45	115.74	0.02	4597.90	41.3 26.8	36.91 N 18.61 E
4700.00	0.31	124.91	0.15	4697.90	41.3 27.7	36.59 N 19.18 E
4800.00	0.29	133.53	0.05	4797.90	41.2 28.4	36.26 N 19.59 E
4900.00	0.30	138.59	0.03	4897.90	41.1 29.1	35.89 N 19.94 E
5000.00	0.38	143.56	0.08	4997.89	40.8 29.8	35.43 N 20.31 E
5100.00	0.37	156.16	0.08	5097.89	40.5 30.6	34.87 N 20.64 E
5200.00	0.35	177.30	0.13	5197.89	40.1 31.2	34.28 N 20.78 E
5300.00	0.37	176.17	0.03	5297.89	39.6 31.7	33.65 N 20.82 E
5400.00	0.40	183.05	0.06	5397.89	39.0 32.3	32.97 N 20.82 E
5500.00	0.41	182.91	0.01	5497.88	38.4 32.8	32.26 N 20.78 E
5600.00	0.51	189.42	0.11	5597.88	37.7 33.3	31.47 N 20.69 E
5700.00	0.52	196.56	0.06	5697.88	36.8 33.8	30.59 N 20.49 E
5800.00	0.57	200.25	0.06	5797.87	35.9 34.2	29.69 N 20.19 E
5900.00	0.71	205.37	0.15	5897.87	34.8 34.6	28.66 N 19.75 E
6000.00	0.71	200.53	0.06	5997.86	33.6 35.0	27.52 N 19.27 E

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6100.00	0.79	207.39	0.12	6097.85	32.3 35.4	26.33 N 18.74 E
6200.00	0.85	211.31	0.08	6197.84	30.9 35.7	25.09 N 18.04 E
6300.00	0.98	220.11	0.19	6297.83	29.3 35.7	23.81 N 17.10 E
6400.00	1.34	239.14	0.52	6397.81	27.4 34.6	22.56 N 15.56 E
6500.00	1.08	234.72	0.27	6497.78	25.5 32.8	21.42 N 13.78 E
6600.00	0.78	223.62	0.35	6597.77	23.9 31.6	20.38 N 12.54 E
6700.00	0.83	225.67	0.06	6697.76	22.6 30.8	19.39 N 11.56 E
6800.00	0.87	207.74	0.27	6797.75	21.1 30.4	18.21 N 10.69 E
6900.00	1.12	176.35	0.59	6897.74	19.6 32.1	16.56 N 10.40 E
7000.00	1.09	257.73	1.44	6997.72	18.1 31.8	15.39 N 9.53 E
7100.00	1.58	264.04	0.51	7097.70	16.7 25.7	15.05 N 7.24 E
7200.00	1.51	261.20	0.10	7197.66	15.4 17.2	14.70 N 4.56 E
7300.00	1.35	258.69	0.18	7297.63	14.4 8.4	14.27 N 2.10 E
7400.00	1.07	264.47	0.30	7397.61	13.9 0.1	13.95 N 0.02 E
7500.00	0.81	273.17	0.30	7497.59	14.0 353.4	13.90 N 1.61 W
7600.00	0.95	288.09	0.27	7597.58	14.5 347.7	14.19 N 3.10 W
7700.00	1.68	315.69	0.95	7697.55	16.3 342.4	15.50 N 4.91 W
7800.00	3.04	330.11	1.48	7797.47	20.2 338.9	18.85 N 7.25 W
7900.00	2.14	324.91	0.94	7897.36	24.6 336.9	22.67 N 9.65 W
8000.00	1.51	330.37	0.65	7997.31	27.8 335.8	25.35 N 11.37 W
8100.00	0.81	327.93	0.70	8097.29	29.8 335.4	27.09 N 12.40 W
8200.00	0.60	327.21	0.22	8197.28	31.0 335.1	28.13 N 13.06 W

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8300.00	0.63	318.97	0.09	8297.28	32.1 334.7	28.98 N 13.70 W
8400.00	0.62	306.77	0.13	8397.27	33.1 334.0	29.72 N 14.50 W
8500.00	0.66	300.46	0.08	8497.27	34.0 333.0	30.34 N 15.43 W
8600.00	0.51	291.99	0.17	8597.26	34.9 332.0	30.80 N 16.35 W
8700.00	0.46	280.96	0.10	8697.26	35.5 331.1	31.05 N 17.16 W
8800.00	0.59	257.49	0.25	8797.25	35.9 329.8	31.01 N 18.06 W
8900.00	0.66	240.07	0.20	8897.25	36.1 328.1	30.62 N 19.06 W
9000.00	0.68	238.54	0.03	8997.24	36.1 326.2	30.02 N 20.06 W
9100.00	0.73	236.88	0.05	9097.23	36.2 324.3	29.36 N 21.10 W
9200.00	0.74	231.67	0.07	9197.23	36.2 322.3	28.62 N 22.13 W
9300.00	0.83	215.47	0.24	9297.22	36.0 320.2	27.63 N 23.06 W
9400.00	0.89	217.49	0.07	9397.20	35.7 317.8	26.42 N 23.95 W
9500.00	0.95	223.89	0.12	9497.19	35.5 315.2	25.21 N 25.00 W
9600.00	0.90	222.33	0.05	9597.18	35.5 312.6	24.03 N 26.10 W
9700.00	0.77	215.51	0.16	9697.17	35.4 310.3	22.90 N 27.02 W
9800.00	0.46	224.40	0.33	9797.16	35.4 308.5	22.07 N 27.69 W
9900.00	0.38	246.68	0.18	9897.16	35.6 307.4	21.65 N 28.28 W
10000.00	0.56	266.06	0.23	9997.16	36.1 306.5	21.48 N 29.07 W
10100.00	0.75	274.41	0.21	10097.15	37.1 305.4	21.50 N 30.20 W
10200.00	1.41	260.91	0.71	10197.13	38.5 303.7	21.35 N 32.07 W
10300.00	2.57	251.07	1.20	10297.07	40.9 300.0	20.43 N 35.41 W
10400.00	2.37	244.26	0.36	10396.98	43.7 295.5	18.81 N 39.40 W

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Solaris Midstream

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
10500.00	2.15	236.34	0.38	10496.90	46.0 291.5	16.87 N 42.82 W
10600.00	1.93	236.34	0.22	10596.84	48.1 288.0	14.89 N 45.79 W
10700.00	1.91	233.49	0.10	10696.78	50.2 285.0	12.97 N 48.53 W
10800.00	1.12	247.34	0.86	10796.74	52.1 282.9	11.60 N 50.76 W
10900.00	0.71	259.92	0.45	10896.73	53.4 282.0	11.12 N 52.27 W
11000.00	0.74	257.10	0.05	10996.72	54.6 281.5	10.87 N 53.52 W
11100.00	0.59	251.89	0.17	11096.72	55.6 280.9	10.56 N 54.63 W
11200.00	0.81	241.07	0.25	11196.71	56.6 280.2	10.06 N 55.74 W
11300.00	0.88	243.49	0.08	11296.70	57.8 279.3	9.38 N 57.04 W
11400.00	0.94	250.58	0.13	11396.69	59.2 278.5	8.76 N 58.50 W
11500.00	1.04	261.84	0.22	11496.67	60.8 277.9	8.36 N 60.18 W
11600.00	1.02	272.32	0.19	11596.66	62.5 277.6	8.27 N 61.97 W
11700.00	1.12	274.63	0.11	11696.64	64.4 277.5	8.38 N 63.83 W
11800.00	1.17	277.84	0.09	11796.62	66.4 277.4	8.60 N 65.81 W
11900.00	1.16	280.09	0.05	11896.60	68.4 277.5	8.92 N 67.82 W
12000.00	1.13	279.22	0.03	11996.58	70.4 277.6	9.25 N 69.79 W
12100.00	1.29	280.90	0.16	12096.55	72.5 277.6	9.62 N 71.86 W
12200.00	1.42	282.90	0.14	12196.53	74.9 277.8	10.11 N 74.18 W
12300.00	1.35	278.62	0.13	12296.50	77.3 277.9	10.56 N 76.55 W
12400.00	1.38	271.41	0.17	12396.47	79.6 277.8	10.77 N 78.91 W
12500.00	1.26	261.90	0.25	12496.44	81.9 277.5	10.65 N 81.20 W

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12600.00	1.26	260.02	0.04	12596.42	84.0 277.0	10.30 N 83.36 W
12700.00	1.30	254.53	0.13	12696.39	86.1 276.5	9.81 N 85.54 W
12800.00	1.60	228.54	0.72	12796.36	88.1 275.6	8.58 N 87.68 W
12900.00	1.45	215.19	0.39	12896.33	89.7 274.2	6.62 N 89.46 W
13000.00	1.56	194.55	0.55	12996.29	90.6 272.7	4.27 N 90.53 W
13100.00	1.36	198.51	0.22	13096.26	91.3 271.1	1.82 N 91.25 W
13200.00	1.47	221.44	0.57	13196.23	92.5 269.8	0.26 S 92.48 W
13300.00	2.02	228.67	0.59	13296.19	94.7 268.6	2.39 S 94.65 W
13400.00	1.87	257.60	0.98	13396.13	97.6 267.7	3.90 S 97.56 W
13500.00	1.82	269.81	0.40	13496.08	100.8 267.6	4.26 S 100.75 W
13600.00	1.83	266.33	0.11	13596.03	104.0 267.6	4.36 S 103.93 W
13700.00	1.62	267.43	0.20	13695.98	107.0 267.6	4.53 S 106.93 W
13800.00	1.44	277.32	0.32	13795.95	109.7 267.7	4.43 S 109.59 W
13900.00	1.26	287.95	0.31	13895.92	112.0 268.0	3.93 S 111.89 W
14000.00	1.38	316.03	0.65	13995.89	113.8 268.6	2.73 S 113.77 W
14100.00	1.56	342.69	0.70	14095.86	115.0 269.7	0.56 S 115.01 W
14200.00	2.27	9.70	1.13	14195.81	115.1 271.3	2.69 N 115.08 W
14300.00	3.41	15.39	1.17	14295.68	114.2 273.8	7.51 N 113.96 W
14400.00	4.15	20.22	0.80	14395.47	112.8 277.0	13.77 N 111.92 W
14500.00	5.86	31.89	1.98	14495.08	110.1 281.3	21.50 N 107.97 W
14600.00	6.55	37.40	0.91	14594.50	106.2 286.6	30.37 N 101.81 W
14700.00	5.99	27.99	1.17	14693.90	103.7 292.4	39.51 N 95.90 W

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.		HORIZONTAL COORDINATES feet	
14800.00	5.90	5.64	2.30	14793.38	105.2	297.9	49.23 N	92.94 W
14900.00	8.14	10.05	2.30	14892.62	109.9	303.9	61.32 N	91.20 W
15000.00	10.72	9.03	2.59	14991.26	117.6	311.2	77.48 N	88.51 W
15100.00	12.76	12.06	2.13	15089.17	129.2	319.0	97.46 N	84.74 W
15200.00	15.84	4.95	3.54	15186.06	146.5	326.3	121.87 N	81.25 W
15300.00	21.29	4.89	5.45	15280.82	172.5	332.9	153.58 N	78.52 W
15400.00	29.85	17.74	10.15	15371.01	207.4	340.5	195.48 N	69.37 W
15500.00	35.66	28.70	8.28	15455.15	249.4	349.0	244.83 N	47.75 W
15600.00	35.20	32.19	2.07	15536.64	295.4	356.4	294.80 N	18.40 W
15700.00	32.44	32.25	2.76	15619.71	342.1	1.9	341.88 N	11.27 E

Final Station Closure: Distance: 342.07 ft Az: 1.89 deg.