

Railroad Commission of Texas
Oil and Gas Division
P.O.Box 12967
Capitol Station
Austin TX, 78711

October 10, 2014

Attn: Pam Johns

Enclosed, please find the original and one copy of the surveys performed on the referenced well by Evolution Guidance Systems, LLC (Operator No. 676020) supervised by Henry Iwunze. Other information required by your office is as follows:

JOB NUMBER	EH14050	CUSTOMER	Kerogan Texas Energy Operating, LLC
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WELL NAME	Wildcat / University FA #1	COUNTY & STATE	Terrell, Texas
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API WELL NUMBER	42-443-30068	PROPOSED DIRECTION	
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TIE-IN DATA						
MEASURE DEPTH	VERTICAL DEPTH	INCLINATION	AZIMUTH	N-S	E-W	DATA SOURCE
4,062 ft	4,061.61 ft	2.1 ft	195.9 ft	-41.59 ft	10.15 ft	Gyro Data

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLINATION	AZIMUTH
7/29/2014	4,181 ft	5.4°	212.°

SURVEY INSTRUMENT TYPE

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLINATION	AZIMUTH
8/22/2014	13,016 ft	7.9°	11.4°

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLINATION	AZIMUTH
8/22/2014	13,062 ft	7.9°	11.4°

Matt Van Bergen

Matt Van Bergen
MWD Coordinator
Evolution Guidance Systems, LLC

TOTAL CORRECTION USED	7.89
DECLINATION OR GRID	GRID

MWD SUPERVISOR 1	Mik Tran	DIRECTIONAL DRILLER 1	Lee Scholl
MWD SUPERVISOR 2	Evan Cooper	DIRECTIONAL DRILLER 2	Bobby Mckay

A certified plat on which the bottom-hole location is oriented to the surface location is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Enclosures (Surveys and Plat)



Survey Report

Service Company: Evolution Guidance Systems

Location: Terrell County

Well: University FA1 ST01

Rig: H&P 222

API or UWI: 42-443-30068

Job Number: EH14050

State: Texas

Operating Company: Kerogen Texas Energy Operating, LLC

County: Terrell

Magnetic Declination: 0.00

Comment:

Proposed Azimuth: 210.00

North Reference: GRID

Tie-In Data:

MD	Inclination	Azimuth	TVD	NS	EW
4062.00	2.11	195.86	4061.61	-41.59	10.15

Survey Data:

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4062.00	2.11	195.86	4061.61	-41.59	10.15	166.29	42.81	30.94	0.00
4181.00	5.40	212.00	4180.34	-48.45	6.58	172.26	48.89	38.67	2.88
4276.00	5.50	200.00	4274.92	-56.52	2.66	177.31	56.58	47.62	1.20
4370.00	4.80	197.40	4368.54	-64.50	-0.06	180.05	64.50	55.89	0.78
4465.00	4.60	196.70	4463.22	-71.94	-2.34	181.87	71.98	63.48	0.22
4559.00	4.60	191.10	4556.91	-79.25	-4.15	183.00	79.36	70.71	0.48
4653.00	4.60	194.00	4650.61	-86.61	-5.79	183.82	86.80	77.90	0.25
4748.00	3.60	206.50	4745.37	-92.98	-8.04	184.94	93.32	84.54	1.41
4843.00	3.60	206.50	4840.18	-98.31	-10.70	186.21	98.90	90.49	0.00
4937.00	3.70	205.60	4933.99	-103.69	-13.33	187.33	104.54	96.46	0.12
5031.00	2.70	218.10	5027.84	-108.17	-16.01	188.42	109.35	101.68	1.29
5126.00	1.80	236.80	5122.77	-110.75	-18.64	189.55	112.30	105.23	1.21
5220.00	0.70	286.50	5216.75	-111.39	-20.42	190.39	113.25	106.68	1.54
5314.00	0.80	283.90	5310.74	-111.07	-21.61	191.01	113.15	107.00	0.11
5409.00	0.70	286.70	5405.73	-110.75	-22.81	191.64	113.07	107.31	0.11
5503.00	0.40	296.50	5499.73	-110.43	-23.65	192.09	112.94	107.47	0.33
5597.00	0.40	3.00	5593.73	-109.96	-23.93	192.28	112.53	107.19	0.47
5692.00	0.40	2.30	5688.72	-109.30	-23.90	192.33	111.88	106.60	0.01

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
5786.00	0.80	353.50	5782.72	-108.32	-23.96	192.47	110.94	105.79	0.44
5880.00	1.10	356.60	5876.71	-106.76	-24.09	192.71	109.45	104.50	0.32
5975.00	1.50	1.60	5971.68	-104.61	-24.11	192.98	107.35	102.65	0.44
6069.00	1.30	11.80	6065.65	-102.34	-23.86	193.12	105.08	100.55	0.34
6164.00	1.60	13.70	6160.62	-99.99	-23.32	193.13	102.68	98.26	0.32
6258.00	1.10	17.70	6254.60	-97.86	-22.74	193.08	100.47	96.12	0.54
6353.00	1.00	13.50	6349.58	-96.18	-22.27	193.03	98.73	94.43	0.13
6447.00	1.00	10.50	6443.57	-94.58	-21.92	193.05	97.09	92.87	0.06
6542.00	1.00	358.60	6538.55	-92.94	-21.79	193.20	95.46	91.38	0.22
6636.00	1.10	26.30	6632.54	-91.31	-21.41	193.20	93.79	89.78	0.54
6731.00	1.10	33.40	6727.52	-89.73	-20.51	192.87	92.04	87.96	0.14
6825.00	1.40	20.50	6821.50	-87.90	-19.61	192.58	90.06	85.93	0.44
6919.00	1.60	29.30	6915.46	-85.68	-18.56	192.23	87.67	83.48	0.32
7014.00	1.80	35.00	7010.42	-83.30	-17.06	191.57	85.03	80.67	0.28
7108.00	1.20	9.50	7104.39	-81.12	-16.05	191.19	82.69	78.28	0.94
7202.00	1.30	10.70	7198.37	-79.10	-15.69	191.22	80.64	76.35	0.11
7297.00	1.30	6.30	7293.34	-76.97	-15.37	191.29	78.49	74.35	0.11
7391.00	1.30	2.60	7387.32	-74.85	-15.21	191.48	76.38	72.42	0.09
7486.00	1.20	356.10	7482.30	-72.78	-15.22	191.82	74.35	70.64	0.18
7581.00	1.20	358.20	7577.28	-70.79	-15.32	192.21	72.43	68.97	0.05
7675.00	1.30	354.20	7671.25	-68.75	-15.46	192.68	70.46	67.27	0.14
7769.00	1.50	359.10	7765.23	-66.46	-15.59	193.20	68.26	65.35	0.25
7864.00	1.00	301.80	7860.21	-64.78	-16.31	194.14	66.80	64.25	1.34
7955.00	1.10	308.10	7951.19	-63.82	-17.68	195.48	66.22	64.11	0.17
8049.00	1.00	325.40	8045.17	-62.59	-18.85	196.76	65.36	63.63	0.35
8144.00	0.90	336.40	8140.16	-61.22	-19.62	197.77	64.29	62.83	0.22
8238.00	0.90	340.10	8234.15	-59.85	-20.17	198.62	63.16	61.92	0.06
8333.00	1.10	333.30	8329.14	-58.33	-20.83	199.65	61.94	60.93	0.24
8427.00	1.10	352.20	8423.12	-56.63	-21.36	200.66	60.53	59.73	0.38
8522.00	1.50	20.70	8518.10	-54.57	-21.04	201.09	58.48	57.78	0.79
8616.00	1.70	17.40	8612.06	-52.09	-20.19	201.19	55.86	55.20	0.23
8711.00	1.40	27.20	8707.02	-49.71	-19.24	201.16	53.30	52.67	0.42
8808.00	1.20	32.30	8804.00	-47.80	-18.16	200.80	51.13	50.47	0.24
8903.00	1.20	34.40	8898.98	-46.13	-17.06	200.30	49.19	48.48	0.05
8997.00	1.60	28.60	8992.95	-44.17	-15.88	199.77	46.94	46.19	0.45

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
9090.00	1.80	36.00	9085.91	-41.85	-14.40	198.99	44.26	43.44	0.32
9185.00	1.70	46.70	9180.86	-39.68	-12.50	197.48	41.60	40.61	0.36
9279.00	1.80	48.30	9274.82	-37.74	-10.38	195.38	39.14	37.87	0.12
9374.00	1.80	44.80	9369.77	-35.69	-8.21	192.96	36.62	35.01	0.12
9465.00	1.60	51.80	9460.73	-33.89	-6.21	190.38	34.45	32.45	0.32
9560.00	1.10	56.10	9555.71	-32.56	-4.41	187.71	32.85	30.40	0.54
9654.00	1.10	45.90	9649.69	-31.43	-3.01	185.47	31.57	28.72	0.21
9749.00	1.50	38.80	9744.66	-29.82	-1.58	183.03	29.86	26.62	0.45
9843.00	1.40	35.50	9838.63	-27.93	-0.14	180.29	27.93	24.26	0.14
9938.00	1.50	27.80	9933.60	-25.88	1.11	177.54	25.91	21.86	0.23
10033.00	1.80	20.70	10028.56	-23.39	2.22	174.57	23.49	19.14	0.38
10127.00	1.80	19.30	10122.52	-20.61	3.23	171.09	20.87	16.24	0.05
10221.00	1.90	12.60	10216.47	-17.70	4.06	167.08	18.16	13.30	0.25
10316.00	1.40	12.60	10311.43	-15.03	4.66	162.79	15.74	10.69	0.53
10411.00	1.80	9.30	10406.39	-12.43	5.15	157.49	13.45	8.19	0.43
10531.00	1.90	19.70	10526.33	-8.69	6.13	144.83	10.63	4.47	0.29
10625.00	2.20	16.70	10620.27	-5.50	7.17	127.48	9.03	1.18	0.34
10720.00	2.30	13.70	10715.20	-1.90	8.14	103.12	8.36	-2.43	0.16
10814.00	1.30	37.20	10809.15	0.78	9.24	85.15	9.27	-5.30	1.30
10908.00	1.10	356.30	10903.13	2.53	9.82	75.54	10.14	-7.10	0.91
11003.00	1.30	10.90	10998.11	4.50	9.97	65.70	10.94	-8.88	0.38
11098.00	1.70	17.70	11093.08	6.90	10.60	56.93	12.65	-11.28	0.46
11192.00	1.70	10.90	11187.04	9.60	11.29	49.62	14.82	-13.96	0.21
11287.00	2.00	17.00	11281.99	12.57	12.04	43.77	17.40	-16.90	0.38
11381.00	2.20	20.40	11375.92	15.83	13.15	39.71	20.58	-20.28	0.25
11458.00	1.80	16.20	11452.88	18.37	14.00	37.30	23.10	-22.91	0.55
11553.00	1.10	289.00	11547.86	20.10	13.55	33.99	24.25	-24.19	2.17
11647.00	1.20	329.60	11641.84	21.25	12.20	29.87	24.50	-24.50	0.85
11742.00	1.80	353.10	11736.81	23.59	11.52	26.03	26.25	-26.19	0.89
11836.00	0.90	351.20	11830.78	25.78	11.23	23.54	28.12	-27.94	0.96
11931.00	1.20	9.80	11925.76	27.50	11.28	22.31	29.72	-29.46	0.47
12025.00	1.40	341.70	12019.74	29.56	11.09	20.57	31.57	-31.14	0.70
12120.00	2.50	334.80	12114.68	32.54	9.84	16.83	33.99	-33.10	1.18
12214.00	0.60	61.90	12208.65	34.62	9.41	15.20	35.88	-34.69	2.70
12309.00	0.80	69.20	12303.64	35.09	10.46	16.60	36.62	-35.62	0.23

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
12403.00	0.70	39.70	12397.64	35.77	11.44	17.74	37.55	-36.70	0.42
12498.00	2.10	17.20	12492.61	37.88	12.33	18.03	39.83	-38.97	1.56
12592.00	2.50	31.80	12586.53	41.26	13.92	18.64	43.55	-42.70	0.75
12687.00	4.00	11.20	12681.38	46.28	15.66	18.69	48.85	-47.90	1.98
12781.00	7.10	8.90	12774.93	55.23	17.19	17.29	57.85	-56.43	3.31
12875.00	8.20	13.30	12868.09	67.50	19.63	16.22	70.29	-68.27	1.32
12970.00	8.00	12.80	12962.14	80.54	22.66	15.71	83.66	-81.07	0.22
13016.00	7.90	11.40	13007.70	86.76	23.99	15.46	90.01	-87.13	0.47
13062.00	7.90	11.40	13053.26	92.96	25.24	15.19	96.32	-93.12	0.00

Keroaen Texas Energy Operating LLC

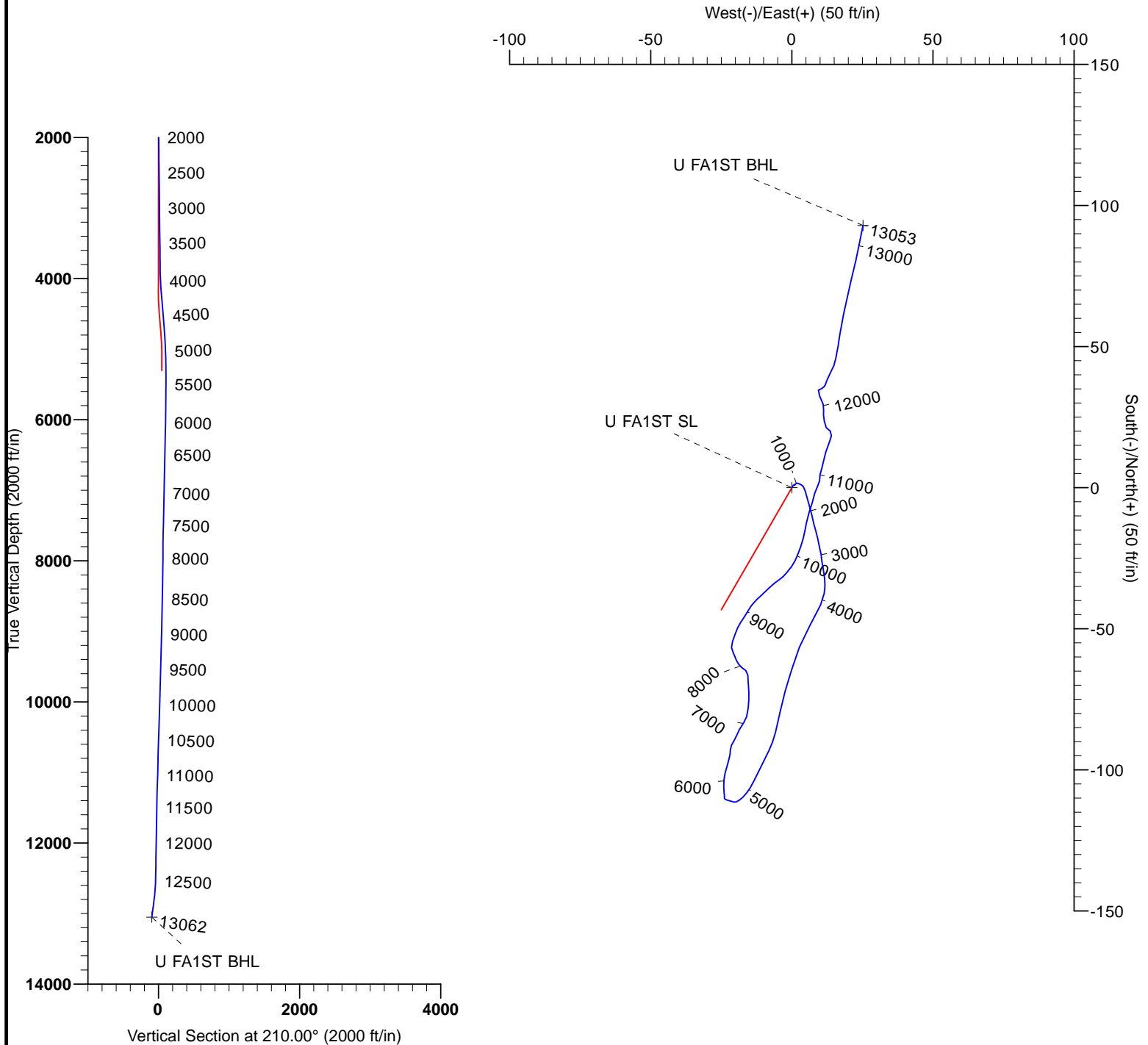
Project: Terrell County, TX (NAD83) TSCZ

Site: University Lands FA #1

Well: FA#1

Wellbore: Sidetrack

Design: Sidetrack



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
U FA1ST SL	0.00	0.00	0.00	14126862.00	1004137.00	Point
U FA1ST BHL	13053.27	92.95	25.24	14126954.95	1004162.24	Point

Evolution Guidance Systems

Survey Report

Company:	Kerogen Texas Energy Operating LLC	Local Co-ordinate Reference:	Well FA#1
Project:	Terrell County, TX (NAD83) TSCZ	TVD Reference:	2572 @ 2572.00ft (PLANNING)
Site:	University Lands FA #1	MD Reference:	2572 @ 2572.00ft (PLANNING)
Well:	FA#1	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack	Database:	EDM 5000.1 Single User Db

Project	Terrell County, TX (NAD83) TSCZ		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Texas South Central Zone		

Site		University Lands FA #1			
Site Position: From:	Map	Northing:	14,126,862.00 ft	Latitude:	30° 33' 29.762 N
		Easting:	1,004,137.00 ft	Longitude:	102° 3' 49.675 W
		Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in

Well	FA#1					
Well Position	+N/-S	0.00 ft	Northing:	14,126,862.00 ft	Latitude:	30° 33' 29.762 N
	+E/-W	0.00 ft	Easting:	1,004,137.00 ft	Longitude:	102° 3' 49.675 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	2,572.00 ft	Ground Level:	2,572.00 ft

Wellbore	Sidetrack				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/30/2014	6.39	58.79	47,450

Design	Sidetrack				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	210.00	

Survey Program	Date	8/22/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	4,062.00	Survey #1 (Sidetrack)	NSG-GYC_Drop	Battery powered gyrocompassing drop gyro	
4,181.00	13,016.00	Survey #2 (Sidetrack)	MWD	MWD v3:standard declination	
13,062.00	13,062.00	Survey #3 (Sidetrack)	Projection	Projection to Bit	

Survey										
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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.31	26.69	100.00	0.24	0.12	-0.27	0.31	0.31	0.00	
200.00	0.50	41.43	200.00	0.81	0.53	-0.97	0.22	0.19	14.74	
300.00	0.05	93.09	300.00	1.14	0.86	-1.42	0.47	-0.45	51.66	
400.00	0.14	138.42	400.00	1.04	0.99	-1.40	0.11	0.09	45.33	
500.00	0.01	213.88	500.00	0.94	1.06	-1.35	0.14	-0.13	75.46	
600.00	0.02	103.20	600.00	0.93	1.08	-1.35	0.03	0.01	-110.68	
700.00	0.07	33.50	700.00	0.98	1.13	-1.41	0.07	0.05	-69.70	
800.00	0.19	15.83	800.00	1.19	1.21	-1.63	0.13	0.12	-17.67	

Evolution Guidance Systems

Survey Report

Company:	Kerogen Texas Energy Operating LLC	Local Co-ordinate Reference:	Well FA#1
Project:	Terrell County, TX (NAD83) TSCZ	TVD Reference:	2572 @ 2572.00ft (PLANNING)
Site:	University Lands FA #1	MD Reference:	2572 @ 2572.00ft (PLANNING)
Well:	FA#1	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack	Database:	EDM 5000.1 Single User Db

Survey										
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)	
900.00	0.10	55.86	899.99	1.40	1.32	-1.87	0.13	-0.09	40.03	
1,000.00	0.22	64.50	999.99	1.53	1.57	-2.11	0.12	0.12	8.64	
1,100.00	0.20	91.34	1,099.99	1.61	1.92	-2.35	0.10	-0.02	26.84	
1,200.00	0.49	113.56	1,199.99	1.43	2.48	-2.48	0.31	0.29	22.22	
1,300.00	0.56	118.07	1,299.99	1.03	3.31	-2.55	0.08	0.07	4.51	
1,400.00	0.26	143.47	1,399.99	0.62	3.87	-2.47	0.34	-0.30	25.40	
1,500.00	0.59	148.64	1,499.98	0.00	4.28	-2.14	0.33	0.33	5.17	
1,600.00	0.96	165.27	1,599.97	-1.25	4.76	-1.29	0.43	0.37	16.63	
1,700.00	1.00	163.98	1,699.96	-2.90	5.21	-0.09	0.05	0.04	-1.29	
1,800.00	1.08	163.54	1,799.94	-4.64	5.72	1.16	0.08	0.08	-0.44	
1,900.00	1.04	166.07	1,899.92	-6.43	6.20	2.46	0.06	-0.04	2.53	
2,000.00	1.00	165.00	1,999.91	-8.15	6.65	3.74	0.04	-0.04	-1.07	
2,100.00	0.85	166.31	2,099.90	-9.72	7.05	4.89	0.15	-0.15	1.31	
2,200.00	0.97	167.38	2,199.88	-11.26	7.41	6.05	0.12	0.12	1.07	
2,300.00	1.12	164.98	2,299.87	-13.03	7.85	7.36	0.16	0.15	-2.40	
2,400.00	0.93	165.30	2,399.85	-14.76	8.31	8.63	0.19	-0.19	0.32	
2,500.00	0.78	162.16	2,499.84	-16.19	8.72	9.66	0.16	-0.15	-3.14	
2,600.00	0.98	168.68	2,599.83	-17.68	9.10	10.76	0.22	0.20	6.52	
2,700.00	0.81	165.97	2,699.82	-19.20	9.44	11.91	0.18	-0.17	-2.71	
2,800.00	0.99	171.13	2,799.80	-20.74	9.74	13.09	0.20	0.18	5.16	
2,900.00	0.93	166.22	2,899.79	-22.39	10.07	14.35	0.10	-0.06	-4.91	
3,000.00	0.64	170.07	2,999.78	-23.72	10.36	15.37	0.29	-0.29	3.85	
3,100.00	0.78	173.61	3,099.77	-24.95	10.53	16.34	0.15	0.14	3.54	
3,200.00	0.82	173.42	3,199.76	-26.34	10.69	17.46	0.04	0.04	-0.19	
3,300.00	0.84	168.93	3,299.75	-27.77	10.91	18.59	0.07	0.02	-4.49	
3,400.00	0.89	168.63	3,399.74	-29.25	11.21	19.73	0.05	0.05	-0.30	
3,500.00	0.93	175.66	3,499.73	-30.82	11.42	20.98	0.12	0.04	7.03	
3,600.00	0.92	171.07	3,599.71	-32.42	11.61	22.28	0.07	-0.01	-4.59	
3,700.00	0.89	180.66	3,699.70	-33.99	11.72	23.58	0.15	-0.03	9.59	
3,800.00	0.98	182.19	3,799.69	-35.62	11.68	25.01	0.09	0.09	1.53	
3,900.00	1.13	190.42	3,899.67	-37.45	11.47	26.70	0.21	0.15	8.23	
4,000.00	1.58	201.66	3,999.64	-39.70	10.78	28.99	0.52	0.45	11.24	
4,062.00	2.11	195.86	4,061.61	-41.59	10.15	30.94	0.91	0.85	-9.35	
4,181.00	5.40	212.00	4,180.34	-48.45	6.59	38.66	2.88	2.76	13.56	
4,276.00	5.50	200.00	4,274.92	-56.52	2.66	47.62	1.20	0.11	-12.63	
4,370.00	4.80	197.40	4,368.54	-64.50	-0.06	55.89	0.78	-0.74	-2.77	
4,465.00	4.60	196.70	4,463.22	-71.95	-2.34	63.48	0.22	-0.21	-0.74	
4,559.00	4.60	191.10	4,556.91	-79.25	-4.15	70.71	0.48	0.00	-5.96	
4,653.00	4.60	194.00	4,650.61	-86.61	-5.79	77.90	0.25	0.00	3.09	
4,748.00	3.60	206.50	4,745.37	-92.98	-8.04	84.54	1.41	-1.05	13.16	
4,843.00	3.60	206.50	4,840.18	-98.31	-10.70	90.49	0.00	0.00	0.00	
4,937.00	3.70	205.60	4,933.99	-103.69	-13.33	96.46	0.12	0.11	-0.96	
5,031.00	2.70	218.10	5,027.84	-108.17	-16.00	101.68	1.29	-1.06	13.30	

Evolution Guidance Systems

Survey Report

Company:	Kerogen Texas Energy Operating LLC	Local Co-ordinate Reference:	Well FA#1
Project:	Terrell County, TX (NAD83) TSCZ	TVD Reference:	2572 @ 2572.00ft (PLANNING)
Site:	University Lands FA #1	MD Reference:	2572 @ 2572.00ft (PLANNING)
Well:	FA#1	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack	Database:	EDM 5000.1 Single User Db

Survey									
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)
5,126.00	1.80	236.80	5,122.77	-110.75	-18.63	105.23	1.21	-0.95	19.68
5,220.00	0.70	286.50	5,216.75	-111.39	-20.42	106.68	1.54	-1.17	52.87
5,314.00	0.80	283.90	5,310.74	-111.07	-21.61	106.99	0.11	0.11	-2.77
5,409.00	0.70	286.70	5,405.73	-110.75	-22.81	107.31	0.11	-0.11	2.95
5,503.00	0.40	296.50	5,499.73	-110.43	-23.65	107.46	0.33	-0.32	10.43
5,597.00	0.40	3.00	5,593.73	-109.96	-23.93	107.19	0.47	0.00	70.74
5,692.00	0.40	2.30	5,688.73	-109.30	-23.90	106.60	0.01	0.00	-0.74
5,786.00	0.80	353.50	5,782.72	-108.32	-23.96	105.78	0.44	0.43	-9.36
5,880.00	1.10	356.60	5,876.71	-106.76	-24.08	104.50	0.32	0.32	3.30
5,975.00	1.50	1.60	5,971.68	-104.61	-24.10	102.65	0.44	0.42	5.26
6,069.00	1.30	11.80	6,065.65	-102.34	-23.85	100.55	0.34	-0.21	10.85
6,164.00	1.60	13.70	6,160.62	-99.99	-23.32	98.26	0.32	0.32	2.00
6,258.00	1.10	17.70	6,254.60	-97.86	-22.73	96.11	0.54	-0.53	4.26
6,353.00	1.00	13.50	6,349.58	-96.19	-22.26	94.43	0.13	-0.11	-4.42
6,447.00	1.00	10.50	6,443.57	-94.58	-21.92	92.87	0.06	0.00	-3.19
6,542.00	1.00	358.60	6,538.55	-92.94	-21.79	91.38	0.22	0.00	-12.53
6,636.00	1.10	26.30	6,632.54	-91.31	-21.41	89.78	0.54	0.11	29.47
6,731.00	1.10	33.40	6,727.52	-89.73	-20.50	87.96	0.14	0.00	7.47
6,825.00	1.40	20.50	6,821.50	-87.90	-19.60	85.93	0.44	0.32	-13.72
6,919.00	1.60	29.30	6,915.47	-85.68	-18.56	83.48	0.32	0.21	9.36
7,014.00	1.80	35.00	7,010.42	-83.30	-17.06	80.67	0.28	0.21	6.00
7,108.00	1.20	9.50	7,104.39	-81.12	-16.05	78.28	0.94	-0.64	-27.13
7,202.00	1.30	10.70	7,198.37	-79.10	-15.69	76.35	0.11	0.11	1.28
7,297.00	1.30	6.30	7,293.35	-76.97	-15.37	74.34	0.11	0.00	-4.63
7,391.00	1.30	2.60	7,387.32	-74.85	-15.20	72.42	0.09	0.00	-3.94
7,486.00	1.20	356.10	7,482.30	-72.78	-15.22	70.64	0.18	-0.11	-6.84
7,581.00	1.20	358.20	7,577.28	-70.79	-15.32	68.97	0.05	0.00	2.21
7,675.00	1.30	354.20	7,671.26	-68.75	-15.46	67.27	0.14	0.11	-4.26
7,769.00	1.50	359.10	7,765.23	-66.46	-15.59	65.35	0.25	0.21	5.21
7,864.00	1.00	301.80	7,860.21	-64.78	-16.31	64.25	1.34	-0.53	-60.32
7,955.00	1.10	308.10	7,951.19	-63.82	-17.67	64.10	0.17	0.11	6.92
8,049.00	1.00	325.40	8,045.18	-62.59	-18.85	63.63	0.35	-0.11	18.40
8,144.00	0.90	336.40	8,140.16	-61.22	-19.62	62.83	0.22	-0.11	11.58
8,238.00	0.90	340.10	8,234.15	-59.85	-20.16	61.91	0.06	0.00	3.94
8,333.00	1.10	333.30	8,329.14	-58.33	-20.83	60.93	0.24	0.21	-7.16
8,427.00	1.10	352.20	8,423.12	-56.63	-21.36	59.72	0.38	0.00	20.11
8,522.00	1.50	20.70	8,518.10	-54.57	-21.04	57.78	0.79	0.42	30.00
8,616.00	1.70	17.40	8,612.06	-52.09	-20.19	55.20	0.23	0.21	-3.51
8,711.00	1.40	27.20	8,707.03	-49.71	-19.24	52.67	0.42	-0.32	10.32
8,808.00	1.20	32.30	8,804.00	-47.80	-18.15	50.47	0.24	-0.21	5.26
8,903.00	1.20	34.40	8,898.98	-46.14	-17.06	48.48	0.05	0.00	2.21
8,997.00	1.60	28.60	8,992.95	-44.17	-15.87	46.19	0.45	0.43	-6.17
9,090.00	1.80	36.00	9,085.91	-41.85	-14.39	43.44	0.32	0.22	7.96

Evolution Guidance Systems

Survey Report

Company:	Kerogen Texas Energy Operating LLC	Local Co-ordinate Reference:	Well FA#1
Project:	Terrell County, TX (NAD83) TSCZ	TVD Reference:	2572 @ 2572.00ft (PLANNING)
Site:	University Lands FA #1	MD Reference:	2572 @ 2572.00ft (PLANNING)
Well:	FA#1	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack	Database:	EDM 5000.1 Single User Db

Survey										
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)	
9,185.00	1.70	46.70	9,180.87	-39.68	-12.49	40.61	0.36	-0.11	11.26	
9,279.00	1.80	48.30	9,274.82	-37.74	-10.37	37.87	0.12	0.11	1.70	
9,374.00	1.80	44.80	9,369.78	-35.69	-8.21	35.01	0.12	0.00	-3.68	
9,465.00	1.60	51.80	9,460.74	-33.89	-6.20	32.45	0.32	-0.22	7.69	
9,560.00	1.10	56.10	9,555.71	-32.56	-4.40	30.40	0.54	-0.53	4.53	
9,654.00	1.10	45.90	9,649.69	-31.43	-3.01	28.72	0.21	0.00	-10.85	
9,749.00	1.50	38.80	9,744.67	-29.82	-1.57	26.61	0.45	0.42	-7.47	
9,843.00	1.40	35.50	9,838.64	-27.93	-0.14	24.26	0.14	-0.11	-3.51	
9,938.00	1.50	27.80	9,933.61	-25.88	1.12	21.86	0.23	0.11	-8.11	
10,033.00	1.80	20.70	10,028.57	-23.39	2.23	19.14	0.38	0.32	-7.47	
10,127.00	1.80	19.30	10,122.52	-20.61	3.24	16.23	0.05	0.00	-1.49	
10,221.00	1.90	12.60	10,216.47	-17.70	4.06	13.30	0.25	0.11	-7.13	
10,316.00	1.40	12.60	10,311.43	-15.03	4.66	10.69	0.53	-0.53	0.00	
10,411.00	1.80	9.30	10,406.40	-12.43	5.15	8.18	0.43	0.42	-3.47	
10,531.00	1.90	19.70	10,526.33	-8.69	6.13	4.46	0.29	0.08	8.67	
10,625.00	2.20	16.70	10,620.27	-5.50	7.17	1.17	0.34	0.32	-3.19	
10,720.00	2.30	13.70	10,715.20	-1.90	8.15	-2.43	0.16	0.11	-3.16	
10,814.00	1.30	37.20	10,809.15	0.78	9.24	-5.30	1.30	-1.06	25.00	
10,908.00	1.10	356.30	10,903.13	2.53	9.83	-7.11	0.91	-0.21	-43.51	
11,003.00	1.30	10.90	10,998.11	4.50	9.97	-8.88	0.38	0.21	15.37	
11,098.00	1.70	17.70	11,093.08	6.90	10.60	-11.28	0.46	0.42	7.16	
11,192.00	1.70	10.90	11,187.04	9.60	11.29	-13.96	0.21	0.00	-7.23	
11,287.00	2.00	17.00	11,281.99	12.57	12.04	-16.91	0.38	0.32	6.42	
11,381.00	2.20	20.40	11,375.93	15.83	13.15	-20.28	0.25	0.21	3.62	
11,458.00	1.80	16.20	11,452.88	18.37	14.00	-22.91	0.55	-0.52	-5.45	
11,553.00	1.10	289.00	11,547.86	20.10	13.56	-24.19	2.17	-0.74	-91.79	
11,647.00	1.20	329.60	11,641.84	21.25	12.21	-24.50	0.85	0.11	43.19	
11,742.00	1.80	353.10	11,736.81	23.59	11.52	-26.19	0.89	0.63	24.74	
11,836.00	0.90	351.20	11,830.78	25.78	11.23	-27.94	0.96	-0.96	-2.02	
11,931.00	1.20	9.80	11,925.77	27.50	11.29	-29.46	0.47	0.32	19.58	
12,025.00	1.40	341.70	12,019.74	29.56	11.10	-31.15	0.70	0.21	-29.89	
12,120.00	2.50	334.80	12,114.69	32.54	9.85	-33.10	1.18	1.16	-7.26	
12,214.00	0.60	61.90	12,208.65	34.62	9.41	-34.69	2.70	-2.02	92.66	
12,309.00	0.80	69.20	12,303.65	35.09	10.47	-35.63	0.23	0.21	7.68	
12,403.00	0.70	39.70	12,397.64	35.77	11.45	-36.70	0.42	-0.11	-31.38	
12,498.00	2.10	17.20	12,492.61	37.88	12.33	-38.97	1.56	1.47	-23.68	
12,592.00	2.50	31.80	12,586.53	41.26	13.92	-42.70	0.75	0.43	15.53	
12,687.00	4.00	11.20	12,681.38	46.28	15.66	-47.91	1.98	1.58	-21.68	
12,781.00	7.10	8.90	12,774.93	55.23	17.20	-56.43	3.31	3.30	-2.45	
12,875.00	8.20	13.30	12,868.09	67.50	19.64	-68.27	1.32	1.17	4.68	
12,970.00	8.00	12.80	12,962.15	80.54	22.66	-81.08	0.22	-0.21	-0.53	
13,016.00	7.90	11.40	13,007.70	86.76	23.99	-87.13	0.47	-0.22	-3.04	
13,062.00	7.90	11.40	13,053.27	92.95	25.24	-93.12	0.00	0.00	0.00	

Evolution Guidance Systems

Survey Report

Company:	Kerogen Texas Energy Operating LLC	Local Co-ordinate Reference:	Well FA#1
Project:	Terrell County, TX (NAD83) TSCZ	TVD Reference:	2572 @ 2572.00ft (PLANNING)
Site:	University Lands FA #1	MD Reference:	2572 @ 2572.00ft (PLANNING)
Well:	FA#1	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack	Database:	EDM 5000.1 Single User Db

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
U FA1ST SL	0.00	0.00	0.00	0.00	0.00	14,126,862.00	1,004,137.00	30° 33' 29.762 N	102° 3' 49.675 W
- actual wellpath hits target center									
- Point									
U FA1ST BHL	0.00	0.00	13,053.2 7	92.95	25.24	14,126,954.95	1,004,162.24	30° 33' 30.688 N	102° 3' 49.414 W
- actual wellpath misses target center by 0.01ft at 13062.00ft MD (13053.27 TVD, 92.95 N, 25.24 E)									
- Point									

Checked By: _____ Approved By: _____ Date: _____