

**Ryan Directional Services
Directional Drilling Report**

**Field: Crockett Co, Tx
Site: University East 4411 JH
Well: University East 4411 JH
Wellpath: 4411 JH**

Prepared For:

EP Energy E&P Company, L.P.

EP ENERGY 

Ryan Directional Services.

19510 Oil Center Blvd
Houston, TX 77073
Ph: 281-443-1414
Fx: 281-443-1676

www.ryanenergy.com



EP Energy E&P Company, L.P.

Field: Crockett Co, Tx
 Site: University East 4411 JH
 Well: University East 4411 JH
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Azimuths to Grid North
 True North: 0.49°
 Magnetic North: 6.55°

Magnetic Field
 Strength: 47848nT
 Dip Angle: 59.37°
 Date: 5/30/2014
 Model: IGRF2010

FIELD DETAILS

Crockett Co, Tx
 Texas
 USA

Geodetic System: US State Plane Coordinate System 1927
 Ellipsoid: NAD27 (Clarke 1866)
 Zone: Texas, Central Zone
 Magnetic Model: IGRF2010

System Datum: Mean Sea Level
 Local North: Grid North

WELLPATH DETAILS

4411 JH				
Rig:	Sidewinder 221			
Ref. Datum:	SITE 2687.00ft			
V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD	
0.00°	0.00	0.00	0.00	

SITE DETAILS

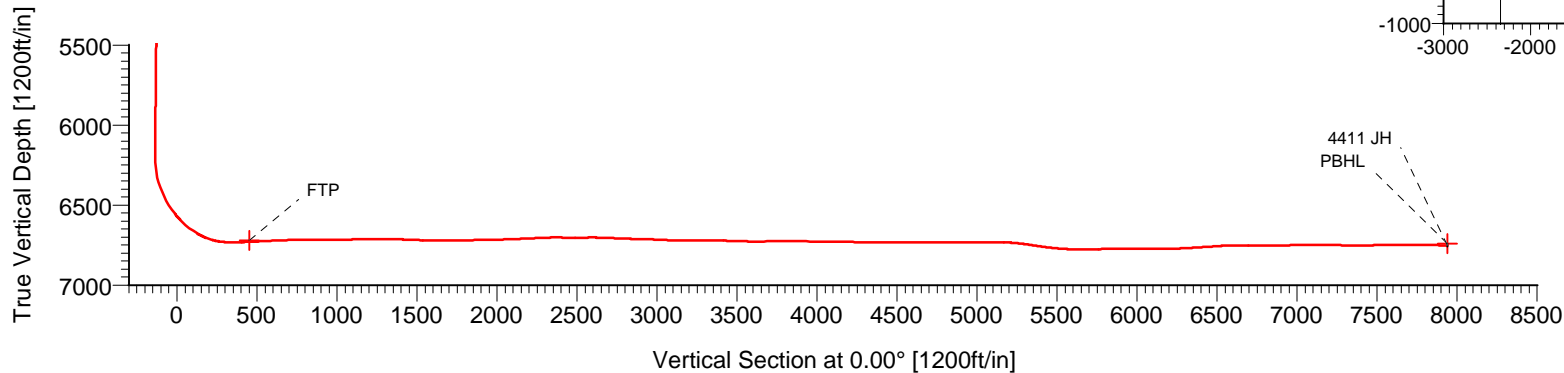
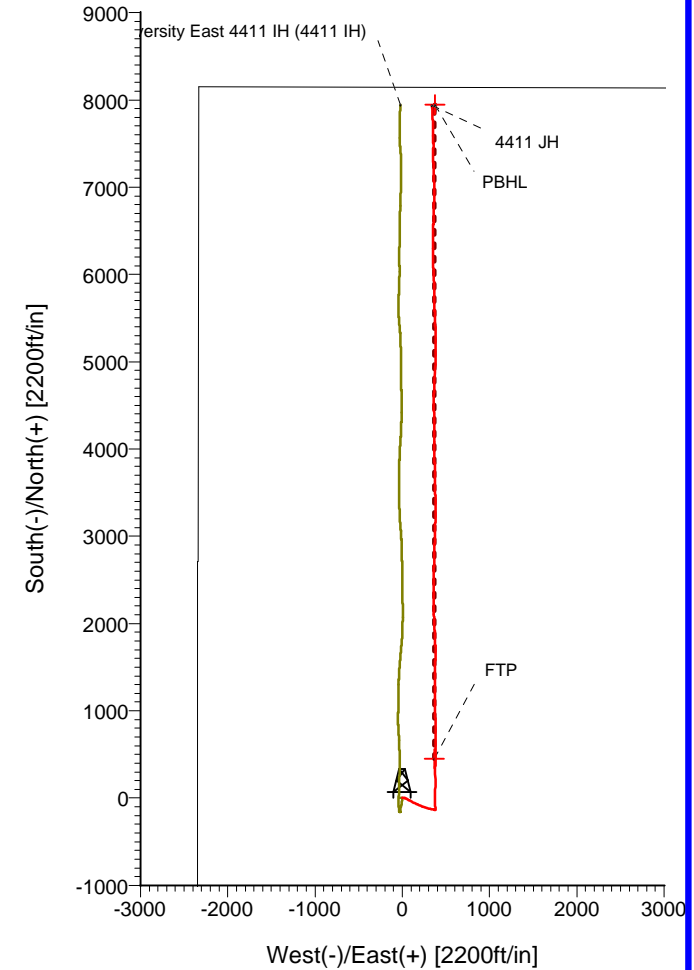
University East 4411 JH
 Crockett Co, Tx

Site Centre Northing: 499514.70
 Easting: 1699369.74

Ground Level: 2662.00
 Positional Uncertainty: 0.00
 Convergence: -0.49

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FTP	6720.00	452.87	363.73	499967.57	1699733.47	31°02'16.223N	101°17'31.610W	Point
PBHL	6740.00	7941.87	372.43	507456.57	1699742.17	31°03'30.351N	101°17'32.252W	Point



Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:22:39	Page: 1
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Field: Crockett Co, Tx Texas USA	Map System: US State Plane Coordinate System 1927	Map Zone: Texas, Central Zone
Geo Datum: NAD27 (Clarke 1866)	Coordinate System: Site Centre	
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010	

Site: University East 4411 JH
Crockett Co, Tx

Site Position:	Northing: 499514.70 ft	Latitude: 31 2 11.710 N
From: Map	Easting: 1699369.74 ft	Longitude: 101 17 35.746 W
Position Uncertainty: 0.00 ft	North Reference: Grid	
Ground Level: 2662.00 ft	Grid Convergence: -0.49 deg	

Well: University East 4411 JH	Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 499514.70 ft	Latitude: 31 2 11.710 N
+E/-W 0.00 ft	Easting : 1699369.74 ft	Longitude: 101 17 35.746 W
Position Uncertainty: 2.00 ft		

Wellpath: 4411 JH	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 5/30/2014	Above System Datum: Mean Sea Level		
Field Strength: 47848 nT	Declination: 6.05 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 59.37 deg		
ft	+N/-S	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	0.00

Survey Program for Definitive Wellpath

Date: 6/10/2014	Validated: No	Version: 2		
Actual From	To	Survey	Toolcode	Tool Name
ft	ft			
125.00	1664.00	Survey #1 (125.00-1664.00)	Gyro	Gyro
1854.00	14572.00	Survey #2 (1854.00-14572.00)	Ryan MWD	Ryan MWD
14623.00	14623.00	Survey #3 (14623.00-14623.00)	Projection	Projected to TD

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
125.00	0.12	165.34	125.00	-0.13	0.03	-0.13	0.10	0.10	0.00	Gyro
225.00	0.34	92.34	225.00	-0.24	0.36	-0.24	0.33	0.22	-73.00	Gyro
325.00	0.37	86.27	325.00	-0.23	0.97	-0.23	0.05	0.03	-6.07	Gyro
425.00	0.38	16.15	425.00	0.11	1.39	0.11	0.43	0.01	-70.12	Gyro
525.00	0.65	55.28	524.99	0.75	1.95	0.75	0.43	0.27	39.13	Gyro
625.00	0.52	31.99	624.99	1.46	2.65	1.46	0.27	-0.13	-23.29	Gyro
725.00	0.70	37.28	724.98	2.33	3.26	2.33	0.19	0.18	5.29	Gyro
825.00	0.69	42.63	824.97	3.26	4.04	3.26	0.07	-0.01	5.35	Gyro
890.00	0.13	104.19	889.97	3.53	4.38	3.53	0.98	-0.86	94.71	Gyro
998.00	0.70	77.20	997.97	3.64	5.14	3.64	0.54	0.53	-24.99	Gyro
1093.00	1.90	95.40	1092.94	3.62	7.27	3.62	1.32	1.26	19.16	Gyro
1283.00	2.00	96.80	1282.83	2.94	13.70	2.94	0.06	0.05	0.74	Gyro
1474.00	2.20	102.30	1473.70	1.76	20.59	1.76	0.15	0.10	2.88	Gyro
1664.00	0.70	112.20	1663.64	0.54	25.23	0.54	0.80	-0.79	5.21	Gyro
1854.00	1.00	101.20	1853.62	-0.22	27.93	-0.22	0.18	0.16	-5.79	Ryan MWD
2043.00	1.10	110.30	2042.59	-1.17	31.25	-1.17	0.10	0.05	4.81	Ryan MWD
2234.00	1.20	107.90	2233.55	-2.42	34.88	-2.42	0.06	0.05	-1.26	Ryan MWD
2329.00	1.50	115.90	2328.52	-3.27	36.94	-3.27	0.37	0.32	8.42	Ryan MWD
2425.00	1.50	114.30	2424.49	-4.33	39.22	-4.33	0.04	0.00	-1.67	Ryan MWD
2521.00	3.60	116.50	2520.39	-6.19	43.06	-6.19	2.19	2.19	2.29	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:22:39	Page: 2
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2616.00	5.50	120.90	2615.08	-9.86	49.63	-9.86	2.03	2.00	4.63	Ryan MWD
2712.00	5.50	119.40	2710.64	-14.48	57.59	-14.48	0.15	0.00	-1.56	Ryan MWD
2807.00	4.80	120.00	2805.26	-18.71	65.00	-18.71	0.74	-0.74	0.63	Ryan MWD
2901.00	4.20	121.10	2898.97	-22.45	71.35	-22.45	0.64	-0.64	1.17	Ryan MWD
2996.00	5.20	114.00	2993.65	-26.00	78.26	-26.00	1.22	1.05	-7.47	Ryan MWD
3091.00	4.70	118.20	3088.29	-29.59	85.63	-29.59	0.65	-0.53	4.42	Ryan MWD
3187.00	3.80	115.40	3184.03	-32.81	91.97	-32.81	0.96	-0.94	-2.92	Ryan MWD
3283.00	5.50	121.20	3279.71	-36.56	98.78	-36.56	1.84	1.77	6.04	Ryan MWD
3379.00	7.80	116.70	3375.06	-41.87	108.53	-41.87	2.45	2.40	-4.69	Ryan MWD
3474.00	6.50	119.80	3469.32	-47.44	118.96	-47.44	1.43	-1.37	3.26	Ryan MWD
3569.00	6.50	118.00	3563.71	-52.64	128.37	-52.64	0.21	0.00	-1.89	Ryan MWD
3663.00	8.80	111.80	3656.87	-57.81	139.75	-57.81	2.60	2.45	-6.60	Ryan MWD
3759.00	7.10	110.00	3751.94	-62.56	152.14	-62.56	1.79	-1.77	-1.87	Ryan MWD
3854.00	7.00	115.00	3846.22	-67.02	162.91	-67.02	0.65	-0.11	5.26	Ryan MWD
3950.00	8.30	114.60	3941.37	-72.37	174.51	-72.37	1.36	1.35	-0.42	Ryan MWD
4043.00	6.20	118.90	4033.62	-77.60	185.01	-77.60	2.33	-2.26	4.62	Ryan MWD
4138.00	7.30	112.50	4127.96	-82.39	195.08	-82.39	1.40	1.16	-6.74	Ryan MWD
4234.00	7.10	112.70	4223.20	-87.01	206.19	-87.01	0.21	-0.21	0.21	Ryan MWD
4329.00	8.40	112.10	4317.33	-91.89	218.03	-91.89	1.37	1.37	-0.63	Ryan MWD
4424.00	7.00	107.40	4411.47	-96.23	229.99	-96.23	1.61	-1.47	-4.95	Ryan MWD
4519.00	8.10	108.20	4505.65	-100.05	241.87	-100.05	1.16	1.16	0.84	Ryan MWD
4615.00	6.50	105.50	4600.87	-103.61	253.53	-103.61	1.70	-1.67	-2.81	Ryan MWD
4709.00	8.50	110.80	4694.06	-107.50	265.15	-107.50	2.25	2.13	5.64	Ryan MWD
4805.00	7.20	111.80	4789.16	-112.26	277.37	-112.26	1.36	-1.35	1.04	Ryan MWD
4901.00	7.90	107.70	4884.33	-116.50	289.24	-116.50	0.92	0.73	-4.27	Ryan MWD
4996.00	7.10	104.50	4978.51	-119.95	301.15	-119.95	0.95	-0.84	-3.37	Ryan MWD
5091.00	6.40	102.20	5072.86	-122.54	312.00	-122.54	0.79	-0.74	-2.42	Ryan MWD
5186.00	5.50	98.80	5167.34	-124.36	321.68	-124.36	1.02	-0.95	-3.58	Ryan MWD
5282.00	4.70	94.20	5262.96	-125.35	330.15	-125.35	0.94	-0.83	-4.79	Ryan MWD
5376.00	5.30	106.80	5356.61	-126.88	338.15	-126.88	1.33	0.64	13.40	Ryan MWD
5471.00	4.40	102.70	5451.27	-128.95	345.90	-128.95	1.01	-0.95	-4.32	Ryan MWD
5565.00	4.00	99.50	5545.01	-130.29	352.65	-130.29	0.49	-0.43	-3.40	Ryan MWD
5659.00	3.30	99.80	5638.82	-131.29	358.55	-131.29	0.74	-0.74	0.32	Ryan MWD
5754.00	3.00	98.40	5733.68	-132.12	363.71	-132.12	0.33	-0.32	-1.47	Ryan MWD
5849.00	2.50	110.60	5828.57	-133.21	368.10	-133.21	0.81	-0.53	12.84	Ryan MWD
5943.00	1.70	106.40	5922.51	-134.33	371.36	-134.33	0.87	-0.85	-4.47	Ryan MWD
6038.00	1.20	93.60	6017.48	-134.79	373.71	-134.79	0.62	-0.53	-13.47	Ryan MWD
6133.00	1.20	95.40	6112.45	-134.94	375.69	-134.94	0.04	0.00	1.89	Ryan MWD
6202.00	1.20	88.50	6181.44	-134.99	377.13	-134.99	0.21	0.00	-10.00	Ryan MWD
6223.00	1.10	99.00	6202.44	-135.02	377.55	-135.02	1.11	-0.48	50.00	Ryan MWD
6254.00	1.40	50.10	6233.43	-134.82	378.13	-134.82	3.45	0.97	-157.74	Ryan MWD
6286.00	4.50	16.30	6265.38	-133.36	378.79	-133.36	10.71	9.69	-105.62	Ryan MWD
6318.00	9.00	8.00	6297.16	-129.68	379.49	-129.68	14.35	14.06	-25.94	Ryan MWD
6350.00	13.50	2.30	6328.53	-123.46	379.99	-123.46	14.47	14.06	-17.81	Ryan MWD
6381.00	17.30	356.00	6358.42	-115.25	379.81	-115.25	13.38	12.26	-20.32	Ryan MWD
6413.00	19.70	351.90	6388.76	-105.16	378.72	-105.16	8.53	7.50	-12.81	Ryan MWD
6445.00	22.30	354.10	6418.63	-93.78	377.33	-93.78	8.49	8.12	6.87	Ryan MWD
6477.00	25.80	355.10	6447.85	-80.80	376.11	-80.80	11.01	10.94	3.12	Ryan MWD
6508.00	29.30	357.90	6475.33	-66.49	375.26	-66.49	12.04	11.29	9.03	Ryan MWD
6540.00	32.60	1.30	6502.78	-50.04	375.17	-50.04	11.67	10.31	10.63	Ryan MWD
6572.00	35.50	1.20	6529.29	-32.13	375.56	-32.13	9.06	9.06	-0.31	Ryan MWD
6604.00	37.60	359.50	6554.99	-13.08	375.67	-13.08	7.28	6.56	-5.31	Ryan MWD
6668.00	44.60	360.00	6603.19	28.97	375.50	28.97	10.95	10.94	0.78	Ryan MWD
6699.00	48.40	1.00	6624.53	51.45	375.70	51.45	12.48	12.26	3.23	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:22:39	Page: 3
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Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6731.00	52.60	1.70	6644.88	76.13	376.29	76.13	13.23	13.12	2.19	Ryan MWD
6763.00	56.50	2.00	6663.43	102.18	377.13	102.18	12.21	12.19	0.94	Ryan MWD
6794.00	60.00	1.40	6679.74	128.52	377.91	128.52	11.41	11.29	-1.94	Ryan MWD
6857.00	68.30	359.50	6707.19	185.16	378.32	185.16	13.45	13.17	-3.02	Ryan MWD
6889.00	73.00	359.00	6717.79	215.35	377.92	215.35	14.76	14.69	-1.56	Ryan MWD
6952.00	84.00	359.50	6730.33	276.98	377.12	276.98	17.48	17.46	0.79	Ryan MWD
7009.00	89.80	0.80	6733.41	333.87	377.27	333.87	10.43	10.18	2.28	Ryan MWD
7103.00	92.10	0.10	6731.85	427.85	378.01	427.85	2.56	2.45	-0.74	Ryan MWD
7198.00	93.20	0.30	6727.46	522.75	378.34	522.75	1.18	1.16	0.21	Ryan MWD
7293.00	92.50	0.70	6722.74	617.62	379.17	617.62	0.85	-0.74	0.42	Ryan MWD
7386.00	91.90	1.00	6719.17	710.54	380.55	710.54	0.72	-0.65	0.32	Ryan MWD
7481.00	90.10	359.00	6717.51	805.52	380.55	805.52	2.83	-1.89	-2.11	Ryan MWD
7575.00	90.40	358.20	6717.10	899.49	378.25	899.49	0.91	0.32	-0.85	Ryan MWD
7671.00	89.60	359.20	6717.10	995.46	376.07	995.46	1.33	-0.83	1.04	Ryan MWD
7766.00	91.60	358.10	6716.10	1090.43	373.84	1090.43	2.40	2.11	-1.16	Ryan MWD
7861.00	90.50	358.80	6714.36	1185.37	371.27	1185.37	1.37	-1.16	0.74	Ryan MWD
7954.00	89.80	1.80	6714.12	1278.36	371.75	1278.36	3.31	-0.75	3.23	Ryan MWD
8049.00	89.00	2.30	6715.12	1373.29	375.15	1373.29	0.99	-0.84	0.53	Ryan MWD
8143.00	87.40	0.00	6718.07	1467.22	377.04	1467.22	2.98	-1.70	-2.45	Ryan MWD
8239.00	88.70	0.60	6721.33	1563.16	377.54	1563.16	1.49	1.35	0.62	Ryan MWD
8333.00	90.70	0.70	6721.83	1657.15	378.61	1657.15	2.13	2.13	0.11	Ryan MWD
8428.00	89.80	358.00	6721.41	1752.13	377.53	1752.13	3.00	-0.95	-2.84	Ryan MWD
8522.00	91.50	357.50	6720.35	1846.05	373.84	1846.05	1.89	1.81	-0.53	Ryan MWD
8618.00	90.90	357.60	6718.34	1941.94	369.74	1941.94	0.63	-0.62	0.10	Ryan MWD
8713.00	91.80	356.80	6716.10	2036.80	365.10	2036.80	1.27	0.95	-0.84	Ryan MWD
8809.00	92.30	357.80	6712.66	2132.63	360.58	2132.63	1.16	0.52	1.04	Ryan MWD
8902.00	93.00	359.80	6708.36	2225.50	358.63	2225.50	2.28	0.75	2.15	Ryan MWD
8998.00	91.80	0.50	6704.34	2321.42	358.88	2321.42	1.45	-1.25	0.73	Ryan MWD
9093.00	88.30	0.00	6704.26	2416.40	359.30	2416.40	3.72	-3.68	-0.53	Ryan MWD
9187.00	91.10	1.50	6704.75	2510.38	360.53	2510.38	3.38	2.98	1.60	Ryan MWD
9282.00	89.90	0.70	6703.92	2605.36	362.35	2605.36	1.52	-1.26	-0.84	Ryan MWD
9376.00	87.10	1.10	6706.38	2699.30	363.83	2699.30	3.01	-2.98	0.43	Ryan MWD
9470.00	87.80	0.50	6710.57	2793.20	365.14	2793.20	0.98	0.74	-0.64	Ryan MWD
9566.00	89.20	3.70	6713.08	2889.09	368.65	2889.09	3.64	1.46	3.33	Ryan MWD
9661.00	86.90	1.60	6716.31	2983.92	373.05	2983.92	3.28	-2.42	-2.21	Ryan MWD
9757.00	87.70	1.50	6720.83	3079.78	375.64	3079.78	0.84	0.83	-0.10	Ryan MWD
9851.00	90.30	1.60	6722.47	3173.72	378.18	3173.72	2.77	2.77	0.11	Ryan MWD
9946.00	89.50	0.40	6722.64	3268.70	379.84	3268.70	1.52	-0.84	-1.26	Ryan MWD
10040.00	89.90	0.00	6723.13	3362.70	380.17	3362.70	0.60	0.43	-0.43	Ryan MWD
10136.00	88.30	357.80	6724.64	3458.66	378.32	3458.66	2.83	-1.67	-2.29	Ryan MWD
10230.00	88.10	357.00	6727.59	3552.52	374.06	3552.52	0.88	-0.21	-0.85	Ryan MWD
10326.00	90.80	0.10	6728.52	3648.46	371.64	3648.46	4.28	2.81	3.23	Ryan MWD
10420.00	91.00	359.70	6727.04	3742.45	371.47	3742.45	0.48	0.21	-0.43	Ryan MWD
10515.00	89.50	359.10	6726.62	3837.44	370.48	3837.44	1.70	-1.58	-0.63	Ryan MWD
10609.00	88.90	358.60	6727.94	3931.41	368.59	3931.41	0.83	-0.64	-0.53	Ryan MWD
10703.00	89.10	358.90	6729.58	4025.37	366.54	4025.37	0.38	0.21	0.32	Ryan MWD
10796.00	89.40	359.30	6730.79	4118.36	365.08	4118.36	0.54	0.32	0.43	Ryan MWD
10890.00	89.40	359.20	6731.78	4212.34	363.85	4212.34	0.11	0.00	-0.11	Ryan MWD
10985.00	89.70	359.90	6732.52	4307.34	363.10	4307.34	0.80	0.32	0.74	Ryan MWD
11079.00	89.80	0.00	6732.94	4401.33	363.02	4401.33	0.15	0.11	0.11	Ryan MWD
11174.00	90.20	359.80	6732.94	4496.33	362.85	4496.33	0.47	0.42	-0.21	Ryan MWD
11268.00	90.10	359.90	6732.69	4590.33	362.61	4590.33	0.15	-0.11	0.11	Ryan MWD
11363.00	90.00	2.10	6732.61	4685.31	364.27	4685.31	2.32	-0.11	2.32	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:22:39	Page: 4
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
11458.00	89.80	2.90	6732.77	4780.22	368.41	4780.22	0.87	-0.21	0.84	Ryan MWD
11553.00	89.80	2.90	6733.10	4875.10	373.22	4875.10	0.00	0.00	0.00	Ryan MWD
11646.00	89.90	2.80	6733.35	4967.98	377.84	4967.98	0.15	0.11	-0.11	Ryan MWD
11740.00	90.50	0.50	6733.02	5061.94	380.55	5061.94	2.53	0.64	-2.45	Ryan MWD
11835.00	88.90	0.40	6733.52	5156.93	381.29	5156.93	1.69	-1.68	-0.11	Ryan MWD
11929.00	84.10	359.30	6739.25	5250.73	381.05	5250.73	5.24	-5.11	-1.17	Ryan MWD
12024.00	81.10	358.60	6751.49	5344.91	379.33	5344.91	3.24	-3.16	-0.74	Ryan MWD
12118.00	82.80	357.60	6764.65	5437.93	376.24	5437.93	2.09	1.81	-1.06	Ryan MWD
12213.00	85.90	357.40	6774.00	5532.36	372.11	5532.36	3.27	3.26	-0.21	Ryan MWD
12307.00	89.00	359.30	6778.18	5626.21	369.41	5626.21	3.87	3.30	2.02	Ryan MWD
12402.00	91.80	359.90	6777.52	5721.20	368.75	5721.20	3.01	2.95	0.63	Ryan MWD
12497.00	91.40	358.50	6774.87	5816.15	367.42	5816.15	1.53	-0.42	-1.47	Ryan MWD
12593.00	90.40	356.80	6773.36	5912.05	363.49	5912.05	2.05	-1.04	-1.77	Ryan MWD
12688.00	89.80	357.10	6773.20	6006.92	358.43	6006.92	0.71	-0.63	0.32	Ryan MWD
12783.00	90.40	358.00	6773.03	6101.83	354.37	6101.83	1.14	0.63	0.95	Ryan MWD
12878.00	89.50	359.30	6773.11	6196.80	352.13	6196.80	1.66	-0.95	1.37	Ryan MWD
12973.00	93.10	359.20	6770.96	6291.75	350.89	6291.75	3.79	3.79	-0.11	Ryan MWD
13068.00	93.50	0.60	6765.49	6386.59	350.73	6386.59	1.53	0.42	1.47	Ryan MWD
13164.00	94.30	1.40	6758.96	6482.35	352.40	6482.35	1.18	0.83	0.83	Ryan MWD
13259.00	91.60	2.60	6754.07	6577.16	355.71	6577.16	3.11	-2.84	1.26	Ryan MWD
13354.00	88.20	1.50	6754.24	6672.08	359.11	6672.08	3.76	-3.58	-1.16	Ryan MWD
13448.00	91.10	1.50	6754.81	6766.04	361.57	6766.04	3.09	3.09	0.00	Ryan MWD
13542.00	91.00	1.80	6753.09	6859.98	364.27	6859.98	0.34	-0.11	0.32	Ryan MWD
13636.00	90.30	359.60	6752.02	6953.97	365.42	6953.97	2.46	-0.74	-2.34	Ryan MWD
13730.00	90.20	358.20	6751.61	7047.94	363.62	7047.94	1.49	-0.11	-1.49	Ryan MWD
13826.00	90.00	357.90	6751.44	7143.89	360.35	7143.89	0.38	-0.21	-0.31	Ryan MWD
13921.00	89.60	357.90	6751.77	7238.82	356.87	7238.82	0.42	-0.42	0.00	Ryan MWD
14015.00	89.90	359.70	6752.19	7332.80	354.90	7332.80	1.94	0.32	1.91	Ryan MWD
14111.00	90.10	0.90	6752.19	7428.80	355.40	7428.80	1.27	0.21	1.25	Ryan MWD
14205.00	90.50	359.20	6751.69	7522.79	355.48	7522.79	1.86	0.43	-1.81	Ryan MWD
14299.00	89.80	358.00	6751.45	7616.76	353.19	7616.76	1.48	-0.74	-1.28	Ryan MWD
14393.00	90.20	358.70	6751.45	7710.72	350.48	7710.72	0.86	0.43	0.74	Ryan MWD
14489.00	89.70	356.90	6751.53	7806.64	346.80	7806.64	1.95	-0.52	-1.87	Ryan MWD
14572.00	89.60	355.60	6752.04	7889.46	341.37	7889.46	1.57	-0.12	-1.57	Ryan MWD
14623.00	89.60	355.60	6752.39	7940.31	337.46	7940.31	0.00	0.00	0.00	PROJECTED to TD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:23:43	Page: 1
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Field: Crockett Co, Tx Texas USA	Map System: US State Plane Coordinate System 1927	Map Zone: Texas, Central Zone
Geo Datum: NAD27 (Clarke 1866)	Coordinate System: Site Centre	
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010	

Site: University East 4411 JH
Crockett Co, Tx

Site Position:	Northing: 499514.70 ft	Latitude: 31 2 11.710 N
From: Map	Easting: 1699369.74 ft	Longitude: 101 17 35.746 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 2662.00 ft		Grid Convergence: -0.49 deg

Well: University East 4411 JH	Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 499514.70 ft	Latitude: 31 2 11.710 N
+E/-W 0.00 ft	Easting : 1699369.74 ft	Longitude: 101 17 35.746 W
Position Uncertainty: 2.00 ft		

Wellpath: 4411 JH	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 5/30/2014	Above System Datum: Mean Sea Level		
Field Strength: 47848 nT	Declination: 6.05 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 59.37 deg		
ft	+N/-S	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	0.00

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft	Tool
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
125.00	0.12	125.00	-0.13	165.34	-0.13	0.03	0.13	165.34	0.10	Gyro
225.00	0.34	225.00	-0.24	92.34	-0.24	0.36	0.43	123.99	0.33	Gyro
325.00	0.37	325.00	-0.23	86.27	-0.23	0.97	1.00	103.34	0.05	Gyro
425.00	0.38	425.00	0.11	16.15	0.11	1.39	1.39	85.54	0.43	Gyro
525.00	0.65	524.99	0.75	55.28	0.75	1.95	2.09	68.94	0.43	Gyro
625.00	0.52	624.99	1.46	31.99	1.46	2.65	3.03	61.22	0.27	Gyro
725.00	0.70	724.98	2.33	37.28	2.33	3.26	4.01	54.50	0.19	Gyro
825.00	0.69	824.97	3.26	42.63	3.26	4.04	5.19	51.13	0.07	Gyro
890.00	0.13	889.97	3.53	104.19	3.53	4.38	5.62	51.15	0.98	Gyro
998.00	0.70	997.97	3.64	77.20	3.64	5.14	6.30	54.67	0.54	Gyro
1093.00	1.90	1092.94	3.62	95.40	3.62	7.27	8.13	63.52	1.32	Gyro
1283.00	2.00	1282.83	2.94	96.80	2.94	13.70	14.01	77.91	0.06	Gyro
1474.00	2.20	1473.70	1.76	102.30	1.76	20.59	20.67	85.12	0.15	Gyro
1664.00	0.70	1663.64	0.54	112.20	0.54	25.23	25.24	88.76	0.80	Gyro
1854.00	1.00	1853.62	-0.22	101.20	-0.22	27.93	27.93	90.44	0.18	Ryan MWD
2043.00	1.10	2042.59	-1.17	110.30	-1.17	31.25	31.27	92.14	0.10	Ryan MWD
2234.00	1.20	2233.55	-2.42	107.90	-2.42	34.88	34.96	93.96	0.06	Ryan MWD
2329.00	1.50	2328.52	-3.27	115.90	-3.27	36.94	37.08	95.05	0.37	Ryan MWD
2425.00	1.50	2424.49	-4.33	114.30	-4.33	39.22	39.45	96.30	0.04	Ryan MWD
2521.00	3.60	2520.39	-6.19	116.50	-6.19	43.06	43.50	98.19	2.19	Ryan MWD
2616.00	5.50	2615.08	-9.86	120.90	-9.86	49.63	50.61	101.24	2.03	Ryan MWD
2712.00	5.50	2710.64	-14.48	119.40	-14.48	57.59	59.38	104.12	0.15	Ryan MWD
2807.00	4.80	2805.26	-18.71	120.00	-18.71	65.00	67.64	106.06	0.74	Ryan MWD
2901.00	4.20	2898.97	-22.45	121.10	-22.45	71.35	74.80	107.47	0.64	Ryan MWD
2996.00	5.20	2993.65	-26.00	114.00	-26.00	78.26	82.47	108.38	1.22	Ryan MWD
3091.00	4.70	3088.29	-29.59	118.20	-29.59	85.63	90.60	109.06	0.65	Ryan MWD
3187.00	3.80	3184.03	-32.81	115.40	-32.81	91.97	97.65	109.64	0.96	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:23:43	Page: 2
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft	Tool
3283.00	5.50	3279.71	-36.56	121.20	-36.56	98.78	105.33	110.31	1.84	Ryan MWD
3379.00	7.80	3375.06	-41.87	116.70	-41.87	108.53	116.33	111.10	2.45	Ryan MWD
3474.00	6.50	3469.32	-47.44	119.80	-47.44	118.96	128.07	111.74	1.43	Ryan MWD
3569.00	6.50	3563.71	-52.64	118.00	-52.64	128.37	138.75	112.30	0.21	Ryan MWD
3663.00	8.80	3656.87	-57.81	111.80	-57.81	139.75	151.23	112.47	2.60	Ryan MWD
3759.00	7.10	3751.94	-62.56	110.00	-62.56	152.14	164.50	112.35	1.79	Ryan MWD
3854.00	7.00	3846.22	-67.02	115.00	-67.02	162.91	176.15	112.36	0.65	Ryan MWD
3950.00	8.30	3941.37	-72.37	114.60	-72.37	174.51	188.92	112.53	1.36	Ryan MWD
4043.00	6.20	4033.62	-77.60	118.90	-77.60	185.01	200.62	112.75	2.33	Ryan MWD
4138.00	7.30	4127.96	-82.39	112.50	-82.39	195.08	211.76	112.90	1.40	Ryan MWD
4234.00	7.10	4223.20	-87.01	112.70	-87.01	206.19	223.79	112.88	0.21	Ryan MWD
4329.00	8.40	4317.33	-91.89	112.10	-91.89	218.03	236.60	112.85	1.37	Ryan MWD
4424.00	7.00	4411.47	-96.23	107.40	-96.23	229.99	249.30	112.70	1.61	Ryan MWD
4519.00	8.10	4505.65	-100.05	108.20	-100.05	241.87	261.74	112.47	1.16	Ryan MWD
4615.00	6.50	4600.87	-103.61	105.50	-103.61	253.53	273.88	112.23	1.70	Ryan MWD
4709.00	8.50	4694.06	-107.50	110.80	-107.50	265.15	286.12	112.07	2.25	Ryan MWD
4805.00	7.20	4789.16	-112.26	111.80	-112.26	277.37	299.23	112.03	1.36	Ryan MWD
4901.00	7.90	4884.33	-116.50	107.70	-116.50	289.24	311.82	111.94	0.92	Ryan MWD
4996.00	7.10	4978.51	-119.95	104.50	-119.95	301.15	324.16	111.72	0.95	Ryan MWD
5091.00	6.40	5072.86	-122.54	102.20	-122.54	312.00	335.21	111.44	0.79	Ryan MWD
5186.00	5.50	5167.34	-124.36	98.80	-124.36	321.68	344.88	111.14	1.02	Ryan MWD
5282.00	4.70	5262.96	-125.35	94.20	-125.35	330.15	353.14	110.79	0.94	Ryan MWD
5376.00	5.30	5356.61	-126.88	106.80	-126.88	338.15	361.17	110.57	1.33	Ryan MWD
5471.00	4.40	5451.27	-128.95	102.70	-128.95	345.90	369.16	110.45	1.01	Ryan MWD
5565.00	4.00	5545.01	-130.29	99.50	-130.29	352.65	375.95	110.28	0.49	Ryan MWD
5659.00	3.30	5638.82	-131.29	99.80	-131.29	358.55	381.83	110.11	0.74	Ryan MWD
5754.00	3.00	5733.68	-132.12	98.40	-132.12	363.71	386.96	109.96	0.33	Ryan MWD
5849.00	2.50	5828.57	-133.21	110.60	-133.21	368.10	391.47	109.89	0.81	Ryan MWD
5943.00	1.70	5922.51	-134.33	106.40	-134.33	371.36	394.91	109.89	0.87	Ryan MWD
6038.00	1.20	6017.48	-134.79	93.60	-134.79	373.71	397.27	109.83	0.62	Ryan MWD
6133.00	1.20	6112.45	-134.94	95.40	-134.94	375.69	399.19	109.76	0.04	Ryan MWD
6202.00	1.20	6181.44	-134.99	88.50	-134.99	377.13	400.56	109.69	0.21	Ryan MWD
6223.00	1.10	6202.44	-135.02	99.00	-135.02	377.55	400.97	109.68	1.11	Ryan MWD
6254.00	1.40	6233.43	-134.82	50.10	-134.82	378.13	401.45	109.62	3.45	Ryan MWD
6286.00	4.50	6265.38	-133.36	16.30	-133.36	378.79	401.58	109.40	10.71	Ryan MWD
6318.00	9.00	6297.16	-129.68	8.00	-129.68	379.49	401.03	108.87	14.35	Ryan MWD
6350.00	13.50	6328.53	-123.46	2.30	-123.46	379.99	399.54	108.00	14.47	Ryan MWD
6381.00	17.30	6358.42	-115.25	356.00	-115.25	379.81	396.91	106.88	13.38	Ryan MWD
6413.00	19.70	6388.76	-105.16	351.90	-105.16	378.72	393.05	105.52	8.53	Ryan MWD
6445.00	22.30	6418.63	-93.78	354.10	-93.78	377.33	388.81	103.96	8.49	Ryan MWD
6477.00	25.80	6447.85	-80.80	355.10	-80.80	376.11	384.69	102.12	11.01	Ryan MWD
6508.00	29.30	6475.33	-66.49	357.90	-66.49	375.26	381.10	100.05	12.04	Ryan MWD
6540.00	32.60	6502.78	-50.04	1.30	-50.04	375.17	378.49	97.60	11.67	Ryan MWD
6572.00	35.50	6529.29	-32.13	1.20	-32.13	375.56	376.93	94.89	9.06	Ryan MWD
6604.00	37.60	6554.99	-13.08	359.50	-13.08	375.67	375.90	91.99	7.28	Ryan MWD
6668.00	44.60	6603.19	28.97	360.00	28.97	375.50	376.61	85.59	10.95	Ryan MWD
6699.00	48.40	6624.53	51.45	1.00	51.45	375.70	379.21	82.20	12.48	Ryan MWD
6731.00	52.60	6644.88	76.13	1.70	76.13	376.29	383.91	78.56	13.23	Ryan MWD
6763.00	56.50	6663.43	102.18	2.00	102.18	377.13	390.73	74.84	12.21	Ryan MWD
6794.00	60.00	6679.74	128.52	1.40	128.52	377.91	399.17	71.22	11.41	Ryan MWD
6857.00	68.30	6707.19	185.16	359.50	185.16	378.32	421.20	63.92	13.45	Ryan MWD
6889.00	73.00	6717.79	215.35	359.00	215.35	377.92	434.97	60.32	14.76	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:23:43	Page: 3
Field: Crockett Co, Tx	Co-ordinate(NE) Reference: Site: University East 4411 JH, Grid Nort		
Site: University East 4411 JH	Vertical (TVD) Reference: SITE 2687.0		
Well: University East 4411 JH	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: 4411 JH	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft	Tool
6952.00	84.00	6730.33	276.98	359.50	276.98	377.12	467.91	53.70	17.48	Ryan MWD
7009.00	89.80	6733.41	333.87	0.80	333.87	377.27	503.79	48.49	10.43	Ryan MWD
7103.00	92.10	6731.85	427.85	0.10	427.85	378.01	570.92	41.46	2.56	Ryan MWD
7198.00	93.20	6727.46	522.75	0.30	522.75	378.34	645.29	35.90	1.18	Ryan MWD
7293.00	92.50	6722.74	617.62	0.70	617.62	379.17	724.73	31.55	0.85	Ryan MWD
7386.00	91.90	6719.17	710.54	1.00	710.54	380.55	806.03	28.17	0.72	Ryan MWD
7481.00	90.10	6717.51	805.52	359.00	805.52	380.55	890.89	25.29	2.83	Ryan MWD
7575.00	90.40	6717.10	899.49	358.20	899.49	378.25	975.79	22.81	0.91	Ryan MWD
7671.00	89.60	6717.10	995.46	359.20	995.46	376.07	1064.13	20.70	1.33	Ryan MWD
7766.00	91.60	6716.10	1090.43	358.10	1090.43	373.84	1152.73	18.92	2.40	Ryan MWD
7861.00	90.50	6714.36	1185.37	358.80	1185.37	371.27	1242.16	17.39	1.37	Ryan MWD
7954.00	89.80	6714.12	1278.36	1.80	1278.36	371.75	1331.32	16.21	3.31	Ryan MWD
8049.00	89.00	6715.12	1373.29	2.30	1373.29	375.15	1423.61	15.28	0.99	Ryan MWD
8143.00	87.40	6718.07	1467.22	0.00	1467.22	377.04	1514.89	14.41	2.98	Ryan MWD
8239.00	88.70	6721.33	1563.16	0.60	1563.16	377.54	1608.11	13.58	1.49	Ryan MWD
8333.00	90.70	6721.83	1657.15	0.70	1657.15	378.61	1699.85	12.87	2.13	Ryan MWD
8428.00	89.80	6721.41	1752.13	358.00	1752.13	377.53	1792.34	12.16	3.00	Ryan MWD
8522.00	91.50	6720.35	1846.05	357.50	1846.05	373.84	1883.52	11.45	1.89	Ryan MWD
8618.00	90.90	6718.34	1941.94	357.60	1941.94	369.74	1976.82	10.78	0.63	Ryan MWD
8713.00	91.80	6716.10	2036.80	356.80	2036.80	365.10	2069.26	10.16	1.27	Ryan MWD
8809.00	92.30	6712.66	2132.63	357.80	2132.63	360.58	2162.90	9.60	1.16	Ryan MWD
8902.00	93.00	6708.36	2225.50	359.80	2225.50	358.63	2254.21	9.15	2.28	Ryan MWD
8998.00	91.80	6704.34	2321.42	0.50	2321.42	358.88	2348.99	8.79	1.45	Ryan MWD
9093.00	88.30	6704.26	2416.40	0.00	2416.40	359.30	2442.97	8.46	3.72	Ryan MWD
9187.00	91.10	6704.75	2510.38	1.50	2510.38	360.53	2536.14	8.17	3.38	Ryan MWD
9282.00	89.90	6703.92	2605.36	0.70	2605.36	362.35	2630.43	7.92	1.52	Ryan MWD
9376.00	87.10	6706.38	2699.30	1.10	2699.30	363.83	2723.71	7.68	3.01	Ryan MWD
9470.00	87.80	6710.57	2793.20	0.50	2793.20	365.14	2816.96	7.45	0.98	Ryan MWD
9566.00	89.20	6713.08	2889.09	3.70	2889.09	368.65	2912.51	7.27	3.64	Ryan MWD
9661.00	86.90	6716.31	2983.92	1.60	2983.92	373.05	3007.15	7.13	3.28	Ryan MWD
9757.00	87.70	6720.83	3079.78	1.50	3079.78	375.64	3102.60	6.95	0.84	Ryan MWD
9851.00	90.30	6722.47	3173.72	1.60	3173.72	378.18	3196.17	6.80	2.77	Ryan MWD
9946.00	89.50	6722.64	3268.70	0.40	3268.70	379.84	3290.70	6.63	1.52	Ryan MWD
10040.00	89.90	6723.13	3362.70	0.00	3362.70	380.17	3384.12	6.45	0.60	Ryan MWD
10136.00	88.30	6724.64	3458.66	357.80	3458.66	378.32	3479.29	6.24	2.83	Ryan MWD
10230.00	88.10	6727.59	3552.52	357.00	3552.52	374.06	3572.16	6.01	0.88	Ryan MWD
10326.00	90.80	6728.52	3648.46	0.10	3648.46	371.64	3667.34	5.82	4.28	Ryan MWD
10420.00	91.00	6727.04	3742.45	359.70	3742.45	371.47	3760.84	5.67	0.48	Ryan MWD
10515.00	89.50	6726.62	3837.44	359.10	3837.44	370.48	3855.28	5.51	1.70	Ryan MWD
10609.00	88.90	6727.94	3931.41	358.60	3931.41	368.59	3948.65	5.36	0.83	Ryan MWD
10703.00	89.10	6729.58	4025.37	358.90	4025.37	366.54	4042.03	5.20	0.38	Ryan MWD
10796.00	89.40	6730.79	4118.36	359.30	4118.36	365.08	4134.51	5.07	0.54	Ryan MWD
10890.00	89.40	6731.78	4212.34	359.20	4212.34	363.85	4228.03	4.94	0.11	Ryan MWD
10985.00	89.70	6732.52	4307.34	359.90	4307.34	363.10	4322.61	4.82	0.80	Ryan MWD
11079.00	89.80	6732.94	4401.33	0.00	4401.33	363.02	4416.28	4.72	0.15	Ryan MWD
11174.00	90.20	6732.94	4496.33	359.80	4496.33	362.85	4510.95	4.61	0.47	Ryan MWD
11268.00	90.10	6732.69	4590.33	359.90	4590.33	362.61	4604.63	4.52	0.15	Ryan MWD
11363.00	90.00	6732.61	4685.31	2.10	4685.31	364.27	4699.45	4.45	2.32	Ryan MWD
11458.00	89.80	6732.77	4780.22	2.90	4780.22	368.41	4794.40	4.41	0.87	Ryan MWD
11553.00	89.80	6733.10	4875.10	2.90	4875.10	373.22	4889.36	4.38	0.00	Ryan MWD
11646.00	89.90	6733.35	4967.98	2.80	4967.98	377.84	4982.33	4.35	0.15	Ryan MWD
11740.00	90.50	6733.02	5061.94	0.50	5061.94	380.55	5076.22	4.30	2.53	Ryan MWD
11835.00	88.90	6733.52	5156.93	0.40	5156.93	381.29	5171.01	4.23	1.69	Ryan MWD

Company: EP Energy E&P Company, L.P.	Date: 6/10/2014	Time: 07:23:43	Page: 4
Field: Crockett Co, Tx	Co-ordinate(NE) Reference:	Site: University East 4411 JH, Grid Nort	
Site: University East 4411 JH	Vertical (TVD) Reference:	SITE 2687.0	
Well: University East 4411 JH	Section (VS) Reference:	Well (0.00N,0.00E,0.00Azi)	
Wellpath: 4411 JH	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft	Tool
11929.00	84.10	6739.25	5250.73	359.30	5250.73	381.05	5264.53	4.15	5.24	Ryan MWD
12024.00	81.10	6751.49	5344.91	358.60	5344.91	379.33	5358.35	4.06	3.24	Ryan MWD
12118.00	82.80	6764.65	5437.93	357.60	5437.93	376.24	5450.93	3.96	2.09	Ryan MWD
12213.00	85.90	6774.00	5532.36	357.40	5532.36	372.11	5544.86	3.85	3.27	Ryan MWD
12307.00	89.00	6778.18	5626.21	359.30	5626.21	369.41	5638.33	3.76	3.87	Ryan MWD
12402.00	91.80	6777.52	5721.20	359.90	5721.20	368.75	5733.07	3.69	3.01	Ryan MWD
12497.00	91.40	6774.87	5816.15	358.50	5816.15	367.42	5827.75	3.61	1.53	Ryan MWD
12593.00	90.40	6773.36	5912.05	356.80	5912.05	363.49	5923.22	3.52	2.05	Ryan MWD
12688.00	89.80	6773.20	6006.92	357.10	6006.92	358.43	6017.60	3.41	0.71	Ryan MWD
12783.00	90.40	6773.03	6101.83	358.00	6101.83	354.37	6112.11	3.32	1.14	Ryan MWD
12878.00	89.50	6773.11	6196.80	359.30	6196.80	352.13	6206.80	3.25	1.66	Ryan MWD
12973.00	93.10	6770.96	6291.75	359.20	6291.75	350.89	6301.53	3.19	3.79	Ryan MWD
13068.00	93.50	6765.49	6386.59	0.60	6386.59	350.73	6396.22	3.14	1.53	Ryan MWD
13164.00	94.30	6758.96	6482.35	1.40	6482.35	352.40	6491.93	3.11	1.18	Ryan MWD
13259.00	91.60	6754.07	6577.16	2.60	6577.16	355.71	6586.77	3.10	3.11	Ryan MWD
13354.00	88.20	6754.24	6672.08	1.50	6672.08	359.11	6681.74	3.08	3.76	Ryan MWD
13448.00	91.10	6754.81	6766.04	1.50	6766.04	361.57	6775.69	3.06	3.09	Ryan MWD
13542.00	91.00	6753.09	6859.98	1.80	6859.98	364.27	6869.65	3.04	0.34	Ryan MWD
13636.00	90.30	6752.02	6953.97	359.60	6953.97	365.42	6963.56	3.01	2.46	Ryan MWD
13730.00	90.20	6751.61	7047.94	358.20	7047.94	363.62	7057.32	2.95	1.49	Ryan MWD
13826.00	90.00	6751.44	7143.89	357.90	7143.89	360.35	7152.97	2.89	0.38	Ryan MWD
13921.00	89.60	6751.77	7238.82	357.90	7238.82	356.87	7247.62	2.82	0.42	Ryan MWD
14015.00	89.90	6752.19	7332.80	359.70	7332.80	354.90	7341.38	2.77	1.94	Ryan MWD
14111.00	90.10	6752.19	7428.80	0.90	7428.80	355.40	7437.29	2.74	1.27	Ryan MWD
14205.00	90.50	6751.69	7522.79	359.20	7522.79	355.48	7531.18	2.71	1.86	Ryan MWD
14299.00	89.80	6751.45	7616.76	358.00	7616.76	353.19	7624.94	2.65	1.48	Ryan MWD
14393.00	90.20	6751.45	7710.72	358.70	7710.72	350.48	7718.68	2.60	0.86	Ryan MWD
14489.00	89.70	6751.53	7806.64	356.90	7806.64	346.80	7814.34	2.54	1.95	Ryan MWD
14572.00	89.60	6752.04	7889.46	355.60	7889.46	341.37	7896.85	2.48	1.57	Ryan MWD
14623.00	89.60	6752.39	7940.31	355.60	7940.31	337.46	7947.48	2.43	0.00	PROJECTED



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

SLIDE & ROTATING REPORT

Customer: **EP ENERGY**
Field: **CROCKETT COUNTY, TEXAS**
County, State: **CROCKETT, TEXAS**

Rig Name & No.: **SIDEWINDER 221**
Well Name & No.: **UNIVERSITY EAST 4411 JH**
Ryan Job #: **7566**

MODE	DEPTH FROM	DEPTH TO	FEET MADE	SURVEY DEPTH	INC	AZI	DLS	BUILD RATE	MOTOR OUTPUT	SLIDE SEEN	SLIDE AHEAD	DLN	SIDE / ROTATE (Based on Formula)	MTF / GTF	WOB (1K lbs)	RPM	PUMP GPM	PUMP PRESSURE
Rotate	935	1,012	77							0.00	0.00				16.00	63.00	586.00	1825.00
SLIDE	1,012	1,027	15											113° MTF	7.00	0.00	578.00	1732.00
Rotate	1,027	1,044	17	998	0.70°	77.20°	0.54°	0.53°		0.00	15.00				14.00	60.00	595.00	1749.00
Rotate	1,044	1,139	95	1,093	1.90°	95.40°	1.32°	1.26°	8.36°	15.00	0.00				27.00	61.00	595.00	1749.00
Rotate	1,139	1,329	190	1,283	2.00°	96.80°	0.06°	0.05°		0.00	0.00				34.00	61.00	511.00	1361.00
Rotate	1,329	1,520	191	1,474	2.20°	102.30°	0.15°	0.10°		0.00	0.00				16.00	61.00	498.00	1302.00
SLIDE	1,520	1,532	12											280° MTF	9.00	0.00	494.00	1289.00
Rotate	1,532	1,710	178	1,664	0.70°	112.20°	0.80°	-0.79°	12.67°	12.00	0.00				19.00	61.00	582.00	1794.00
Rotate	1,710	1,900	190	1,854	1.00°	101.20°	0.18°	0.16°		0.00	0.00				19.00	61.00	603.00	1900.00
Rotate	1,900	2,089	189	2,043	1.10°	110.30°	0.10°	0.05°		0.00	0.00				24.00	61.00	578.00	1756.00
Rotate	2,089	2,280	191	2,234	1.20°	107.90°	0.06°	0.05°		0.00	0.00				30K	60.00	586.00	1800.00
Rotate	2,280	2,375	95	2,329	1.50°	115.90°	0.37°	0.32°		0.00	0.00				30K	60.00	586.00	1800.00
Rotate	2,375	2,471	96	2,425	1.50°	114.30°	0.04°	0.00°		0.00	0.00				30K	60.00	586.00	1800.00
SLIDE	2,471	2,486	15											113° MTF	15K		586.00	1800.00
Rotate	2,486	2,567	81	2,521	3.60°	116.50°	2.19°	2.19°		15.00	0.00				30K	60.00	586.00	1800.00
SLIDE	2,567	2,577	10											0° GTF	20K		586.00	1800.00
Rotate	2,577	2,662	85	2,616	5.50°	120.90°	2.03°	2.00°		10.00	0.00				30K	60.00	586.00	1800.00
Rotate	2,662	2,758	96	2,712	5.50°	119.40°	0.15°	0.00°		0.00	0.00				30K	60.00	586.00	1800.00
Rotate	2,758	2,853	95	2,807	4.80°	120.00°	0.74°	-0.74°		0.00	0.00				30K	60.00	586.00	1800.00
Rotate	2,853	2,947	94	2,901	4.20°	121.10°	0.64°	-0.64°		0.00	0.00				30K	60.00	586.00	1800.00
SLIDE	2,947	2,957	10											10° L GTF	10K		586.00	1800.00
Rotate	2,957	3,042	85	2,996	5.20°	114.00°	1.22°	1.05°		10.00	0.00				30K	60.00	586.00	1800.00
Rotate	3,042	3,137	95	3,091	4.70°	118.20°	0.65°	-0.53°		0.00	0.00				30K	60.00	586.00	1800.00
Rotate	3,137	3,233	96	3,187	3.80°	115.40°	0.96°	0.94°		0.00	0.00				30K	60.00	586.00	1800.00
SLIDE	3,233	3,253	20											0° GTF	10K		586.00	1800.00
Rotate	3,253	3,329	76	3,283	5.50°	121.20°	1.84°	1.77°		20.00	0.00				30K	60.00	586.00	1800.00
SLIDE	3,329	3,344	15											20° L GTF	10K		586.00	1800.00
Rotate	3,344	3,425	81	3,379	7.80°	116.70°	2.45°	2.40°		15.00	0.00				30K	60.00	586.00	1800.00
Rotate	3,425	3,520	95	3,474	6.50°	119.80°	1.43°	1.37°		0.00	0.00				30K	60.00	586.00	1800.00
SLIDE	3,520	3,530	10											30° L GTF	10K		586.00	1800.00
Rotate	3,530	3,615	85	3,569	6.50°	118.00°	0.21°	0.00°		10.00	0.00				30K	60.00	586.00	1800.00
SLIDE	3,615	3,635	20											30° L GTF	10K		586.00	1800.00
Rotate	3,635	3,709	74	3,663	8.80°	111.80°	2.60°	2.45°		20.00	0.00						586.00	1800.00
Rotate	3,709	3,805	96	3,759	7.10°	110.00°	1.79°	1.77°									586.00	1800.00
SLIDE	3,805	3,820	15											10° R GTF	10K		586.00	1800.00
Rotate	3,820	3,900	80	3,854	7.00°	115.00°	0.65°	0.11°		15.00	0.00						586.00	2155.00
SLIDE	3,900	3,910	10											10° L GTF	10K		586.00	2155.00
Rotate	3,910	3,996	86	3,950	8.30°	114.60°	1.36°	1.36°		10.00	0.00						586.00	2155.00
Rotate	3,996	4,089	93	4,043	6.20°	118.90°	2.33°	2.26°									586.00	2155.00
SLIDE	4,089	4,109	20											20° L GTF	10K		586.00	2155.00
Rotate	4,109	4,184	75	4,138	7.30°	112.50°	1.40°	1.16°		20.00	0.00						586.00	2155.00
SLIDE	4,184	4,199	15											HS GTF	10K		586.00	2155.00
Rotate	4,199	4,280	81	4,234	7.10°	112.70°	0.14°	0.14°		15.00	0.00						586.00	2155.00
SLIDE	4,280	4,305	25											HS GTF	10K		586.00	2155.00
Rotate	4,305	4,375	70	4,329	8.40°	112.10°	1.37°	1.37°	5.21°	25.00	0.00				36.00	62.00	598.00	2180.00
Rotate	4,375	4,470	95	4,424	7.00°	107.40°	1.61°	-1.47°		0.00	0.00				30.00	62.00	586.00	2166.00
SLIDE	4,470	4,495	25											30° R GTF	3.00	0.00	586.00	2163.00
Rotate	4,495	4,565	70	4,519	8.10°	108.20°	1.16°	1.16°	4.41°	25.00	0.00				22.00	62.00	591.00	2123.00
Rotate	4,565	4,661	96	4,615	6.50°	105.50°	1.70°	1.67°		0.00	0.00				26.00	61.00	586.00	2158.00
SLIDE	4,661	4,688	27											35° R GTF	6.00	0.00	599.00	2119.00
Rotate	4,688	4,755	67	4,709	8.50°	110.80°	2.25°	2.13°	7.83°	27.00	0.00				21.00	61.00	612.00	2271.00
Rotate	4,755	4,851	96	4,805	7.20°	111.80°	1.36°	-1.35°		0.00	0.00				19.00	42.00	498.00	1613.00
SLIDE	4,851	4,876	25											10° R GTF	7.00	0.00	574.00	2109.00
Rotate	4,876	4,947	71	4,901	7.90°	107.70°	0.92°	0.73°	3.53°	25.00	0.00				20.00	41.00	461.00	1383.00
Rotate	4,947	5,042	95	4,996	7.10°	104.50°	0.95°	-0.84°		0.00	0.00				17.00	41.00	448.00	1353.00
Rotate	5,042	5,137	95	5,091	6.40°	102.20°	0.79°	-0.74°		0.00	0.00				16.00	41.00	444.00	1583.00
Rotate	5,137	5,232	95	5,186	5.50°	98.80°	1.02°	-0.95°		0.00	0.00				19.00	41.00	461.00	1489.00
Rotate	5,232	5,328	96	5,282	4.70°	94.20°	0.94°	-0.83°		0.00	0.00				17.00	42.00	448.00	1442.00
SLIDE	5,328	5,353	25											80° R GTF	7.00	0.00	477.00	1594.00
Rotate	5,353	5,422	69	5,376	5.30°	106.80°	1.33°	0.64°	5.00°	25.00	0.00				16.00	42.00	469.00	1539.00
Rotate	5,422	5,517	95	5,471	4.40°	102.70°	1.01°	-0.95°		0.00	0.00				18.00	41.00	469.00	1566.00
Rotate	5,517	5,611	94	5,565	4.00°	99.50°	0.49°	-0.43°		0.00	0.00				16.00	41.00	477.00	1607.00
Rotate	5,611	5,705	94	5,659	3.30°	99.80°	0.74°	-0.74°		0.00	0.00				11.00	41.00	461.00	1530.00
Rotate	5,705	5,800	95	5,754	3.00°	98.40°	0.33°	-0.32°		0.00	0.00				15.00	40.00	448.00	1453.00
SLIDE	5,800	5,820	20							0.00	0.00			160° GTF	7.00	0.00	477.00	1594.00
Rotate	5,820	5,895	75	5,849	2.90°	110.60°	0.81°	0.53°	4.00°	20.00	0.00				15.00	40.00	448.00	1453.00
SLIDE	5,895	5,915	20							0.00	0.00			270° MTF	15.00	0.00	450.00	1594.00
Rotate	5,915	5,989	74	5,943	1.70°	106.40°	0.87°	0.85°	4.00°	20.00	0.00				15.00	40.00	450.00	1500.00
SLIDE	5,989	5,999	10							0.00	0.00			286° MTF	15.00	0.00	450.00	1594.00
Rotate	5,999	6,084	85	6,038	1.20°	93.60°	0.62°	0.53°	6.00°	10.00	0.00				15.00	40.00	450.00	1500.00
Rotate	6,084	6,179	95	6,133	1.20°	95.40°	0.15°	0.00°		0.00	0.00				15.00	40.00	450.00	1500.00
Rotate	6,179	6,248	69	6,202											15.00	40.00	450.00	1500.00
SLIDE	6,248	6,269	21	6,223	1.10°	99.00°	1.11°	-0.48°		0.00	21.00	12.00°		0° MTF	21.00	0.00	465.00	1509.00
SLIDE	6,269	6,300	31	6,254	1.40°	50.10°	3.45°	0.97°	17.83°	32.00	46.00	11.51°		0° MTF	25.00	0.00	444.00	1438.00
SLIDE	6,300	6,332	32	6,286	4.50°	16.30°	10.71°	9.69°	10.71°	32.00	46.00	11.30°		0° MTF	20.00	0.00	515.00	1878.00



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

SLIDE & ROTATING REPORT

Customer: **EP ENERGY**
Field: **CROCKETT COUNTY, TEXAS**
County, State: **CROCKETT, TEXAS**

Rig Name & No.: **SIDEWINDER 221**
Well Name & No.: **UNIVERSITY EAST 4411 JH**
Ryan Job #: **7566**

MODE	DEPTH FROM	DEPTH TO	FEET MADE	SURVEY DEPTH	INC	AZI	DLS	BUILD RATE	MOTOR OUTPUT	SLIDE SEEN	SLIDE AHEAD	DLN	SIDE / ROTATE (Based on Formula)	MTF / GTF	WOB (1K lbs)	RPM	PUMP GPM	PUMP PRESSURE
SLIDE	6,332	6,364	32	6,318	9.00°	8.00°	14.35°	14.06°	14.35°	32.00	46.00	11.49°		30° L GTF	26.00	0.00	524.00	1926.00
SLIDE	6,364	6,396	32	6,350	13.50°	2.30°	14.47°	14.06°	14.47°	32.00	46.00	10.82°		30° L GTF	31.00	0.00	482.00	1703.00
Rotate	6,396	6,401	5												25.00	19.00	473.00	1567.00
SLIDE	6,401	6,427	26	6,381	17.30°	356.00°	13.38°	12.26°	13.38°	31.00	41.00	11.14°		20° L GTF	33.00	0.00	465.00	1613.00
Rotate	6,427	6,432	5												20.00	20.00	482.00	1692.00
SLIDE	6,432	6,459	27	6,413	19.70°	351.90°	8.53°	7.50°	10.11°	27.00	41.00	11.97°		20° R GTF	35.00	0.00	477.00	1656.00
SLIDE	6,459	6,491	32	6,445	22.30°	354.10°	8.49°	8.12°	10.06°	27.00	46.00	12.08°		20° R GTF	35.00	0.00	477.00	1656.00
SLIDE	6,491	6,523	32	6,477	25.80°	355.10°	11.01°	10.94°	11.01°	32.00	46.00	12.07°		20° R GTF	45K		477.00	1656.00
SLIDE	6,523	6,554	31	6,508	29.30°	357.90°	12.04°	11.29°	12.04°	31.00	46.00	11.94°		20° R GTF	45K		477.00	1656.00
SLIDE	6,554	6,586	32	6,540	32.60°	1.30°	11.67°	10.31°	11.67°	32.00	46.00	12.24°		0° GTF	45K		477.00	1656.00
SLIDE	6,586	6,618	32	6,572	35.50°	1.20°	9.06°	9.06°	9.06°	32.00	46.00	13.40°		0° GTF	45K		477.00	1656.00
SLIDE	6,618	6,650	32	6,604	37.60°	359.50°	7.28°	6.56°	7.28°	32.00	46.00	15.19°		0° GTF	45K		450.00	1500.00
SLIDE	6,650	6,714	64	6,668	44.60°	360.00°	10.94°	10.94°	10.95°	64.00	46.00	15.77°		0° GTF	45K		450.00	1500.00
SLIDE	6,714	6,745	31	6,699	48.40°	1.00°	12.48°	12.26°	12.48°	31.00	46.00	15.88°		0° GTF	45K		450.00	1500.00
SLIDE	6,745	6,777	32	6,731	52.60°	1.70°	13.23°	13.12°	13.23°	32.00	46.00	16.60°		0° GTF	45K		450.00	1500.00
SLIDE	6,777	6,809	32	6,763	56.50°	2.00°	12.21°	12.19°	12.21°	32.00	46.00	19.70°		0° GTF	45K		450.00	1500.00
SLIDE	6,809	6,840	31	6,794	60.00°	1.40°	11.41°	11.39°	11.41°	31.00	46.00	24.00°		0° GTF	45K		450.00	1500.00
SLIDE	6,840	6,903	63	6,857	68.30°	359.50°	13.45°	13.17°	13.45°	63.00	46.00	NA		0° GTF	45K		450.00	1500.00
SLIDE	6,903	6,935	32	6,889	73.00°	359.00°	14.76°	14.69°	14.76°	32.00	46.00	NA		0° GTF	45K		450.00	1500.00
SLIDE	6,935	6,998	63	6,952	84.00°	359.50°	17.48°	17.46°	17.48°	63.00	46.00		LANDED	0° GTF	45K		450.00	1500.00
Rotate	6,998	7,060	62	7,009	89.80°	0.80°	10.43°	10.18°	10.43°	46.00	0.00				20K	60.00	586.00	2950.00
SLIDE	7,060	7,070	10											0° GTF	20K		586.00	2950.00
Rotate	7,070	7,154	84	7,103	92.80°	0.10°	3.28°	3.19°	10.43°	10.00	0.00				20K	60.00	60.00	586.00
SLIDE	7,154	7,159	5											180° GTF	20K		586.00	2950.00
Rotate	7,159	7,249	90	7,198	93.20°	0.30°	0.42°	0.42°	7.90°	5.00	0.00				60.00	60.00	586.00	2950.00
SLIDE	7,249	7,274	25											170° GTF	20K		586.00	2950.00
Rotate	7,274	7,344	70	7,293	92.50°	0.70°	0.97°	0.74°	4.00°	25.00	0.00				20K	60.00	60.00	586.00
SLIDE	7,344	7,374	30											180° GTF	20K		586.00	2950.00
Rotate	7,374	7,437	63	7,386	91.90°	1.00°	0.72°	0.65°	2.28°	30.00	0.00				20K	60.00	60.00	586.00
SLIDE	7,437	7,477	40											150L° GTF	20K		586.00	2950.00
Rotate	7,477	7,532	55	7,481	90.10°	1.89°	1.83°	1.89°	6.70°	40.00	0.00				20K	60.00	60.00	586.00
SLIDE	7,532	7,552	20											150L° GTF	20K		586.00	2950.00
Rotate	7,552	7,626	74	7,575	90.40°	358.20°	0.91°	0.32°	4.30°	20.00	0.00				25K	60.00	586.00	2950.00
SLIDE	7,626	7,646	20											150R° GTF	20K		586.00	2950.00
Rotate	7,646	7,722	76	7,671	89.60°	359.20°	1.33°	0.83°	6.30°	20.00	0.00				25K	60.00	586.00	2950.00
Rotate	7,722	7,817	95	7,766	91.60°	358.10°	2.40°	2.11°	11.00°	0.00					25K	60.00	586.00	2950.00
SLIDE	7,817	7,857	40											150R° GTF	20K		586.00	2950.00
Rotate	7,857	7,912	55	7,861	90.50°	358.80°	1.37°	1.16°	3.20°	40.00	0.00				25K	60.00	586.00	2950.00
SLIDE	7,912	7,952	40											150R° GTF	20K		586.00	2950.00
Rotate	7,952	8,005	53	7,954	89.80°	1.80°	3.31°	0.75°	7.60°	40.00	0.00				25K	50.00	586.00	2950.00
SLIDE	8,005	8,035	30											170L° GTF	20K		586.00	2950.00
Rotate	8,035	8,100	65	8,049	89.00°	2.30°	0.99°	0.84°	3.00°	30.00	0.00				25K	50.00	586.00	2950.00
SLIDE	8,100	8,130	30											140L° GTF	20K		586.00	2950.00
Rotate	8,130	8,194	64	8,143	87.40°	0.00°	2.98°	1.70°	9.40°	30.00	0.00				20K		586.00	2950.00
Rotate	8,194	8,290	96	8,239	88.70°	0.60°	1.49°	1.36°		0.00	0.00				33.00	54.00	578.00	2941.00
SLIDE	8,290	8,305	15											120° L GTF	46.00	0.00	532.00	2650.00
Rotate	8,305	8,384	79	8,333	90.70°	0.70°	2.13°	2.13°		15.00	0.00				22.00	55.00	565.00	2650.00
SLIDE	8,384	8,414	30											135° L GTF	35.00	0.00	536.00	2584.00
Rotate	8,414	8,479	65	8,428	89.80°	358.00°	3.00°	-0.95°	9.50°	30.00	0.00				23.00	54.00	545.00	2647.00
Rotate	8,479	8,573	94	8,522	91.50°	357.50°	1.89°	1.81°		0.00	0.00				16.00	62.00	549.00	2703.00
SLIDE	8,573	8,603	30											170R° GTF	43.00	0.00	549.00	2730.00
Rotate	8,603	8,669	66	8,618	90.90°	357.60°	0.63°	-0.62°	2.02°	30.00	0.00				23.00	63.00	549.00	2787.00
Rotate	8,669	8,764	95	8,713	91.80°	356.80°	1.27°	0.95°		0.00	0.00				20.00	61.00	524.00	2541.00
SLIDE	8,764	8,796	32											120° R GTF	50.00	0.00	549.00	2839.00
Rotate	8,796	8,860	64	8,809	92.30°	357.80°	1.16°	0.52°	3.48°	32.00	0.00				22.00	61.00	553.00	2774.00
SLIDE	8,860	8,895	35											135° R GTF	53.00	0.00	524.00	2594.00
Rotate	8,895	8,953	58	8,902	93.00°	359.80°	2.28°	0.75°	6.06°	35.00	0.00				17.00	62.00	549.00	2780.00
SLIDE	8,953	8,984	31											165° R GTF	46.00	0.00	545.00	2811.00
Rotate	8,984	8,999	15												13.00	62.00	540.00	2763.00
SLIDE	8,999	9,024	25											165° R GTF	40.00	0.00	536.00	2757.00
Rotate	9,024	9,049	25	8,998	91.80°	0.50°	1.45°	-1.25°	4.49°	31.00	25.00				15.00	63.00	549.00	2809.00
SLIDE	9,049	9,079	30											165° R GTF	39.00	0.00	549.00	2850.00
Rotate	9,079	9,144	65	9,093	88.30°	0.00°	3.72°	-3.68°	6.43°	55.00	0.00				22.00	63.00	545.00	2805.00
Rotate	9,144	9,238	94	9,187	91.10°	1.50°	3.38°	2.98°		0.00	0.00				25.00	64.00	532.00	2693.00
SLIDE	9,238	9,283	45											170° L GTF	40.00	0.00	536.00	2782.00
Rotate	9,283	9,333	50	9,282	89.90°	0.70°	1.52°	-1.26°	3.21°	45.00	0.00				7.00	64.00	532.00	2702.00
SLIDE	9,333	9,378	45											180° L GTF	31.00	0.00	515.00	2605.00
Rotate	9,378	9,427	49	9,376	87.10°	1.10°	3.01°	-2.98°	6.29°	45.00	0.00				19.00	63.00	528.00	2676.00
Rotate	9,427	9,521	94	9,470	87.80°	0.50°	0.98°	0.74°		0.00	0.00				20.00	64.00	553.00	2918.00
SLIDE	9,521	9,551	30											150° R GTF	31.00	0.00	515.00	2605.00
Rotate	9,551	9,617	66	9,566	89.20°	3.70°	3.64°	1.46°		30.00	0.00				20.00	64.00	553.00	2918.00
SLIDE	9,617	9,662	45											150° L GTF	31.00	0.00	515.00	2605.00
Rotate	9,662	9,712	50	9,661	86.90°	1.60°	2.42°	-2.42°	5.00°	45.00	0.00				28.00	60.00	575.00	3200.00
Rotate	9,712	9,808	96	9,757	87.70°	1.50°	2.44°	0.83°	0.00°	0.00	0.00				28.00	60.00	575.00	3200.00
Rotate	9,808	9,902	94	9,851														



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

SLIDE & ROTATING REPORT

Customer: **EP ENERGY**
Field: **CROCKETT COUNTY, TEXAS**
County, State: **CROCKETT, TEXAS**

Rig Name & No.: **SIDEWINDER 221**
Well Name & No.: **UNIVERSITY EAST 4411 JH**
Ryan Job #: **7566**

MODE	DEPTH FROM	DEPTH TO	FEET MADE	SURVEY DEPTH	INC	AZI	DLS	BUILD RATE	MOTOR OUTPUT	SLIDE SEEN	SLIDE AHEAD	DLN	SIDE / ROTATE (Based on Formula)	MTF / GTF	WOB (1K lbs)	RPM	PUMP GPM	PUMP PRESSURE
SLIDE	9,902	9,927	25											140° L GTF	31.00	0.00	515.00	2605.00
Rotate	9,927	9,997	70	9,946	89.50°	0.40°	1.52°	0.84°	5.70°	25.00	0.00				25.00	60.00	575.00	3200.00
Rotate	9,997	10,091	94	10,040	89.90°	0.00°	0.63°	0.43°	0.00°	0.00	0.00				25.00	60.00	575.00	3200.00
Rotate	10,091	10,187	96	10,136	88.30°	357.80°	2.83°	1.67°	0.00°	0.00	0.00				25.00	60.00	575.00	3200.00
Rotate	10,187	10,281	94	10,230	88.10°	357.00°	0.88°	0.21°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
SLIDE	10,281	10,311	30											60° R GTF	31.00	0.00	480.00	2300.00
Rotate	10,311	10,377	66	10,326	90.80°	0.10°	2.48°	2.81°	13.00°	30.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,377	10,471	94	10,420	91.00°	359.70°	0.28°	0.21°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,471	10,566	95	10,515	89.50°	359.10°	1.70°	1.58°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,566	10,660	94	10,609	88.90°	358.60°	0.83°	0.64°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,660	10,754	94	10,703	89.10°	358.90°	0.38°	0.21°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,754	10,847	93	10,796	89.40°	359.30°	0.54°	0.32°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,847	10,941	94	10,890	89.40°	359.20°	0.11°	0.00°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	10,941	11,036	95	10,985	89.70°	359.90°	0.80°	0.32°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	11,036	11,130	94	11,079	89.80°	0.00°	0.15°	0.11°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
Rotate	11,130	11,225	95	11,174	90.20°	359.80°	0.47°	0.42°	0.00°	0.00	0.00				25.00	60.00	480.00	2300.00
SLIDE	11,225	11,255	30											150° R GTF	31.00	0.00	630.00	3400.00
Rotate	11,255	11,319	64	11,268	90.10°	359.90°	0.15°	-0.11°	0.47°	30.00	0.00				30.00	63.00	532.00	3065.00
SLIDE	11,319	11,364	45											150° R GTF	53.00	0.00	528.00	3077.00
Rotate	11,364	11,414	50	11,363	90.00°	2.10°	2.32°	-0.11°	4.90°	45.00	0.00				18.00	63.00	536.00	3064.00
SLIDE	11,414	11,459	45											170° L GTF	67.00	0.00	532.00	3053.00
Rotate	11,459	11,509	50	11,458	89.80°	2.90°	0.87°	-0.21°	1.84°	45.00	0.00				16.00	63.00	528.00	3270.00
SLIDE	11,509	11,559	50											120° L GTF	58.00	0.00	549.00	3221.00
Rotate	11,559	11,604	45	11,553	89.80°	2.90°	0.00°	0.00°	0.00°	50.00	0.00				36.00	63.00	482.00	2360.00
SLIDE	11,604	11,639	35											120° L GTF	53.00	0.00	469.00	2484.00
Rotate	11,639	11,659	20												14.00	63.00	490.00	2751.00
SLIDE	11,659	11,697	38	11,646	89.90°	2.80°	0.15°	0.11°	0.40°	35.00	38.00				50.00	0.00	490.00	2683.00
SLIDE	11,697	11,769	72											120° L GTF	56.00	0.00	482.00	2591.00
Rotate	11,769	11,791	22	11,740	90.50°	0.50°	2.53°	0.64°	2.94°	81.00	29.00				15.00	63.00	490.00	2658.00
SLIDE	11,791	11,855	64											180° L GTF	73.00	0.00	494.00	2685.00
Rotate	11,855	11,886	31	11,835	88.90°	0.40°	1.69°	-1.68°	2.20°	73.00	20.00				24.00	63.00	498.00	2854.00
SLIDE	11,886	11,980	94	11,929	84.10°	359.30°	5.24°	-5.11°	7.98°	63.00	51.00				50.00	0.00	482.00	2642.00
Rotate	11,980	12,075	95	12,024	81.10°	358.60°	3.24°	3.16°	6.00°	51.00	0.00				24.00	63.00	498.00	2854.00
SLIDE	12,075	12,105	30											20° R GTF	50.00	0.00	482.00	2642.00
Slide	12,105	12,125	20											20° R GTF	35.00	63.00	540.00	3250.00
Rotate	12,125	12,169	44	12,118	82.80°	357.60°	2.09°	1.81°	4.00°	50.00	0.00				35.00	45.00	540.00	3250.00
Slide	12,169	12,224	55											20° R GTF	50.00	0.00	482.00	2642.00
Rotate	12,224	12,244	20												35.00	60.00	540.00	3250.00
SLIDE	12,244	12,264	20	12,213	85.90°	357.40°	3.27°	3.26°	6.00°	51.00	24.00				50.00	0.00	482.00	2642.00
SLIDE	12,264	12,304	40											20° R GTF	50.00	0.00	482.00	2642.00
Rotate	12,304	12,358	54	12,307	89.00°	359.30°	3.87°	3.30°	9.00°	40.00	0.00				35.00	60.00	540.00	3250.00
Rotate	12,358	12,453	95	12,402	91.80°	359.90°	3.01°	2.95°	9.00°	0.00	0.00				35.00	60.00	540.00	3250.00
Rotate	12,453	12,548	95	12,497	91.40°	358.50°	1.53°	0.42°	0.00	0.00	0.00				35.00	60.00	540.00	3250.00
Rotate	12,548	12,644	96	12,593	90.40°	356.80°	2.05°	1.04°	0.00°	0.00	0.00				35.00	60.00	540.00	3250.00
SLIDE	12,644	12,674	30							0.00	0.00			70° R GTF	50.00	0.00	482.00	2642.00
Rotate	12,674	12,739	65	12,688	89.80°	357.10°	0.71°	0.63°	2.00°	30.00	0.00				35.00	60.00	540.00	3250.00
SLIDE	12,739	12,789	50							0.00	0.00			70° R GTF	50.00	0.00	482.00	2642.00
Rotate	12,789	12,834	45	12,783	90.40°	358.00°	1.14°	0.63°	2.00°	50.00	0.00				35.00	60.00	540.00	3250.00
SLIDE	12,834	12,874	40							0.00	0.00			70° R GTF	50.00	0.00	482.00	2642.00
Rotate	12,874	12,929	55	12,878	89.50°	359.30°	1.66°	0.95°	3.15°	50.00	0.00				35.00	60.00	540.00	3250.00
SLIDE	12,929	12,979	50											50° R GTF	52.00	0.00	532.00	3309.00
Rotate	12,979	13,024	45	12,973	93.10°	359.20°	3.79°	3.79°	8.18°	44.00	6.00				11.00	45.00	486.00	2908.00
SLIDE	13,024	13,074	50											140° R GTF	52.00	0.00	540.00	3394.00
Rotate	13,074	13,119	45	13,068	93.50°	0.60°	1.53°	0.42°	2.91°	50.00	6.00				23.00	45.00	473.00	2812.00
SLIDE	13,119	13,151	32											140° R GTF	22.00	0.00	507.00	3082.00
Rotate	13,151	13,186	35												32.00	63.00	507.00	3094.00
SLIDE	13,186	13,215	29	13,164	94.30°	1.40°	1.18°	0.83°	2.98°	38.00	29.00				25.00	0.00	536.00	3455.00
Rotate	13,215	13,235	20												11.00	63.00	507.00	3107.00
SLIDE	13,235	13,268	33											180° R GTF	29.00	0.00	545.00	3524.00
Rotate	13,268	13,310	42	13,259	91.60°	2.60°	3.11°	-2.84°	5.57°	53.00	9.00				12.00	63.00	494.00	3110.00
SLIDE	13,310	13,342	32											170° L GTF	41.00	0.00	540.00	3452.00
Rotate	13,342	13,405	63	13,354	88.20°	1.50°	3.76°	-3.58°	8.71°	41.00	0.00				19.00	62.00	486.00	2944.00
Rotate	13,405	13,499	94	13,448	91.10°	1.50°	3.09°	3.09°	0.00	0.00	0.00				19.00	62.00	486.00	2944.00
SLIDE	13,499	13,529	30											120° R GTF	41.00	0.00	540.00	3452.00
Rotate	13,529	13,593	64	13,542	91.00°	1.80°	0.34°	0.11°	1.00°	30.00	0.00				35.00	62.00	460.00	2944.00
Rotate	13,593	13,687	94	13,636	90.30°	359.60°												

Report #: 2

Date: 2-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
 Field: **CROCKETT COUNTY, TEXAS**
 County, State: **CROCKETT, TEXAS**
 AFE or PO #: **160579**

Customer: **EP ENERGY**
 Well Name & No.: **UNIVERSITY EAST 4411 JH**
 Block or Section: **SECTION 16 BLOCK 44**
 Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: 935
 24:00 Depth: 1177

Footage Today: 242
 Current Run Ftg: 242

Drig Hrs Today: 1.40
 Run Drig Hrs: 1.40

ROP Today: 172.86
 Run Avg. ROP: 172.86

Last Casing Set: 9 5/8 INCH
 Depth: 935 FT

PUMP Data Total Gals/Min = 594				MUD DATA				Previous	Current	MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			BHA #	1	BHA #	Run No.	1	
Liner (in)	6	6		Sample	IN						MOTOR	Size (in.)	6 3/4
%	95	95		Time	20:00						UBHO	Type	7 / 8 5.0 Stg w/ 8 1/2" STAB
Vol (gps)	4.18	4.18	0.00	Wt.	8.90 @ 85 °F						NMDC MWD	Serial No.	675 36 219
SPM	71	71		VIS	63 @ 85 °F						NMDC SPACER	Tool Deflection	1.5 °FBH
DRILLING PARAMETERS				PV	16						XO	Avg. Diff. Press.	200
ST. WT. ROT 1000's:	86			YP	20						3 - 6 1/2" DC	Daily Drill Hrs.	1.40
P/U WT. 1000's:	86			WL	8.8 @ 250 °F						XO	Daily Circ. Hrs.	0.90
S/O WT. 1000's:	72			CL	57,000							Daily Total Hrs:	2.30
WOB 1000's:	27			Gels	16 / 21 / 23							Acc. Drill Hrs.	1.40
ROTARY RPM:	60			% Oil	67							Acc. Circ. Hrs.	0.90
MOTOR RPM:	173			% Solids	6.4							Depth In	935
TOTAL Bit RPM	233			% Sand	NOT REPORTED							Depth Out	
ROT TQ. OFF BTM:	300			PH	NOT REPORTED							LIH Hrs.	10:00
ROT TQ. ON BTM:	3000			Temp F	NOT REPORTED							Acc. LIH Hrs.	10.00
Current Mag Dec:	6.55 °			MWD F	100 °F			BHA WT				Acc. Hrs Cir/Drig	2.30
Pulse Hight	85			GPM	595			BELOW JARS				Total K Revs	19.57
"G" Totals	1.001			PSI	1750							Jar # HRS	0

BIT DATA														DULL CONDITION			
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935											

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	14:00	14:00	935	935	0	S	STANDBY. NIPPLE UP. PRESSURE TEST BOP				STANDBY			
14:00	15:05	1:05				6.G	P/U BHA # 1 & SCRIBE				NIPPLE UP			
15:05	15:20	0:15				6.G	LAY DOWN UBHO				PRESSURE TEST BOP			
15:20	15:40	0:20				6.G	P/U NEW UBHO AND SCRIBE				PICK UP VERTICAL TOOLS			
15:40	16:00	0:20				6.G	PICK UP SPACER MONEL				TIH			
16:00	18:10	2:10				6.A	TIH				DRILL FLOAT, CEMENT AND SHOE			
18:10	18:25	0:15				3.A	TAG CEMENT @ 909' DISPLACE AND DRILL SHOE TRACK.				DRILL AHEAD IN VERTICAL			
18:25	18:30	0:05	935	948	13	2.A	ROTATE RPM: 75 WOB: 20K DIFF: 600 GPM: 586							
18:30	21:45	3:15				8	REPAIR WEIGHT INDICATOR							
21:45	21:55	0:10				O	CONNECTION @ 902' AND SET CROWN O MATIC							
21:55	22:00	0:05				5.A	SHALLOW PMP TEST MWD AND MOTOR				Estimated Daily Charges			
22:00	22:15	0:15	948	997	49	2.A	ROTATE: RPM: 60; WOB: 11K; DIFF: 227; GPM: 603				Description	Cost		
22:15	22:20	0:05				10	CHECK SHOT @ 951 INC: 0.3 ° AZM: 61.7 ° (QUAL OUT)							
22:20	22:25	0:05	997	1012	15	2.A	ROTATE: RPM: 63; WOB: 16K; DIFF: 244; GPM: 586							
22:25	22:30	0:05				10	CHECK SHOT @ 966 INC: 0.4 ° AZM: 28.7 ° DL: ° TEMP: °							
22:30	22:40	0:10	1012	1027	15	2.B	SLIDE @: 113 ° MTF; WOB: 7K; DIFF: 104; GPM: 578							
22:40	22:50	0:10	1027	1044	17	2.A	ROTATE: RPM: 60; WOB: 14K; DIFF: 177; GPM: 595							
22:50	23:00	0:10				10	C/S @ 998 INC: 0.7 ° AZM: 77.2 ° DL: 0.54 ° TEMP: 95 °							
23:00	23:25	0:25	1044	1107	63	2.A	ROTATE: RPM: 61; WOB: 27K; DIFF: 170; GPM: 595							
23:25	23:30	0:05				O	TAKE PMP NO 1 OFF LINE							
23:30	23:35	0:05				10	CHECK SHOT @ 1,061 INC: 1.8 ° AZM: 93.1 ° DL: ° TEMP: °							
23:35	23:40	0:05	1107	1139	32	2.A	ROTATE: RPM: 61; WOB: 20K; DIFF: 150; GPM: 503							
23:40	23:50	0:10				10	C/S @ 1,093 INC: 1.9 ° AZM: 95.4 ° DL: 1.32 ° TEMP: 100 °				Estimated Daily Cost (USD)	\$ -		
23:50	23:59	0:09	1139	1177	38	2.A	ROTATE: RPM: 61; WOB: 34K; DIFF: 521; GPM: 511				Accumulated Cost (USD)	\$ -		
											Company Representative (s)			
											JEFF WEST		RODNEY SHULTZ	
											DAVE WALDRUM		MICHEAL AARON	
											RYAN Directional Representative (s)			
											JERRY HAMPTON		JARVIS LEHMANN	
											RYAN MWD Representative (s)			
											JAMIE FRICK		SAMBA JARJU	
											24 Hour Breakdown			
							Ftg Rot.	227	Time Rot.	1.20				
							Ftg Orient	15	Time Orient	0.20				
							Rot. ROP	189.17	Orient ROP	75.00				

Report #: 3

Date: 3-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 1177
 24:00 Depth: 3042

Footage Today: 1865
 Current Run Ftg: 2107

Drig Hrs Today: 7.90
 Run Drig Hrs: 9.30

ROP Today: 236.08
 Run Avg. ROP: 226.56

Last Casing Set: 9 5/8 INCH
 Depth: 935 FT

PUMP Data Total Gals/Min = 586				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			BHA #	1	BHA #	PDC BIT	Run No.	1		
Liner (in)	6	6		Sample	IN						MOTOR	Size (in.)	6 3/4		
%	95	95		Time	20:00						UBHO	Type	7 / 8 5.0 Stg w/ 8 1/2" STAB		
Vol (gals)	4.18	4.18	0.00	Wt.	8.90 @ 85° F						NMDC MWD	Serial No.	675 36 219		
SPM	70	70		VIS	63 @ 85° F						NMDC SPACER	Tool Deflection	1.5° FBH		
DRILLING PARAMETERS				PV	16						XO	Avg. Diff. Press.	600		
ST. WT. ROT 1000's:	86			YP	20						3 - 6 1/2" DC	Daily Drill Hrs.	7.90		
P/U WT. 1000's:	86			WL	8.8 @ 250° F						XO	Daily Circ. Hrs.	2.80		
S/O WT. 1000's:	72			CL	57,000							Daily Total Hrs:	10.70		
WOB 1000's:	27			Gels	16 / 21 / 23							Acc. Drill Hrs.	9.30		
ROTARY RPM:	60			% Oil	67							Acc. Circ. Hrs.	3.70		
MOTOR RPM:	173			% Solids	6.4							Depth In	935		
TOTAL Bit RPM	233			% Sand	NOT REPORTED							Depth Out			
ROT TQ. OFF BTM:	300			PH	NOT REPORTED							LIH Hrs.	11:55		
ROT TQ. ON BTM:	3000			Temp F	NOT REPORTED							Acc. LIH Hrs.	21.92		
Current Mag Dec:	6.55°			MWD F	100° F			BHA WT				Acc. Hrs Cir/Drig	13.00		
Pulse Hight	85			GPM	595			BELOW JARS				Total K Revs	130.01		
"G" Totals	1.001			PSI	1750						Jar # HRS	0			

BIT DATA																
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION						
										IR	OR	DC	LOC	B/S	G/16"	OC
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935										

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:45	0:45	1177	1329	152	2.A	ROTATE: RPM: 61; WOB: 34K; DIFF: 521; GPM: 511							
0:45	1:00	0:15				10	C/S @ 1.283 INC: 2.0° AZM: 96.8° DL: 0.06° TEMP: 104°				DRILL AHEAD IN VERTICAL			
1:00	1:20	0:20	1329	1425	96	2.A	ROTATE: RPM: 61; WOB: 16K; DIFF: 375; GPM: 498							
1:20	1:25	0:05				10	SPR							
1:25	1:50	0:25	1425	1520	95	2.A	ROTATE: RPM: 61; WOB: 16K; DIFF: 375; GPM: 498							
1:50	2:00	0:10				10	C/S @ 1.474 INC: 2.2° AZM: 102.3° DL: 0.15° TEMP: 105°							
2:00	2:10	0:10	1520	1532	12	2.B	SLIDE @: 280° MTF; WOB: 9K; DIFF: 159; GPM: 494							
2:10	2:40	0:30	1532	1615	83	2.A	ROTATE: RPM: 61; WOB: 19K; DIFF: 451; GPM: 582							
2:40	3:15	0:35				8	REPAIR HARDLINE LEAK							
3:15	3:35	0:20	1615	1710	95	2.A	ROTATE: RPM: 61; WOB: 19K; DIFF: 451; GPM: 582							
3:35	3:45	0:10				10	C/S @ 1.664 INC: 0.7° AZM: 112.2° DL: 0.80° TEMP: 105°				Estimated Daily Charges			
3:45	3:50	0:05	1710	1738	28	2.A	ROTATE: RPM: 61; WOB: 19K; DIFF: 61; GPM: 603				Description		Cost	
3:50	4:25	0:35				8	REPAIR HARDLINE LEAK							
4:25	5:00	0:35	1738	1900	162	2.A	ROTATE: RPM: 61; WOB: 19K; DIFF: 61; GPM: 603							
5:00	5:15	0:15				10	C/S @ 1.854 INC: 1.0° AZM: 101.2° DL: 0.18° TEMP: 109°							
5:15	5:55	0:40	1900	2089	189	2.A	ROTATE: RPM: 61; WOB: 24K; DIFF: 531; GPM: 578							
5:55	6:10	0:15				10	C/S @ 2.043 INC: 1.1° AZM: 110.3° DL: 0.10° TEMP: 113°							
6:10	7:15	1:05	2089	2280	191	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
7:15	7:25	0:10				10	C/S @ 2.234 INC- 1.2° AZM- 107.9° DL- .06° TEMP- 116°							
7:25	7:45	0:20	2280	2375	95	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
7:45	7:55	0:10				10	C/S @ 2.329 INC- 1.5° AZM- 115.9° DL- .37° TEMP- 118°							
7:55	8:20	0:25	2375	2471	96	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
8:20	8:30	0:10				10	C/S @ 2.425 INC- 1.5° AZM- 114.3° DL- .04° TEMP- 120°				Estimated Daily Cost (USD) \$ -			
8:30	8:40	0:10	2471	2486	15	2.B	SLIDE @ 113° MTF WOB 15K DIFF- 250 GPM- 586				Accumulated Cost (USD) \$ -			
8:40	9:05	0:25	2486	2567	81	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				Company Representative (s)			
9:05	9:15	0:10				10	C/S @ 2.521 INC- 3.6° AZM- 116.5° DL- 2.19° TEMP- 120°				JEFF WEST		RODNEY SHULTZ	
9:15	9:25	0:10	2567	2577	10	2.B	SLIDE @ 0° GTF WOB 15K DIFF- 250 GPM- 586				DAVE WALDRUM		MICHEAL AARON	
9:25	9:50	0:25	2577	2662	85	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				RYAN Directional Representative (s)			
9:50	10:15	0:25				10	C/S @ 2.616 INC- 5.5° AZM- 120.9° DL- 2.03° TEMP- 120°				JERRY HAMPTON		JARVIS LEHMANN	
10:15	10:30	0:15	2662	2758	96	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
10:30	10:45	0:15				10	C/S @ 2.712 INC- 5.5° AZM- 119.4° DL- .15° TEMP- 120°				RYAN MWD Representative (s)			
10:45	11:00	0:15	2758	2853	95	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				JAMIE FRICK		SAMBA JARJU	
11:00	11:10	0:10				10	C/S @ 2.807 INC- 4.8° AZM- 120° DL- .74° TEMP- 120°							
11:10	11:25	0:15	2853	2947	94	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				24 Hour Breakdown			
11:25	11:35	0:10				10	C/S @ 2.901 INC- 4.2° AZM- 121.1° DL- .64° TEMP- 120°				Ftg Rot. 1818		Time Rot. 7.30	
11:35	11:40	0:05	2947	2957	10	2.B	SLIDE @ 10° L GTF WOB 15K DIFF- 250 GPM- 586				Ftg Orient 47		Time Orient 0.60	
11:40	11:55	0:15	2957	3042	85	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				Rot. ROP 249.04		Orient ROP 78.33	

Report #: **3A**
 Date: **3-Jun-14**



RYAN DIRECTIONAL SERVICES, INC.
 A NABORS COMPANY

Ryan Job # **7566**

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
 Field: **CROCKETT COUNTY, TEXAS**
 County, State: **CROCKETT, TEXAS**
 AFE or PO #: **160579**

Customer: **EP ENERGY**
 Well Name & No.: **UNIVERSITY EAST 4411 JH**
 Block or Section: **SECTION 16 BLOCK 44**
 Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: **3042** Footage Today: **1263** Drlg Hrs Today: **3.80** ROP Today: **332.37** Last Casing Set: **9 5/8 INCH**
 24:00 Depth: **4305** Current Run Ftg: **3370** Run Drlg Hrs: **13.10** Run Avg. ROP: **257.25** Depth: **935 FT**

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA	CURRENT
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	BHA #	1	BHA #	Run No.
Liner (in)	6	6		Sample	IN				MOTOR
%	95	95		Time	17:00				UBHO
Vol (gps)	4.18	4.18	0.00	Wt.	8.80 @ 88° F				NMDC MWD
SPM	70	70		VIS	51 @ 88° F				NMDC SPACER
DRILLING PARAMETERS				PV	15				XO
ST. WT. ROT 1000's:	152			YP	16				3 - 6 1/2" DC
P/U WT. 1000's:	153			WL	8.8 @ 250° F				XO
S/O WT. 1000's:	139			CL	64,000				
WOB 1000's:	35			Gels	13 / 17 / 20				
ROTARY RPM:	60			% Oil	68				
MOTOR RPM:	173			% Solids	5				
TOTAL Bit RPM	233			% Sand	NOT REPORTED				
ROT TQ. OFF BTM:	1600			PH	NOT REPORTED				
ROT TQ. ON BTM:	13900			Temp F	NOT REPORTED				
Current Mag Dec:	6.55°			MWD F	88° F				
Pulse Hight	85			GPM	595				
"G" Totals	1,001			PSI	2150				

BIT DATA														DULL CONDITION			
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935											

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
11:55	12:10	0:15				10	C/S @ 2,996 INC- 5.2° AZM- 114° DL- 1.22° TEMP- 120°							
12:10	12:25	0:15	3042	3137	95	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				DRILL AHEAD IN VERTICAL			
12:25	12:35	0:10				10	C/S @ 3,091 INC- 4.7° AZM- 118.2° DL- .65° TEMP- 120°							
12:35	12:45	0:10	3137	3233	96	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
12:45	12:55	0:10				10	C/S @ 3,187 INC- 3.8° AZM- 115.4° DL- ° TEMP- 120°							
12:55	13:05	0:10	3233	3253	20	2.B	SLIDE @ 0° GTF WOB 15K DIFF- 250 GPM- 586							
13:05	13:15	0:10	3253	3329	76	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
13:15	13:25	0:10				10	C/S @ 3,283 INC- 5.5° AZM- 121.2° DL- 1.84° TEMP- 120°							
13:25	13:35	0:10	3329	3344	15	2.B	SLIDE @ 20° L GTF WOB 15K DIFF- 250 GPM- 586							
13:35	13:40	0:05	3344	3425	81	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
13:40	13:50	0:10				10	C/S @ 3,379 INC- 7.8° AZM- 116.7° DL- 2.45° TEMP- 122°				Estimated Daily Charges			
13:50	14:00	0:10	3425	3520	95	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				Description		Cost	
14:00	14:10	0:10				10	C/S @ 3,474 INC- 6.5° AZM- 119.8° DL- 1.43° TEMP- 122°							
14:10	14:15	0:05	3520	3530	10	2.B	SLIDE @ 30° L GTF WOB 15K DIFF- 250 GPM- 586							
14:15	14:25	0:10	3530	3615	85	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
14:25	14:35	0:10				10	C/S @ 3,569 INC- 6.5° AZM- 118.° DL- .21° TEMP- 122°							
14:35	14:45	0:10	3615	3635	20	2.B	SLIDE @ 10° L GTF WOB 15K DIFF- 250 GPM- 586							
14:45	14:50	0:05	3635	3709	74	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
14:50	15:00	0:10				10	C/S @ 3,663 INC- 8.8° AZM- 111.8° DL- 2.60° TEMP- 122°							
15:00	15:10	0:10	3709	3805	96	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586							
15:10	15:20	0:10				10	C/S @ 3,759 INC- 7.1° AZM- 110.° DL- 1.79° TEMP- 122°							
15:20	15:30	0:10	3805	3820	15	2.B	SLIDE @ 10° R GTF WOB 15K DIFF- 250 GPM- 586							
15:30	15:35	0:05	3820	3900	80	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				Estimated Daily Cost (USD)		\$ -	
15:35	15:45	0:10				10	C/S @ 3,854 INC- 7.° AZM- 115° DL- .65° TEMP- 122°				Accumulated Cost (USD)		\$ -	
15:45	15:50	0:05	3900	3910	10	2.B	SLIDE @ 10° L GTF WOB 15K DIFF- 250 GPM- 586				Company Representative (s)			
15:50	16:00	0:10	3910	3996	86	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				JEFF WEST		RODNEY SHULTZ	
16:00	16:10	0:10				10	C/S @ 3,950 INC- 8.3° AZM- 114.6° DL- 1.36° TEMP- 122°				DAVE WALDRUM		MICHEAL AARON	
16:10	16:20	0:10	3996	4089	93	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				RYAN Directional Representative (s)			
16:20	16:30	0:10				10	C/S @ 4,043 INC- 6.2° AZM- 118.9° DL- 2.33° TEMP- 122°				JERRY HAMPTON		JARVIS LEHMANN	
16:30	16:50	0:20	4089	4109	20	2.B	SLIDE @ 20° L GTF WOB 15K DIFF- 250 GPM- 586				JAMES RAWLINSON			
16:50	17:00	0:10	4109	4184	75	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				RYAN MWD Representative (s)			
17:00	17:15	0:15				7	RIG SERVICE				JAMIE FRICK		SAMBA JARJU	
17:15	17:25	0:10				10	C/S @ 4138 INC- 7.3° AZM- 112.5° DL- 1.40° TEMP- 122°							
17:25	17:40	0:15	4184	4199	15	2.B	SLIDE @ HS GTF WOB 15K DIFF- 250 GPM- 586				24 Hour Breakdown			
17:40	17:50	0:10	4199	4280	81	2.A	ROTATE RPM- 60 WOB- 30K DIFF- 600 GPM 586				Ftg Rot. 1113		Time Rot. 2.00	
17:50	18:00	0:10				10	C/S @ 4234 INC- 7.1° AZM- 112.7° DL- 0.21° TEMP- 122°				Ftg Orient 150		Time Orient 1.80	
18:00	18:25	0:25	4280	4305	25	2.B	SLIDE @ HS GTF WOB 15K DIFF- 250 GPM- 586				Rot. ROP 556.50		Orient ROP 83.33	

Report #: 3B

Date: 3-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 4305 Footage Today: 804 Drlg Hrs Today: 4.20 ROP Today: 191.43 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 5109 Current Run Ftg: 4174 Run Drlg Hrs: 17.30 Run Avg. ROP: 241.27 Depth: 935 FT

PUMP Data Total Gals/Min = 586				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			BHA #	1	BHA #	PDC BIT	Run No.	1		
Liner (in)	6	6		Sample	IN						MOTOR	Size (in.)	6 3/4		
%	95	95		Time	17:00						UBHO	Type	7 / 8 5.0 Stg w/ 8 1/2" STAB		
Vol (gps)	4.18	4.18	0.00	Wt.	8.80 @ 88° F						NMDC MWD	Serial No.	675 36 219		
SPM	70	70		VIS	51 @ 88° F						NMDC SPACER	Tool Deflection	1.5° FBH		
DRILLING PARAMETERS				PV	15						XO	Avg. Diff. Press.	650		
ST. WT. ROT 1000's:	152			YP	16						3 - 6 1/2" DC	Daily Drill Hrs.	4.20		
P/U WT. 1000's:	153			WL	8.8 @ 250° F						XO	Daily Circ. Hrs.	1.30		
S/O WT. 1000's:	139			CL	64,000							Daily Total Hrs:	5.50		
WOB 1000's:	35			Gels	13 / 17 / 20							Acc. Drill Hrs.	17.30		
ROTARY RPM:	60			% Oil	68							Acc. Circ. Hrs.	7.40		
MOTOR RPM:	173			% Solids	5							Depth In	935		
TOTAL Bit RPM	233			% Sand	NOT REPORTED							Depth Out			
ROT TQ. OFF BTM:	1600			PH	NOT REPORTED							LIH Hrs.	5:35		
ROT TQ. ON BTM:	13900			Temp F	NOT REPORTED							Acc. LIH Hrs.	34.00		
Current Mag Dec:	6.55°			MWD F	88° F			BHA WT				Acc. Hrs Cir/Drilg	24.70		
Pulse Hight	85			GPM	595			BELOW JARS				Total K Revs	241.85		
"G" Totals	1.001			PSI	2150						Jar # HRS	0			

BIT DATA																	
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935											

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
18:25	18:40	0:15	4305	4375	70	2.A	ROTATE: RPM: 62; WOB: 36K; DIFF: 700; GPM: 598							
18:40	18:50	0:10				10	C/S @ 4,329 INC - ° AZM - ° DL - ° TEMP- 122°				DRILL AHEAD IN VERTICAL			
18:50	19:05	0:15	4375	4470	95	2.A	ROTATE: RPM: 62; WOB: 30K; DIFF: 700; GPM: 586							
19:05	19:10	0:05				10	C/S @ 4,424 INC: 7.0° AZM: 107.4° DL: 1.61° TEMP: 125°							
19:10	19:40	0:30	4470	4495	25	2.B	SLIDE @: 30° R GTF; WOB: 3K; DIFF: 40; GPM: 586							
19:40	19:50	0:10	4495	4565	70	2.A	ROTATE: RPM: 62; WOB: 22K; DIFF: 569; GPM: 591							
19:50	20:00	0:10				10	C/S @ 4,519 INC: 8.1° AZM: 108.2° DL: 1.16° TEMP: 125°							
20:00	20:10	0:10	4565	4661	96	2.A	ROTATE: RPM: 61; WOB: 26K; DIFF: 736; GPM: 586							
20:10	20:20	0:10				10	C/S @ 4,615 INC: 6.5° AZM: 105.5° DL: 1.70° TEMP: 127°							
20:20	20:50	0:30	4661	4688	27	2.B	SLIDE @: 35° R GTF; WOB: 6K; DIFF: 98; GPM: 599							
20:50	21:00	0:10	4688	4755	67	2.A	ROTATE: RPM: 61; WOB: 21K; DIFF: 684; GPM: 612				Estimated Daily Charges			
21:00	21:10	0:10				10	C/S @ 4,709 INC: 8.5° AZM: 110.8° DL: 2.25° TEMP: 127°				Description		Cost	
21:10	21:30	0:20	4755	4851	96	2.A	ROTATE: RPM: 42; WOB: 19K; DIFF: 639; GPM: 498							
21:30	21:40	0:10				10	C/S @ 4,805 INC: 7.2° AZM: 111.8° DL: 1.36° TEMP: 127°							
21:40	22:20	0:40	4851	4876	25	2.B	SLIDE @: 10° R GTF; WOB: 7K; DIFF: 77; GPM: 574							
22:20	22:50	0:30	4876	4947	71	2.A	ROTATE: RPM: 41; WOB: 20K; DIFF: 550; GPM: 461							
22:50	22:55	0:05				5.A	SPR							
22:55	23:05	0:10				10	C/S @ 4,901 INC: 7.9° AZM: 107.7° DL: 0.92° TEMP: 127°							
23:05	23:30	0:25	4947	5042	95	2.A	ROTATE: RPM: 41; WOB: 17K; DIFF: 685; GPM: 448							
23:30	23:40	0:10				10	C/S @ 4,996 INC: 7.1° AZM: 104.5° DL: 0.95° TEMP: 125°							
23:40	23:59	0:19	5042	5109	67	2.A	ROTATE: RPM: 41; WOB: 16K; DIFF: 649; GPM: 494							
											Estimated Daily Cost (USD)		\$ -	
											Accumulated Cost (USD)		\$ -	
											Company Representative (s)			
											JEFF WEST		RODNEY SHULTZ	
											DAVE WALDRUM		MICHEAL AARON	
											RYAN Directional Representative (s)			
											JERRY HAMPTON		JARVIS LEHMANN	
											JAMES RAWLINSON			
											RYAN MWD Representative (s)			
											JAMIE FRICK		SAMBA JARJU	
											24 Hour Breakdown			
							Ftg Rot.	727	Time Rot.	2.60				
							Ftg Orient	77	Time Orient	1.70				
							Rot. ROP	279.62	Orient ROP	45.29				

Report #: 4

Date: 4-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 5109 Footage Today: 1139 Drlg Hrs Today: 9.30 ROP Today: 122.47 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 6248 Current Run Ftg: 5313 Run Drlg Hrs: 26.60 Run Avg. ROP: 199.74 Depth: 935 FT

PUMP Data Total Gals/Min = 452				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			BHA #	1	BHA #	PDC BIT	Run No.	1		
Liner (in)	6	6		Sample	IN						MOTOR	Size (in.)	6 3/4		
%	95	95		Time	17:00						UBHO	Type	7 / 8 5.0 Stg w/ 8 1/2" STAB		
Vol (gps)	4.18	4.18	0.00	Wt.	8.80 @ 88° F						NMDC MWD	Serial No.	675 36 219		
SPM	54	54		VIS	51 @ 88° F						NMDC SPACER	Tool Deflection	1.5° FBH		
DRILLING PARAMETERS				PV	15						XO	Avg. Diff. Press.	600		
ST. WT. ROT 1000's:	160			YP	16						3 - 6 1/2" DC	Daily Drill Hrs.	9.30		
P/U WT. 1000's:	163			WL	8.8 @ 250° F						XO	Daily Circ. Hrs.	3.30		
S/O WT. 1000's:	145			CL	64,000							Daily Total Hrs:	12.60		
WOB 1000's:	20			Gels	13 / 17 / 20							Acc. Drill Hrs.	26.60		
ROTARY RPM:	40			% Oil	68							Acc. Circ. Hrs.	10.70		
MOTOR RPM:	131			% Solids	5							Depth In	935		
TOTAL Bit RPM	171			% Sand	NOT REPORTED							Depth Out	6248		
ROT TQ. OFF BTM:	1600			PH	NOT REPORTED							LIH Hrs.	18:55		
ROT TQ. ON BTM:	13900			Temp F	NOT REPORTED							Acc. LIH Hrs.	52.92		
Current Mag Dec:	6.55°			MWD F	129° F			BHA WT				Acc. Hrs Cir/Drilg	37.30		
Pulse Hight	85			GPM	450			BELOW JARS				Total K Revs	272.92		
"G" Totals	1.001			PSI	1500							Jar # HRS	0		

BIT DATA																DULL CONDITION					
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD				
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935	5313	26.6	6248	1	2	CT	G	X	I	NO	TD				

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations							
0:00	0:10	0:10	5109	5137	28	2.A	ROTATE: RPM: 41; WOB: 16K; DIFF: 649; GPM: 494											
0:10	0:20	0:10				10	C/S @ 5,091 INC: 6.4° AZM: 102.2° DL: 0.79° TEMP: 125°				DRILL AHEAD IN VERTICAL							
0:20	0:55	0:35	5137	5232	95	2.A	ROTATE: RPM: 41; WOB: 19K; DIFF: 419; GPM: 461											
0:55	1:00	0:05				10	C/S @ 5,186 INC: 5.5° AZM: 98.8° DL: 1.02° TEMP: 125°											
1:00	1:35	0:35	5232	5328	96	2.A	ROTATE: RPM: 42; WOB: 17K; DIFF: 536; GPM: 448											
1:35	1:45	0:10				10	C/S @ 5,282 INC: 4.7° AZM: 94.2° DL: 0.94° TEMP: 123°											
1:45	2:20	0:35	5328	5353	25	2.B	SLIDE @: 80° R GTF; WOB: 7K; DIFF: 125; GPM: 477											
2:20	2:50	0:30	5353	5422	69	2.A	ROTATE: RPM: 42; WOB: 16K; DIFF: 586; GPM: 469											
2:50	2:55	0:05				5.A	SPR											
2:55	3:05	0:10				10	C/S @ 5,376 INC: 5.3° AZM: 106.8° DL: 1.33° TEMP: 123°											
3:05	3:35	0:30	5422	5517	95	2.A	ROTATE: RPM: 41; WOB: 18K; DIFF: 659; GPM: 469				Estimated Daily Charges							
3:35	3:45	0:10				10	C/S @ 5,471 INC: 4.4° AZM: 102.7° DL: 1.01° TEMP: 125°				Description		Cost					
3:45	4:15	0:30	5517	5611	94	2.A	ROTATE: RPM: 41; WOB: 16K; DIFF: 581; GPM: 477											
4:15	4:20	0:05				10	C/S @ 5,565 INC: 4.0° AZM: 99.5° DL: 0.49° TEMP: 125°											
4:20	5:05	0:45	5611	5705	94	2.A	ROTATE: RPM: 41; WOB: 11K; DIFF: 446; GPM: 461											
5:05	5:15	0:10				10	C/S @ 5,659 INC: 3.3° AZM: 99.8° DL: 0.74° TEMP: 125°											
5:15	5:55	0:40	5705	5800	95	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 477; GPM: 448											
5:55	6:05	0:10				10	C/S @ 5,754 INC: 3.0° AZM: 98.4° DL: 0.33° TEMP: 125°											
6:05	6:45	0:40	5800	5820	20	2.B	SLIDE @: 160° R GTF; WOB: 7K; DIFF: 125; GPM: 477											
6:45	7:20	0:35	5820	5895	75	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 477; GPM: 448											
7:20	7:30	0:10				10	C/S @ 5,849 INC: 2.5° AZM: 110.6° DL: .81° TEMP: 125°											
7:30	8:15	0:45	5895	5915	20	2.B	SLIDE @: 270° MTF; WOB: 7K; DIFF: 125; GPM: 450											
8:15	8:50	0:35	5915	5989	74	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 500; GPM: 450				Estimated Daily Cost (USD)		\$ -					
8:50	9:00	0:10				10	C/S @ 5,943 INC: 1.7° AZM: 106.4° DL: .87° TEMP: 125°				Accumulated Cost (USD)		\$ -					
9:00	9:15	0:15	5989	5999	10	2.B	SLIDE @: 286° MTF; WOB: 7K; DIFF: 125; GPM: 450				Company Representative (s)							
9:15	9:55	0:40	5999	6084	85	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 500; GPM: 450				JEFF WEST		RODNEY SHULTZ					
9:55	10:10	0:15				7	RIG SERVICE				DAVE WALDRUM		MICHEAL AARON					
10:10	10:20	0:10				10	C/S @ 6,038 INC: 1.2° AZM: 93.6° DL: .62° TEMP: 125°				RYAN Directional Representative (s)							
10:20	11:10	0:50	6084	6179	95	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 500; GPM: 450				JERRY HAMPTON		JARVIS LEHMANN					
11:10	12:15	1:05				8	REPLACE O RING ON STAND PIPE				JAMES RAWLINSON							
12:15	12:25	0:10				10	C/S @ 6,133 INC: 1.2° AZM: 95.4° DL: .15° TEMP: 129°				RYAN MWD Representative (s)							
12:25	12:35	0:10	6179	6248	69	2.A	ROTATE: RPM: 40; WOB: 15K; DIFF: 500; GPM: 450				JAMIE FRICK		SAMBA JARJU					
12:35	14:00	1:25				5.A	CIRCULATE AND CLEAN HOLE											
14:00	17:45	3:45				6.A	PULL OUT OF HOLE.				24 Hour Breakdown							
17:45	18:55	1:10				6.G	LAY DOWN BHA # 1				Ftg Rot.		1064		Time Rot.		7.10	
											Ftg Orient		75		Time Orient		2.30	
											Rot. ROP		149.86		Orient ROP		32.61	

Report #: 5

Date: 5-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 6248
 24:00 Depth: 6777

Footage Today: 529
 Current Run Ftg: 529

Drig Hrs Today: 6.50
 Run Drig Hrs: 6.50

ROP Today: 81.38
 Run Avg. ROP: 81.38

Last Casing Set: 9 5/8 INCH
 Depth: 935 FT

PUMP Data Total Gals/Min = 452				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	PDC BIT	PDC BIT	Run No.	2	Run No.	2	Run No.	2	Run No.	2
Liner (in)	6	6		Sample	IN	MOTOR	MOTOR	Size (in.)	6 3/4	Size (in.)	6 3/4	Size (in.)	6 3/4	Size (in.)	6 3/4
%	95	95		Time	19:00	UBHO	UBHO	Type	4 / 5 7.0 Stg	Type	4 / 5 7.0 Stg	Type	4 / 5 7.0 Stg	Type	4 / 5 7.0 Stg
Vol (gals)	4.18	4.18	0.00	Wt.	8.60 @ 90° F	NMDC MWD	NMDC MWD	Serial No.	MM 390 675 0015	Serial No.	MM 390 675 0015	Serial No.	MM 390 675 0015	Serial No.	MM 390 675 0015
SPM	54	54		VIS	51 @ 90° F	NMDC SPACER	NMDC FLEX (SPACER)	Tool Deflection	2.12° FBH	Tool Deflection	2.12° FBH	Tool Deflection	2.12° FBH	Tool Deflection	2.12° FBH
DRILLING PARAMETERS				PV	14	XO	XO	Avg. Diff. Press.	325	Avg. Diff. Press.	325	Avg. Diff. Press.	325	Avg. Diff. Press.	325
ST. WT. ROT 1000's:	160			YP	16	3 - 6 1/2" DC	3 - 6 1/2" DC	Daily Drill Hrs.	6.50	Daily Drill Hrs.	6.50	Daily Drill Hrs.	6.50	Daily Drill Hrs.	6.50
P/U WT. 1000's:	163			WL	8.5 @ 250° F	XO	XO	Daily Circ. Hrs.	3.10	Daily Circ. Hrs.	3.10	Daily Circ. Hrs.	3.10	Daily Circ. Hrs.	3.10
S/O WT. 1000's:	145			CL	64,000			Daily Total Hrs:	9.60	Daily Total Hrs:	9.60	Daily Total Hrs:	9.60	Daily Total Hrs:	9.60
WOB 1000's:	20			Gels	14 / 17 / 21			Acc. Drill Hrs.	6.50	Acc. Drill Hrs.	6.50	Acc. Drill Hrs.	6.50	Acc. Drill Hrs.	6.50
ROTARY RPM:	40			% Oil	68			Acc. Circ. Hrs.	3.50	Acc. Circ. Hrs.	3.50	Acc. Circ. Hrs.	3.50	Acc. Circ. Hrs.	3.50
MOTOR RPM:	131			% Solids	5			Depth In	6248	Depth In	6248	Depth In	6248	Depth In	6248
TOTAL Bit RPM	171			% Sand	NOT REPORTED			Depth Out		Depth Out		Depth Out		Depth Out	
ROT TQ. OFF BTM:	1600			PH	NOT REPORTED			LIH Hrs.	10:20	LIH Hrs.	10:20	LIH Hrs.	10:20	LIH Hrs.	10:20
ROT TQ. ON BTM:	13900			Temp F	NOT REPORTED			Acc. LIH Hrs.	15.42	Acc. LIH Hrs.	15.42	Acc. LIH Hrs.	15.42	Acc. LIH Hrs.	15.42
Current Mag Dec:	6.55°			MWD F	88° F	BHA WT	BHA WT	Acc. Hrs Cir/Drig	10.00	Acc. Hrs Cir/Drig	10.00	Acc. Hrs Cir/Drig	10.00	Acc. Hrs Cir/Drig	10.00
Pulse Hight	85			GPM	450	BELOW JARS	BELOW JARS	Total K Revs	66.69	Total K Revs	66.69	Total K Revs	66.69	Total K Revs	66.69
"G" Totals	1.001			PSI	1500			Jar # HRS	0	Jar # HRS	0	Jar # HRS	0	Jar # HRS	0

BIT DATA														DULL CONDITION					
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD		
1	8.75	HUGHES	T 606 X	7150533	6 x 14	935	5313	26.6	6248	1	2	CT	G	X	I	NO	TD		
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations
0:00	0:40	0:40	6248	6248	0	6.A	TIH TO 6245 FT	
0:40	0:45	0:05				5.A	FILL PIPE	PICK UP CURVE TOOLS
0:45	0:50	0:05				6.A	TIH TO 6248 FT.	TIH
0:50	1:00	0:10				10	CHECK SHOT @ 6,202 INC: 1.2° AZM: 92.2° DL: ° TEMP: °	BUILD CURVE
1:00	1:25	0:25	6248	6269	21	2.B	SLIDE @: 0° MTF; WOB: 21K; DIFF: 295; GPM: 465	
1:25	1:40	0:15				10	SVY @ 6,223 INC: 1.1° AZM: 99.0° DL: 1.11° TEMP: 116°	
1:40	2:20	0:40	6269	6300	31	2.B	SLIDE @: 0° MTF; WOB: 25K; DIFF: 311; GPM: 444	
2:20	2:20	0:00	6300	6300	0	KOP	SVY @ 6,254 INC: 1.4° AZM: 50.1° DL: 3.45° TEMP: 114°	
2:20	2:50	0:30	6300	6332	32	2.B	SLIDE @: 0° MTF; WOB: 25K; DIFF: 311; GPM: 444	
2:50	3:00	0:10				10	SVY @ 6,286 INC: 4.5° AZM: 16.3° DL: 10.71° TEMP: 116°	
3:00	3:20	0:20	6332	6364	32	2.B	SLIDE @: 30L° GTF; WOB: 26K; DIFF: 353; GPM: 524	Estimated Daily Charges
3:20	3:40	0:20				10	C/S @ 6,318 INC: 9.0° AZM: 8.0° DL: 14.35° TEMP: 116°	Description Cost
3:40	4:05	0:25	6364	6396	32	2.B	SLIDE @: 30° L GTF; WOB: 31K; DIFF: 279; GPM: 482	
4:05	4:15	0:10				10	SVY @ 6,350 INC: 13.5° AZM: 2.3° DL: 14.47° TEMP: 118°	
4:15	4:25	0:10	6396	6401	5	2.A	ROTATE: RPM: 19; WOB: 25K; DIFF: 246; GPM: 473	
4:25	4:45	0:20	6401	6427	26	2.B	SLIDE @: 20° L GTF; WOB: 33K; DIFF: 402; GPM: 465	
4:45	5:05	0:20				10	SVY @ 6,381 INC: 17.3° AZM: 356.0° DL: 13.38° TEMP: 118°	
5:05	5:10	0:05	6427	6432	5	2.A	ROTATE: RPM: 20; WOB: 20K; DIFF: 262; GPM: 482	
5:10	5:35	0:25	6432	6459	27	2.B	SLIDE @: 20° R GTF; WOB: 35K; DIFF: 324; GPM: 477	
5:35	5:45	0:10				10	C/S @ 6,413 INC: 19.7° AZM: 351.9° DL: 8.53° TEMP: 120°	
5:45	6:05	0:20	6459	6491	32	2.B	SLIDE @: 20° R GTF; WOB: 35K; DIFF: 324; GPM: 477	
6:05	6:15	0:10				10	SVY @ 6,445 INC: 22.3° AZM: 354.1° DL: 8.49° TEMP: 120°	
6:15	6:30	0:15	6491	6523	32	2.B	SLIDE @: 20° R GTF; WOB: 35K; DIFF: 324; GPM: 477	Estimated Daily Cost (USD) \$ -
6:30	6:40	0:10				10	SVY @ 6,477 INC: 25.8° AZM: 355.1° DL: 11.01° TEMP: 122°	Accumulated Cost (USD) \$ -
6:40	6:55	0:15	6523	6554	31	2.B	SLIDE @: 20° R GTF; WOB: 35K; DIFF: 324; GPM: 477	Company Representative (s)
6:55	7:05	0:10				10	SVY @ 6,508 INC: 29.3° AZM: 357.9° DL: 12.04° TEMP: 122°	JEFF WEST RODNEY SHULTZ
7:05	7:30	0:25	6554	6586	32	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 477	DAVE WALDRUM MICHEAL AARON
7:30	7:40	0:10				10	SVY @ 6,540 INC: 32.6° AZM: 1.3° DL: 11.67° TEMP: 122°	RYAN Directional Representative (s)
7:40	8:00	0:20	6586	6618	32	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 477	JERRY HAMPTON JARVIS LEHMANN
8:00	8:10	0:10				10	SVY @ 6,572 INC: 35.5° AZM: 1.2° DL: 9.06° TEMP: 122°	JAMES RAWLINSON
8:10	8:30	0:20	6618	6650	32	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 450	RYAN MWD Representative (s)
8:30	8:40	0:10				10	SVY @ 6,604 INC: 37.6° AZM: 359.5° DL: 7.28° TEMP: 125°	JAMIE FRICK SAMBA JARJU
8:40	9:20	0:40	6650	6714	64	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 450	
9:20	9:35	0:15				10	SVY @ 6,668 INC: 44.6° AZM: 360° DL: 10.95° TEMP: 123°	24 Hour Breakdown
9:35	9:55	0:20	6714	6745	31	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 450	Ftg Rot. 10 Time Rot. 0.30
9:55	10:05	0:10				10	SVY @ 6,699 INC: 48.4° AZM: 1.0° DL: 12.48° TEMP: 125°	Ftg Orient 519 Time Orient 6.30
10:05	10:20	0:15	6745	6777	32	2.B	SLIDE @: 0° GTF; WOB: 35K; DIFF: 324; GPM: 450	Rot. ROP 33.33 Orient ROP 82.38

Report #: 6



RYAN DIRECTIONAL SERVICES, INC.

Ryan Job #: 7566

Date: 6-Jun-14

A NABORS COMPANY

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 6998 Footage Today: 954 Drig Hrs Today: 4.80 ROP Today: 198.75 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 7952 Current Run Ftg: 954 Run Drig Hrs: 4.80 Run Avg. ROP: 198.75 Depth: 935 FT

PUMP Data Total Gals/Min = 586				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM		2	BHA #	3	BHA #	Run No.	3			
Liner (in)	6	6		Sample	IN						Size (in.)	6 3/4			
%	95	95		Time	18:00						Type	7 / 8 6.4 Stg			
Vol (gps)	4.18	4.18	0.00	Wt.	8.50 @ 101 ° F						Serial No.	675 36 044			
SPM	70	70		VIS	51 @ 101 ° F						Tool Deflection	1.50 ° FBH			
DRILLING PARAMETERS				PV	17						26 STDS DP	Avg. Diff. Press.	600		
ST. WT. ROT 1000's:	160			YP	15						SHOCK SUB	Daily Drill Hrs.	4.80		
P/U WT. 1000's:	163			WL	8.5 @ 250 ° F						AGITATOR	Daily Circ. Hrs.	1.80		
S/O WT. 1000's:	145			CL	64,500							Daily Total Hrs:	6.60		
WOB 1000's:	20			Gels	12 / 16 / 20							Acc. Drill Hrs.	4.80		
ROTARY RPM:	40			% Oil	68							Acc. Circ. Hrs.	1.80		
MOTOR RPM:	131			% Solids	3.9							Depth In	6998		
TOTAL Bit RPM	171			% Sand	NOT REPORTED							Depth Out			
ROT TQ. OFF BTM:	1600			PH	NOT REPORTED							LIH Hrs.	15:50		
ROT TQ. ON BTM:	13900			Temp F	NOT REPORTED							Acc. LIH Hrs.	19.08		
Current Mag Dec:	6.55 °			MWD F	127 ° F						BHA WT	Acc. Hrs Cir/Drig	6.60		
Pulse Hight	85			GPM	586						BELOW JARS	Total K Revs	49.25		
"G" Totals	1.001			PSI	2950							Jar # HRS	0		

BIT DATA																		
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION								
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD	
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998												
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR		TD

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations				
0:00	0:05	0:05	6998	6998	0	5.A	FILL PIPE					
0:05	0:10	0:05				5.A	SHALLOW PUMP TEST MWD AND MOTOR					
0:10	0:50	0:40				6.G	PICK UP SHOCK SUB AND AGITATOR					
0:50	1:55	1:05				6.A	TIH TO 3878 FT	DRILL AHEAD IN LATERAL				
1:55	4:55	3:00				8	REPAIR ST80 HYD LEAK					
4:55	7:40	2:45				6.A	TIH					
7:40	7:55	0:15	6998	7060	62	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
7:55	7:55	0:00	7060	7060	0	EOC	C/S @ 7,009 INC- 89.8 ° AZM- .8 ° DL- 10.43 ° TEMP- 120 °					
7:55	8:10	0:15	7060	7070	10	2.B	SLIDE @: 0 ° GTF; WOB: 20K; DIFF: 300; GPM: 586					
8:10	8:30	0:20	7070	7154	84	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
8:30	8:40	0:10				10	C/S @ 7,103 INC- 92.8 ° AZM- .1 ° DL- 3.28 ° TEMP- 122 °	Estimated Daily Charges				
8:40	8:50	0:10	7154	7159	5	2.B	SLIDE @: 180 ° GTF; WOB: 20K; DIFF: 300; GPM: 586	Description	Cost			
8:50	9:10	0:20	7159	7249	90	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
9:10	9:20	0:10				10	C/S @ 7,198 INC- 93.2 ° AZM- .3 ° DL- .42 ° TEMP- 125 °					
9:20	9:30	0:10	7249	7274	25	2.B	SLIDE @: 170 ° GTF; WOB: 20K; DIFF: 300; GPM: 586					
9:30	9:50	0:20	7274	7344	70	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
9:50	10:10	0:20				10	C/S @ 7,293 INC- 92.5 ° AZM- .7 ° DL- .97 ° TEMP- 1132 °					
10:10	10:15	0:05	7344	7374	30	2.B	SLIDE @: 180 ° GTF; WOB: 20K; DIFF: 300; GPM: 586					
10:15	10:30	0:15	7374	7437	63	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
10:30	10:40	0:10				10	C/S @ 7,386 INC- 91.9 ° AZM- 1.1 ° DL- .72 ° TEMP- 132 °					
10:40	11:00	0:20	7437	7477	40	2.B	SLIDE @: 150L ° GTF; WOB: 20K; DIFF: 300; GPM: 586					
11:00	11:10	0:10	7477	7532	55	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586					
11:10	11:20	0:10				10	C/S @ 7,481 INC- 90.1 ° AZM- 359.9 ° DL- 2.83 ° TEMP- 134 °	Estimated Daily Cost (USD)	\$ -			
11:20	11:30	0:10	7532	7552	20	2.B	SLIDE @: 150L ° GTF; WOB: 20K; DIFF: 300; GPM: 586	Accumulated Cost (USD)	\$ -			
11:30	11:45	0:15	7552	7626	74	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586	Company Representative (s)				
11:45	11:55	0:10				10	C/S @ 7,575 INC- 90.4 ° AZM- 358.2 ° DL- .91 ° TEMP- 136 °	JEFF WEST	RODNEY SHULTZ			
11:55	12:05	0:10	7626	7646	20	2.B	SLIDE @: 150R ° GTF; WOB: 20K; DIFF: 300; GPM: 586	DAVE WALDRUM	MICHEAL AARON			
12:05	12:15	0:10	7646	7699	53	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586	RYAN Directional Representative (s)				
12:15	14:00	1:45				MW	TROUBLE SHOOT MWD	JERRY HAMPTON	JARVIS LEHMANN			
14:00	14:10	0:10	7699	7722	23	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586	JAMES RAWLINSON				
14:10	14:20	0:10				10	C/S @ 7,671 INC- 89.6 ° AZM- 359.2 ° DL- 1.33 ° TEMP- 136 °	RYAN MWD Representative (s)				
14:20	14:30	0:10	7722	7817	95	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586	JAMIE FRICK	SAMBA JARJU			
14:30	14:40	0:10				10	C/S @ 7,766 INC- 91.6 ° AZM- 358.1 ° DL- 2.40 ° TEMP- 134 °					
14:40	15:10	0:30	7817	7857	40	2.B	SLIDE @: 150R ° GTF; WOB: 20K; DIFF: 300; GPM: 586	24 Hour Breakdown				
15:10	15:20	0:10	7857	7912	55	2.A	ROTATE RPM- 60 WOB- 20K DIFF- 600 GPM- 586	Ftg Rot.	724	Time Rot.	2.60	
15:20	15:30	0:10				10	C/S @ 7,861 INC- 90.5 ° AZM- 358.8 ° DL- 1.37 ° TEMP- 134 °	Ftg Orient	230	Time Orient	2.20	
15:30	15:50	0:20	7912	7952	40	2.B	SLIDE @: 150R ° GTF; WOB: 20K; DIFF: 300; GPM: 586	Rot. ROP	278.46	Orient ROP	104.55	

Report #: 6A



RYAN DIRECTIONAL SERVICES, INC.

Ryan Job #: 7566

Date: 6-Jun-14

A NABORS COMPANY

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 7952 Footage Today: 959 Drig Hrs Today: 5.60 ROP Today: 171.25 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 8911 Current Run Ftg: 1913 Run Drig Hrs: 10.40 Run Avg. ROP: 183.94 Depth: 935 FT

PUMP Data Total Gals/Min = 552				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			2	BHA #	3	BHA #	Run No.	3		
Liner (in)	6	6		Sample	IN			MOTOR		MOTOR		Size (in.)	6 3/4		
%	95	95		Time	17:30			UBHO		UBHO		Type	7 / 8 6.4 Stg		
Vol (gps)	4.18	4.18	0.00	Wt.	8.50 @ 110°F			NMDC MWD		NMDC (MWD)		Serial No.	675 36 044		
SPM	66	66		VIS	52 @ 110°F			NMDC FLEX (SPACER)		NMDC (SPACER)		Tool Deflection	1.50" FBH		
DRILLING PARAMETERS				PV	16					26 STDS DP		Avg. Diff. Press.	600		
ST. WT. ROT 1000's:	163			YP	16					SHOCK SUB		Daily Drill Hrs.	5.60		
P/U WT. 1000's:	180			WL	8.8 @ 250°F					AGITATOR		Daily Circ. Hrs.	2.10		
S/O WT. 1000's:	150			CL	63,000							Daily Total Hrs:	7.70		
WOB 1000's:	20			Gels	13 / 16 / 20							Acc. Drill Hrs.	10.40		
ROTARY RPM:	40			% Oil	68							Acc. Circ. Hrs.	3.90		
MOTOR RPM:	170			% Solids	4							Depth In	6998		
TOTAL Bit RPM	210			% Sand	NOT REPORTED							Depth Out			
ROT TQ. OFF BTM:	4500			PH	NOT REPORTED							LIH Hrs.	8:10		
ROT TQ. ON BTM:	11200			Temp F	110°F							Acc. LIH Hrs.	27.25		
Current Mag Dec:	6.55°			MWD F	149°F			BHA WT				Acc. Hrs Cir/Drig	14.30		
Pulse Hight	85			GPM	550			BELOW JARS				Total K Revs	131.04		
"G" Totals	1.001			PSI	2750							Jar # HRS	0		

BIT DATA																	
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998											
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR	TD

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
15:50	16:00	0:10	7952	8005	53	2.A	ROTATE RPM- 50 WOB- 20K DIFF- 600 GPM- 586							
16:00	16:30	0:30				7	RIG SERVICE							
16:30	16:35	0:05				10	C/S @ 7,954 INC- 89.8° AZM- 1.8° DL- 3.31° TEMP- 140°							
16:35	16:55	0:20	8005	8035	30	2.B	SLIDE @: 170L° GTF; WOB: 20K; DIFF: 300; GPM: 586				DRILL AHEAD IN LATERAL			
16:55	17:10	0:15	8035	8100	65	2.A	ROTATE RPM- 50 WOB- 20K DIFF- 600 GPM- 586							
17:10	17:20	0:10				10	C/S @ 8,049 INC- 89.0° AZM- 2.3° DL- .99° TEMP- 140°							
17:20	17:35	0:15	8100	8130	30	2.B	SLIDE @: 170L° GTF; WOB: 20K; DIFF: 300; GPM: 586							
17:35	17:50	0:15	8130	8194	64	2.A	ROTATE RPM- 50 WOB- 20K DIFF- 600 GPM- 586							
17:50	18:00	0:10				10	C/S @ 8,143 INC- 87.4° AZM- 0° DL- 2.98° TEMP- 143°							
18:00	18:20	0:20	8194	8290	96	2.A	ROTATE: RPM: 54; WOB: 33K; DIFF: 543; GPM: 578							
18:20	18:40	0:20				10	C/S @ 8,239 INC: 88.7° AZM: 0.6° DL: 1.49° TEMP: 145°				Estimated Daily Charges			
18:40	18:55	0:15	8290	8305	15	2.B	SLIDE @: 120° L GTF; WOB: 46K; DIFF: 340; GPM: 532				Description		Cost	
18:55	19:20	0:25	8305	8384	79	2.A	ROTATE: RPM: 55; WOB: 22K; DIFF: 621; GPM: 565							
19:20	19:30	0:10				10	C/S @ 8,333 INC: 90.7° AZM: 0.7° DL: 2.13° TEMP: 145°							
19:30	19:55	0:25	8384	8414	30	2.B	SLIDE @: 135° L GTF; WOB: 35K; DIFF: 317; GPM: 536							
19:55	20:15	0:20	8414	8479	65	2.A	ROTATE: RPM: 54; WOB: 23K; DIFF: 620; GPM: 545							
20:15	20:25	0:10				10	C/S @ 8,428 INC: 89.8° AZM: 358.0° DL: 3.0° TEMP: 147°							
20:25	20:45	0:20	8479	8573	94	2.A	ROTATE: RPM: 62; WOB: 16K; DIFF: 634; GPM: 549							
20:45	21:05	0:20				10	C/S @ 8,522 INC: 91.5° AZM: 357.5° DL: 1.89° TEMP: 150°							
21:05	21:25	0:20	8573	8603	30	2.B	SLIDE @: 170° R GTF; WOB: 43K; DIFF: 292; GPM: 549							
21:25	21:45	0:20	8603	8669	66	2.A	ROTATE: RPM: 63; WOB: 23K; DIFF: 554; GPM: 549							
21:45	21:55	0:10				10	C/S @ 8,618 INC: 90.9° AZM: 357.6° DL: 0.63° TEMP: 149°							
21:55	22:20	0:25	8669	8764	95	2.A	ROTATE: RPM: 61; WOB: 20K; DIFF: 534; GPM: 524				Estimated Daily Cost (USD)		\$ -	
22:20	22:30	0:10				10	C/S @ 8,713 INC: 91.8° AZM: 356.8° DL: 1.27° TEMP: 150°				Accumulated Cost (USD)		\$ -	
22:30	22:55	0:25	8764	8796	32	2.B	SLIDE @: 120° R GTF; WOB: 50K; DIFF: 321; GPM: 549				Company Representative (s)			
22:55	23:15	0:20	8796	8860	64	2.A	ROTATE: RPM: 61; WOB: 22K; DIFF: 633; GPM: 553				JEFF WEST		RODNEY SHULTZ	
23:15	23:35	0:20				10	C/S @ 8,809 INC: 92.3° AZM: 357.8° DL: 1.16° TEMP: 149°				DAVE WALDRUM		MICHEAL AARON	
23:35	23:55	0:20	8860	8895	35	2.B	SLIDE @: 135° R GTF; WOB: 53K; DIFF: 408; GPM: 524				RYAN Directional Representative (s)			
23:55	23:59	0:04	8895	8911	16	2.A	ROTATE: RPM: 62; WOB: 17K; DIFF: 631; GPM: 549				JERRY HAMPTON		JARVIS LEHMANN	
											JAMES RAWLINSON			
											RYAN MWD Representative (s)			
											JAMIE FRICK		SAMBA JARJU	
											24 Hour Breakdown			
							Ftg Rot.	757	Time Rot.	3.20				
							Ftg Orient	202	Time Orient	2.30				
							Rot. ROP	236.56	Orient ROP	87.83				

Report #: 7

Date: 7-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
 Field: **CROCKETT COUNTY, TEXAS**
 County, State: **CROCKETT, TEXAS**
 AFE or PO #: **160579**

Customer: **EP ENERGY**
 Well Name & No.: **UNIVERSITY EAST 4411 JH**
 Block or Section: **SECTION 16 BLOCK 44**
 Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: 8911
 24:00 Depth: 9927

Footage Today: 1016
 Current Run Ftg: 2929

Drig Hrs Today: 6.30
 Run Drig Hrs: 16.70

ROP Today: 161.27
 Run Avg. ROP: 175.39

Last Casing Set: 9 5/8 INCH
 Depth: 935 FT

PUMP Data Total Gals/Min = 552				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	PDC BIT	PDC BIT	Run No.	3	Run No.	3	Run No.	3	Run No.	3
Liner (in)	6	6		Sample	IN	MOTOR	MOTOR	Size (in.)	6 3/4	Size (in.)	6 3/4	Size (in.)	6 3/4	Size (in.)	6 3/4
%	95	95		Time	17:30	UBHO	UBHO	Type	7 / 8 6.4 Stg	Type	7 / 8 6.4 Stg	Type	7 / 8 6.4 Stg	Type	7 / 8 6.4 Stg
Vol (gps)	4.18	4.18	0.00	Wt.	8.50 @ 110° F	NMDC MWD	NMDC (MWD)	Serial No.	675 36 044	Serial No.	675 36 044	Serial No.	675 36 044	Serial No.	675 36 044
SPM	66	66		VIS	52 @ 110° F	NMDC FLEX (SPACER)	NMDC (SPACER)	Tool Deflection	1.50° FBH	Tool Deflection	1.50° FBH	Tool Deflection	1.50° FBH	Tool Deflection	1.50° FBH
DRILLING PARAMETERS				PV	16			26 STDS DP		Avg. Diff. Press.	600	Avg. Diff. Press.	600	Avg. Diff. Press.	600
ST. WT. ROT 1000's:	163			YP	16			SHOCK SUB		Daily Drill Hrs.	6.30	Daily Drill Hrs.	6.30	Daily Drill Hrs.	6.30
P/U WT. 1000's:	200			WL	8.8 @ 250° F			AGITATOR		Daily Circ. Hrs.	2.70	Daily Circ. Hrs.	2.70	Daily Circ. Hrs.	2.70
S/O WT. 1000's:	130			CL	63,000					Daily Total Hrs:	9.00	Daily Total Hrs:	9.00	Daily Total Hrs:	9.00
WOB 1000's:	20			Gels	13 / 16 / 20					Acc. Drill Hrs.	16.70	Acc. Drill Hrs.	16.70	Acc. Drill Hrs.	16.70
ROTARY RPM:	40			% Oil	68					Acc. Circ. Hrs.	6.60	Acc. Circ. Hrs.	6.60	Acc. Circ. Hrs.	6.60
MOTOR RPM:	170			% Solids	4					Depth In	6998	Depth In	6998	Depth In	6998
TOTAL Bit RPM	210			% Sand	NOT REPORTED					Depth Out		Depth Out		Depth Out	
ROT TQ. OFF BTM:	4500			PH	NOT REPORTED					LIH Hrs.	9:40	LIH Hrs.	9:40	LIH Hrs.	9:40
ROT TQ. ON BTM:	11200			Temp F	110° F					Acc. LIH Hrs.	36.92	Acc. LIH Hrs.	36.92	Acc. LIH Hrs.	36.92
Current Mag Dec:	6.55°			MWD F	149° F	BHA WT				Acc. Hrs Cir/Drig	23.30	Acc. Hrs Cir/Drig	23.30	Acc. Hrs Cir/Drig	23.30
Pulse Hight	85			GPM	550	BELOW JARS				Total K Revs	210.42	Total K Revs	210.42	Total K Revs	210.42
"G" Totals	1.001			PSI	2750					Jar # HRS	0	Jar # HRS	0	Jar # HRS	0

BIT DATA														DULL CONDITION					
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD		
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998													
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR	TD		

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:10	0:10	8911	8953	42	2.A	ROTATE: RPM: 62; WOB: 17K; DIFF: 631; GPM: 549				DRILL AHEAD IN LATERAL			
0:10	0:15	0:05				5.A	SPR							
0:15	0:30	0:15				10	C/S @ 8,902 INC: 93.0° AZM: 359.8° DL: 2.28° TEMP: 147°				TARGET CHANGE @ 08:30 6-7-14			
0:30	0:50	0:20	8953	8984	31	2.B	SLIDE @: 165° R GTF; WOB: 46K; DIFF: 347; GPM: 545				6723 TVD @ 4389 V-SECT W/ 89.62 DIP			
0:50	1:00	0:10	8984	8999	15	2.A	ROTATE: RPM: 62; WOB: 13K; DIFF: 387; GPM: 549							
1:00	1:30	0:30	8999	9024	25	2.B	SLIDE @: 165° R GTF; WOB: 40K; DIFF: 322; GPM: 536							
1:30	1:40	0:10	9024	9049	25	2.A	ROTATE: RPM: 63; WOB: K; DIFF: ; GPM: 549							
1:40	1:55	0:15				10	C/S @ 8,998 INC: ° AZM: ° DL: ° TEMP: °							
1:55	2:10	0:15	9049	9079	30	2.B	SLIDE @: 165° R GTF; WOB: 39K; DIFF: 255; GPM: 549							
2:10	2:20	0:10				10	CHECK SHOT @ 9,028 INC: ° AZM: ° DL: ° TEMP: °							
2:20	2:35	0:15	9079	9144	65	2.A	ROTATE: RPM: 63; WOB: 22K; DIFF: 615; GPM: 545				Estimated Daily Charges			
2:35	2:55	0:20				10	C/S @ 9,093 INC: 88.3° AZM: 0.0° DL: 3.72° TEMP: 147°				Description		Cost	
2:55	3:15	0:20	9144	9238	94	2.A	ROTATE: RPM: 64; WOB: 25K; DIFF: 589; GPM: 532							
3:15	3:25	0:10				10	C/S @ 9,187 INC: 91.1° AZM: 1.5° DL: 3.38° TEMP: 149°							
3:25	3:40	0:15				8	CHECK PUMP OILER MOTOR							
3:40	3:50	0:10	9238	9246	8	2.B	SLIDE @: 170° L GTF; WOB: 40K; DIFF: 224; GPM: 536							
3:50	4:00	0:10				8	WORK ON PMP NO 1 OILER MOTOR							
4:00	4:20	0:20	9246	9283	37	2.B	SLIDE @: 170° L GTF; WOB: 40K; DIFF: 277; GPM: 536							
4:20	4:35	0:15	9283	9333	50	2.A	ROTATE: RPM: 64; WOB: 7K; DIFF: 609; GPM: 532							
4:35	4:50	0:15				10	C/S @ 9,282 INC: 89.9° AZM: 0.7° DL: 1.52° TEMP: 147°							
4:50	5:20	0:30	9333	9378	45	2.B	SLIDE @: 180° R GTF; WOB: 31K; DIFF: 277; GPM: 515							
5:20	5:35	0:15	9378	9427	49	2.A	ROTATE: RPM: 63; WOB: 19K; DIFF: 656; GPM: 528							
5:35	5:50	0:15				10	C/S @ 9,376 INC: 87.1° AZM: 1.1° DL: 3.01° TEMP: 147°				Estimated Daily Cost (USD) \$ -			
5:50	6:15	0:25	9427	9521	94	2.A	ROTATE: RPM: 64; WOB: 20K; DIFF: 414; GPM: 553				Accumulated Cost (USD) \$ -			
6:15	6:30	0:15				10	C/S @ 9,470 INC: 87.8° AZM: .5° DL: .98° TEMP: 150°				Company Representative (s)			
6:30	6:55	0:25	9521	9551	30	2.B	SLIDE @: 150° R GTF; WOB: 31K; DIFF: 277; GPM: 515				JEFF WEST		RODNEY SHULTZ	
6:55	7:10	0:15	9551	9617	66	2.A	ROTATE: RPM: 63; WOB: 19K; DIFF: 656; GPM: 528				DAVE WALDRUM		MICHEAL AARON	
7:10	7:20	0:10				10	C/S @ 9,566 INC: 89.2° AZM: 3.7° DL: 3.64° TEMP: 150°				RYAN Directional Representative (s)			
7:20	7:40	0:20	9617	9662	45	2.B	SLIDE @: 150° L GTF; WOB: 31K; DIFF: 277; GPM: 515				JERRY HAMPTON		JARVIS LEHMANN	
7:40	7:55	0:15	9662	9712	50	2.A	ROTATE: RPM: 63; WOB: 19K; DIFF: 656; GPM: 528				JAMES RAWLINSON			
7:55	8:05	0:10				10	C/S @ 9,661 INC: 86.9° AZM: 1.6° DL: 2.42° TEMP: 152°				RYAN MWD Representative (s)			
8:05	8:30	0:25	9712	9808	96	2.A	ROTATE: RPM: 63; WOB: 19K; DIFF: 656; GPM: 528				JAMIE FRICK		SAMBA JARJU	
8:30	8:55	0:25				7	RIG SERVICE							
8:55	9:05	0:10				10	C/S @ 9,757 INC: ° AZM: ° DL: ° TEMP: °				24 Hour Breakdown			
9:05	9:30	0:25	9808	9902	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 575				Ftg Rot. 740		Time Rot. 3.30	
9:30	9:40	0:10				10	C/S @ 9,757 INC: 86.9° AZM: 1.6° DL: 2.77° TEMP: 154°				Ftg Orient 276		Time Orient 3.00	
9:40	9:50	0:10	9902	9927	25	2.B	SLIDE @: 140° L GTF; WOB: 31K; DIFF: 277; GPM: 575				Rot. ROP 224.24		Orient ROP 92.00	

Report #: 7A

Date: 7-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 7566

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
 Field: **CROCKETT COUNTY, TEXAS**
 County, State: **CROCKETT, TEXAS**
 AFE or PO #: **160579**

Customer: **EP ENERGY**
 Well Name & No.: **UNIVERSITY EAST 4411 JH**
 Block or Section: **SECTION 16 BLOCK 44**
 Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: 9927
 24:00 Depth: 11414

Footage Today: 1487
 Current Run Ftg: 4416

Drig Hrs Today: 6.30
 Run Drig Hrs: 23.00

ROP Today: 236.03
 Run Avg. ROP: 192.00

Last Casing Set: 9 5/8 INCH
 Depth: 935 FT

PUMP Data Total Gals/Min = 527				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	PDC BIT	PDC BIT	Run No.	3	BHA #	3	BHA #	Run No.	3	
Liner (in)	6	6		Sample	IN	MOTOR	MOTOR	Size (in.)					6 3/4		
%	95	95		Time	17:30	UBHO	UBHO	Type					7 / 8 6.4 Stg		
Vol (gps)	4.18	4.18	0.00	Wt.	8.50 @ 110°F	NMDC MWD	NMDC (MWD)	Serial No.					675 36 044		
SPM	63	63		VIS	52 @ 110°F	NMDC FLEX (SPACER)	NMDC (SPACER)	Tool Deflection					1.50° FBH		
DRILLING PARAMETERS				PV	16			26 STDS DP					Avg. Diff. Press.	650	
ST. WT. ROT 1000's:	163			YP	16			SHOCK SUB					Daily Drill Hrs.	6.30	
P/U WT. 1000's:	210			WL	8.8 @ 250°F			AGITATOR					Daily Circ. Hrs.	2.80	
S/O WT. 1000's:	130			CL	63,000								Daily Total Hrs:	9.10	
WOB 1000's:	25			Gels	13 / 16 / 20								Acc. Drill Hrs.	23.00	
ROTARY RPM:	55			% Oil	68								Acc. Circ. Hrs.	9.40	
MOTOR RPM:	164			% Solids	4								Depth In	6998	
TOTAL Bit RPM	219			% Sand	NOT REPORTED								Depth Out		
ROT TQ. OFF BTM:	6300			PH	NOT REPORTED								LIH Hrs.	9:30	
ROT TQ. ON BTM:	14300			Temp F	110°F								Acc. LIH Hrs.	46.42	
Current Mag Dec:	6.55°			MWD F	149°F	BHA WT							Acc. Hrs Cir/Drig	32.40	
Pulse Hight	85			GPM	530	BELOW JARS							Total K Revs	302.22	
"G" Totals	1.001			PSI	3100								Jar # HRS	0	

BIT DATA														DULL CONDITION					
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD		
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998													
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR	TD		

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown					Current Operations								
9:50	10:05	0:15	9927	9997	70	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 575						DRILL AHEAD IN LATERAL							
10:05	10:15	0:10				10	C/S @ 9.946 INC: 89.5° AZM: 4° DL: 1.52° TEMP: 156°													
10:15	10:40	0:25	9997	10091	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 575						TARGET CHANGE @ 08:30 6-7-14							
10:40	10:50	0:10				10	C/S @ 10.040 INC: 89.9° AZM: 0.0° DL: .60° TEMP: 156°						6723 TVD @ 4389 V-SECT W/ 89.62 DIP							
10:50	11:10	0:20	10091	10187	96	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 575													
11:10	11:20	0:10				10	C/S @ 10.136 INC: 88.3° AZM: 357.8° DL: 2.83° TEMP: 159°						TARGET CHANGE @ 12:50 6-7-14							
11:20	11:40	0:20	10187	10281	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 575						6741 TVD @ 4674 V-SECT W/ 89.27 DIP							
11:40	11:50	0:10				10	C/S @ 10.230 INC: 88.1° AZM: 357° DL: .88° TEMP: 158°													
11:50	12:05	0:15	10281	10311	30	2.B	SLIDE @: 60° R GTF; WOB: 31K; DIFF: 277; GPM: 480						TARGET CHANGE @ 16:30 6-7-14							
12:05	12:25	0:20	10311	10377	66	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						6762 TVD @ 5520 V-SECT W/ 88.78 DIP							
12:25	12:35	0:10				10	C/S @ 10.326 INC: 90.8° AZM: 0.1° DL: 2.48° TEMP: 156°						Estimated Daily Charges							
12:35	12:50	0:15	10377	10440	63	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						Description		Cost					
12:50	13:10	0:20				8	PUMP REPAIR													
13:10	13:20	0:10	10440	10471	31	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480													
13:20	13:30	0:10				10	C/S @ 10.420 INC: 91.0° AZM: 359.7° DL: .48° TEMP: 154°													
13:30	13:50	0:20	10471	10566	95	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480													
13:50	14:00	0:10				10	C/S @ 10.515 INC: 89.5° AZM: 359.1° DL: 1.70° TEMP: 156°													
14:00	14:20	0:20	10566	10660	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480													
14:20	14:30	0:10				10	C/S @ 10.609 INC: 88.9° AZM: 358.6° DL: .64° TEMP: 158°													
14:30	14:55	0:25	10660	10754	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480													
14:55	15:05	0:10				10	C/S @ 10.703 INC: 89.1° AZM: 358.9° DL: .38° TEMP: .38°													
15:05	15:20	0:15	10754	10847	93	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480													
15:20	15:30	0:10				10	C/S @ 10.796 INC: 89.4° AZM: 359.3° DL: .54° TEMP: °						Estimated Daily Cost (USD)		\$ -					
15:30	15:50	0:20	10847	10941	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						Accumulated Cost (USD)		\$ -					
15:50	16:00	0:10				10	C/S @ 10.890 INC: 89.4° AZM: 359.2° DL: .11° TEMP: 159°						Company Representative (s)							
16:00	16:20	0:20	10941	11036	95	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						JEFF WEST		RODNEY SHULTZ					
16:20	16:30	0:10				10	C/S @ 10.985 INC: 89.7° AZM: 359.9° DL: .8° TEMP: 159°						DAVE WALDRUM		MICHEAL AARON					
16:30	16:45	0:15	11036	11130	94	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						RYAN Directional Representative (s)							
16:45	16:55	0:10				10	C/S @ 11.079 INC: 89.7° AZM: 0.0° DL: .15° TEMP: 159°						JERRY HAMPTON		JARVIS LEHMANN					
16:55	17:20	0:25	11130	11225	95	2.A	ROTATE: RPM: 60; WOB: 25K; DIFF: 656; GPM: 480						JAMES RAWLINSON							
17:20	17:30	0:10				10	C/S @ 11.174 INC: 90.2° AZM: 359.8° DL: .47° TEMP: 159°						RYAN MWD Representative (s)							
17:30	17:50	0:20	11225	11255	30	2.B	SLIDE @: 150° R GTF; WOB: 31K; DIFF: 277; GPM: 480						JAMIE FRICK		SAMBA JARJU					
17:50	18:05	0:15	11255	11319	64	2.A	ROTATE: RPM: 63; WOB: 30K; DIFF: 566; GPM: 532													
18:05	18:20	0:15				10	C/S @ 11.268 INC: 90.1° AZM: 359.9° DL: 0.15° TEMP: 160°						24 Hour Breakdown							
18:20	18:35	0:15				5.A	RECYCLE PUMPS. NOISY PUMPS						Ftg Rot.		1382		Time Rot.		5.30	
18:35	19:05	0:30	11319	11364	45	2.B	SLIDE @: 160° R GTF; WOB: 53K; DIFF: 210; GPM: 528						Ftg Orient		105		Time Orient		1.10	
19:05	19:20	0:15	11364	11414	50	2.A	ROTATE: RPM: 63; WOB: 18K; DIFF: 454; GPM: 536						Rot. ROP		260.75		Orient ROP		95.45	

Report #: 8
Date: 8-Jun-14



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
Field: **CROCKETT COUNTY, TEXAS**
County, State: **CROCKETT, TEXAS**
AFE or PO #: **160579**

Customer: **EP ENERGY**
Well Name & No.: **UNIVERSITY EAST 4411 JH**
Block or Section: **SECTION 16 BLOCK 44**
Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: 11733 Footage Today: 911 Drig Hrs Today: 9.60 ROP Today: 94.90 Last Casing Set: 9 5/8 INCH
24:00 Depth: 12644 Current Run Ftg: 5646 Run Drig Hrs: 36.00 Run Avg. ROP: 156.83 Depth: 935 FT

PUMP Data Total Gals/Min = 485				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	2	BHA #	3	BHA #	Run No.	3	Run No.	3		
Liner (in)	6	6		Sample	IN					Size (in.)	6 3/4				
%	95	95		Time	17:30					Type	7 / 8 6.4 Stg				
Vol (gps)	4.18	4.18	0.00	Wt.	8.50 @ 110°F					Serial No.	675 36 044				
SPM	58	58		VIS	52 @ 110°F					Tool Deflection	1.50° FBH				
DRILLING PARAMETERS				PV	16					26 STDS DP	Avg. Diff. Press.	500			
ST. WT. ROT 1000's:	163			YP	16					SHOCK SUB	Daily Drill Hrs.	9.60			
P/U WT. 1000's:	210			WL	8.8 @ 250°F					AGITATOR	Daily Circ. Hrs.	3.40			
S/O WT. 1000's:	130			CL	63,000						Daily Total Hrs:	13.00			
WOB 1000's:	25			Gels	13 / 16 / 20						Acc. Drill Hrs.	36.00			
ROTARY RPM:	55			% Oil	68						Acc. Circ. Hrs.	14.10			
MOTOR RPM:	149			% Solids	4						Depth In	6998			
TOTAL Bit RPM	204			% Sand	NOT REPORTED						Depth Out				
ROT TQ. OFF BTM:	6300			PH	NOT REPORTED						LIH Hrs.	13:10			
ROT TQ. ON BTM:	14300			Temp F	110°F						Acc. LIH Hrs.	64.25			
Current Mag Dec:	6.55°			MWD F	149°F					BHA WT	Acc. Hrs Cir/Drig	50.10			
Pulse Hight	85			GPM	480					BELOW JARS	Total K Revs	440.64			
"G" Totals	1.001			PSI	3250						Jar # HRS	0			

BIT DATA																			
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION									
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD		
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998													
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR		TD	

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown					Current Operations			
0:00	0:10	0:09	11733	11742	9	2.B	SLIDE @: 120° L GTF; WOB: 35K; DIFF: 256; GPM: 482					DRILL AHEAD IN LATERAL			
0:10	0:20	0:10				10	CHECK SHOT @ 11, 691 INC: 89.4° AZM: 1.2° DL: ° TEMP: °								
0:20	0:40	0:20	11742	11769	27	2.B	SLIDE @: 120° L GTF; WOB: 56K; DIFF: 281; GPM: 482					TARGET CHANGE @ 2200 HRS 6-7-14			
0:40	0:50	0:10	11769	11791	22	2.A	ROTATE: RPM: 63; WOB: 15K; DIFF: 504; GPM: 490					6766 TVD @ 6189 V-SECT W/ 88.74 DIP			
0:50	1:00	0:10				10	C/S @ 11,740 INC: 90.5° AZM: 0.5° DL: 2.53° TEMP: 158°								
1:00	1:10	0:10				O	ISOLATE PMP NO. 1					TARGET CHANGE @ 07:30 HRS 6-8-14			
1:10	2:25	1:15	11791	11855	64	2.B	SLIDE @: 180° L GTF; WOB: 73K; DIFF: 248; GPM: 494					6764 TVD @ 6845 V-SECT W/ 89.5 DIP			
2:25	2:30	0:05				10	CHECK SHOT @ 11, 804 INC: 88.9° AZM: 359.5° DL: ° TEMP: °								
2:30	2:45	0:15	11855	11886	31	2.A	ROTATE: RPM: 63; WOB: 24K; DIFF: 455; GPM: 498								
2:45	3:05	0:20				10	C/S @ 11,835 INC: 88.9° AZM: 0.4° DL: 1.69° TEMP: 158°								
3:05	4:45	1:40	11886	11980	94	2.B	SLIDE @: 180° L GTF; WOB: 50K; DIFF: 199; GPM: 482					Estimated Daily Charges			
4:45	4:55	0:10				10	C/S @ 11,929 INC: 84.1° AZM: 359.3° DL: 5.24° TEMP: 156°					Description		Cost	
4:55	5:25	0:30	11980	12075	95	2.A	ROTATE: RPM: 63; WOB: 15K; DIFF: 504; GPM: 490								
5:25	5:35	0:10				10	C/S @ 12,024 INC: 81.1° AZM: 358.6° DL: 3.24° TEMP: 159°								
5:35	5:55	0:20				5.A	RECYCLE PUMPS								
5:55	6:20	0:25	12075	12105	30	2.B	SLIDE @: 0° HS GTF; WOB: 50K; DIFF: 199; GPM: 482								
6:20	6:45	0:25				10	CHECK SHOT @ 12,056 INC: 81.5° AZM: 358.7°								
6:45	7:20	0:35	12105	12125	20	2.B	SLIDE @: 20° R GTF; WOB: 50K; DIFF: 199; GPM: 482								
7:20	7:35	0:15	12125	12169	44	2.A	ROTATE: RPM: 63; WOB: 15K; DIFF: 504; GPM: 490								
7:35	7:45	0:10				10	C/S @ 12,118 INC: 82.8° AZM: 357.6° DL: 3.24° TEMP: 159°								
7:45	8:40	0:55	12169	12224	55	2.B	SLIDE @: 20° R GTF; WOB: 50K; DIFF: 199; GPM: 482								
8:40	8:50	0:10				10	CHECK SHOT @ 12,173 INC: 83.8° AZM: 357.1°								
8:50	9:00	0:10	12224	12244	20	2.A	ROTATE: RPM: 45; WOB: 35K; DIFF: 540; GPM: 490					Estimated Daily Cost (USD)		\$ -	
9:00	9:10	0:10				10	CHECK SHOT @ 12,193 INC: ° AZM: °					Accumulated Cost (USD)		\$ -	
9:10	9:20	0:10	12244	12264	20	2.B	SLIDE @: 20° R GTF; WOB: 50K; DIFF: 199; GPM: 482					Company Representative (s)			
9:20	9:35	0:15				10	C/S @ 12,213 INC: ° AZM: ° DL: ° TEMP: °					JEFF WEST		RODNEY SHULTZ	
9:35	10:10	0:35	12264	12304	40	2.B	SLIDE @: 20° R GTF; WOB: 50K; DIFF: 199; GPM: 482					DAVE WALDRUM		MICHEAL AARON	
10:10	10:30	0:20	12304	12358	54	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490					RYAN Directional Representative (s)			
10:30	10:40	0:10				10	C/S @ 12,307 INC: 89.0° AZM: 359.3° DL: 3.87° TEMP: 161°					JERRY HAMPTON		JARVIS LEHMANN	
10:40	10:50	0:10	12358	12390	32	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490					JAMES RAWLINSON			
10:50	11:00	0:10				10	CHECK SHOT @ 12,339 INC: 90.9° AZM: 360°					RYAN MWD Representative (s)			
11:00	11:25	0:25	12390	12453	63	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490					JAMIE FRICK		SAMBA JARJU	
11:25	11:35	0:10				10	C/S @ 12,402 INC: ° AZM: ° DL: ° TEMP: 161°								
11:35	12:20	0:45	12453	12548	95	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490					24 Hour Breakdown			
12:20	12:30	0:10				10	C/S @ 12,402 INC: 91.8° AZM: 359.9° DL: 3.01° TEMP: 167°					Ftg Rot.	552	Time Rot.	3.50
12:30	13:00	0:30	12548	12644	96	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490					Ftg Orient	359	Time Orient	6.10
13:00	13:10	0:10				10	C/S @ 12,593 INC: 90.4° AZM: 356.8° DL: 2.05° TEMP: 167°					Rot. ROP	157.71	Orient ROP	58.85

Report #: 8A

Date: 8-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 12644 Footage Today: 547 Drlg Hrs Today: 8.50 ROP Today: 64.35 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 13191 Current Run Ftg: 6193 Run Drlg Hrs: 44.50 Run Avg. ROP: 139.17 Depth: 935 FT

PUMP Data Total Gals/Min = 552				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM		2	BHA #	3	BHA #	Run No.	3			
Liner (in)	6	6		Sample	IN		MOTOR		MOTOR		Size (in.)	6 3/4			
%	95	95		Time	17:00		UBHO		UBHO		Type	7 / 8 6.4 Stg			
Vol (gps)	4.18	4.18	0.00	Wt.	8.70 @ 110°F		NMDC MWD		NMDC (MWD)		Serial No.	675 36 044			
SPM	66	66		VIS	53 @ 110°F		NMDC FLEX (SPACER)		NMDC (SPACER)		Tool Deflection	1.50° FBH			
DRILLING PARAMETERS				PV	14				26 STDS DP		Avg. Diff. Press.	550			
ST. WT. ROT 1000's:	163			YP	17				SHOCK SUB		Daily Drill Hrs.	8.50			
P/U WT. 1000's:	210			WL	8.2 @ 250°F				AGITATOR		Daily Circ. Hrs.	1.80			
S/O WT. 1000's:	130			CL	64,000						Daily Total Hrs:	10.30			
WOB 1000's:	25			Gels	13 / 16 / 20						Acc. Drill Hrs.	44.50			
ROTARY RPM:	55			% Oil	67						Acc. Circ. Hrs.	15.90			
MOTOR RPM:	164			% Solids	5						Depth In	6998			
TOTAL Bit RPM	219			% Sand	NOT REPORTED						Depth Out				
ROT TQ. OFF BTM:	6300			PH	NOT REPORTED						LIH Hrs.	10:50			
ROT TQ. ON BTM:	14300			Temp F	110°F						Acc. LIH Hrs.	75.08			
Current Mag Dec:	6.55°			MWD F	167°F		BHA WT				Acc. Hrs Cir/Drilg	60.40			
Pulse Hight	85			GPM	530		BELOW JARS				Total K Revs	584.73			
"G" Totals	1.001			PSI	3100						Jar # HRS	0			

BIT DATA																	
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998											
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR	

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
13:10	13:55	0:45	12644	12674	30	2.B	SLIDE @: 70° R GTF; WOB: 50K; DIFF: 199; GPM: 482				DRILL AHEAD IN LATERAL			
13:55	14:15	0:20	12674	12739	65	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490							
14:15	14:25	0:10				10	C/S @ 12,688 INC: 89.8° AZM: 357.1° DL: 71° TEMP: 167°				TARGET CHANGE @ 2200 HRS 6-7-14			
14:25	15:30	1:05	12739	12789	50	2.B	SLIDE @: 70° R GTF; WOB: 50K; DIFF: 199; GPM: 482				6766 TVD @ 6189 V-SECT W/ 88.74 DIP			
15:30	15:45	0:15	12789	12834	45	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490							
15:45	16:15	0:30				7	RIG SERVICE				TARGET CHANGE @ 07:30 HRS 6-8-14			
16:15	16:25	0:10				10	C/S @ 12,783 INC: 90.4° AZM: 358° DL: 1.14° TEMP: 165°				6764 TVD @ 6845 V-SECT W/ 89.5 DIP			
16:25	17:35	1:10	12834	12874	40	2.B	SLIDE @: 70° R GTF; WOB: 50K; DIFF: 199; GPM: 482							
17:35	18:00	0:25	12874	12929	55	2.A	ROTATE: RPM: 60; WOB: 35K; DIFF: 540; GPM: 490				TARGET CHANGE @ 13:30 HRS 6-8-14			
18:00	18:15	0:15				10	C/S @ 12,878 INC: 89.5° AZM: 359.3° DL: 1.66° TEMP: 163°				6759 TVD @ 7127 V-SECT W/ 90.73 DIP			
18:15	19:35	1:20	12929	12979	50	2.B	SLIDE @: 50° R GTF; WOB: 52K; DIFF: 260; GPM: 532				Estimated Daily Charges			
19:35	19:55	0:20	12979	13024	45	2.A	ROTATE: RPM: 45; WOB: 11K; DIFF: 423; GPM: 486				Description		Cost	
19:55	20:10	0:15				10	C/S @ 12,973 INC: 93.1° AZM: 359.2° DL: 3.79° TEMP: 165°							
20:10	20:25	0:15				5.A	RECYCLE PUMPS. NOISY PUMPS							
20:25	21:30	1:05	13024	13074	50	2.B	SLIDE @: 140° R GTF; WOB: 52K; DIFF: 170; GPM: 540							
21:30	21:45	0:15	13074	13119	45	2.A	ROTATE: RPM: 45; WOB: 23K; DIFF: 583; GPM: 473							
21:45	21:55	0:10				10	C/S @ 13,068 INC: 93.5° AZM: 0.6° DL: 1.53° TEMP: 167°							
21:55	22:10	0:15				5.A	RECYCLE PUMPS. NOISY PUMPS							
22:10	22:55	0:45	13119	13151	32	2.B	SLIDE @: 140° R GTF; WOB: 22K; DIFF: 131; GPM: 507							
22:55	23:00	0:05				10	CHECK SHOT @ 13,100 INC: 93.9° AZM: 0.7° DL: ° TEMP: °							
23:00	23:10	0:10	13151	13166	15	2.A	ROTATE: RPM: 63; WOB: 37K; DIFF: 534; GPM: 503							
23:10	23:20	0:10				10	CHECK SHOT @ 13,115 100 INC: 93.8° AZM: 1.4° DL: ° TEMP: °							
23:20	23:35	0:15	13166	13186	20	2.A	ROTATE: RPM: 63; WOB: 32K; DIFF: 528; GPM: 507				Estimated Daily Cost (USD)		\$ -	
23:35	23:40	0:05				10	CHECK SHOT @ 13,135 ;INC: 94.1° AZM: 1.5° DL: ° TEMP: °				Accumulated Cost (USD)		\$ -	
23:40	23:59	0:19	13186	13191	5	2.B	SLIDE @: 180° R GTF; WOB: 25K; DIFF: 117; GPM: 536				Company Representative (s)			
											JEFF WEST		RODNEY SHULTZ	
											DAVE WALDRUM		MICHEAL AARON	
											RYAN Directional Representative (s)			
											JERRY HAMPTON		JARVIS LEHMANN	
											JAMES RAWLINSON			
											RYAN MWD Representative (s)			
											JAMIE FRICK		SAMBA JARJU	
											24 Hour Breakdown			
							Ftg Rot.	290	Time Rot.	2.00				
							Ftg Orient	257	Time Orient	6.50				
							Rot. ROP	145.00	Orient ROP	39.54				

Report #: 9
Date: 9-Jun-14



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: **EP ENERGY**
Field: **CROCKETT COUNTY, TEXAS**
County, State: **CROCKETT, TEXAS**
AFE or PO #: **160579**

Customer: **EP ENERGY**
Well Name & No.: **UNIVERSITY EAST 4411 JH**
Block or Section: **SECTION 16 BLOCK 44**
Rig Contractor & No.: **SIDEWINDER 221**

00:00 Depth: 13191 Footage Today: 971 Drlg Hrs Today: 11.40 ROP Today: 85.18 Last Casing Set: 9 5/8 INCH
24:00 Depth: 14162 Current Run Ftg: 7164 Run Drlg Hrs: 55.90 Run Avg. ROP: 128.16 Depth: 935 FT

PUMP Data Total Gals/Min = 552				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM			2	BHA #	3	BHA #	Run No.	3		
Liner (in)	6	6		Sample	IN			MOTOR		MOTOR		Size (in.)	6 3/4		
%	95	95		Time	17:00			UBHO		UBHO		Type	7 / 8 6.4 Stg		
Vol (gps)	4.18	4.18	0.00	Wt.	8.70 @ 110°F			NMDC MWD		NMDC (MWD)		Serial No.	675 36 044		
SPM	66	66		VIS	53 @ 110°F			NMDC FLEX (SPACER)		NMDC (SPACER)		Tool Deflection	1.50° FBH		
DRILLING PARAMETERS				PV	14					26 STDS DP		Avg. Diff. Press.	600		
ST. WT. ROT 1000's:	170			YP	17					SHOCK SUB		Daily Drill Hrs.	11.40		
P/U WT. 1000's:	225			WL	8.2 @ 250°F					AGITATOR		Daily Circ. Hrs.	3.00		
S/O WT. 1000's:	120			CL	64,000							Daily Total Hrs:	14.40		
WOB 1000's:	25			Gels	13 / 16 / 20							Acc. Drill Hrs.	55.90		
ROTARY RPM:	55			% Oil	67							Acc. Circ. Hrs.	18.90		
MOTOR RPM:	164			% Solids	5							Depth In	6998		
TOTAL Bit RPM	219			% Sand	NOT REPORTED							Depth Out			
ROT TQ. OFF BTM:	8000			PH	NOT REPORTED							LIH Hrs.	14:25		
ROT TQ. ON BTM:	15200			Temp F	110°F							Acc. LIH Hrs.	89.50		
Current Mag Dec:	6.55°			MWD F	167°F			BHA WT				Acc. Hrs Cir/Drilg	74.80		
Pulse Hight	85			GPM	530			BELOW JARS				Total K Revs	734.53		
"G" Totals	1.001			PSI	3100							Jar # HRS	0		

BIT DATA																		
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	DULL CONDITION								
										IR	OR	DC	LOC	B/S	G/16"	OC	RPLD	
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998												
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR		TD

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:50	0:50	13191	13215	24	2.B	SLIDE @: 180° R GTF; WOB: 25K; DIFF: 117; GPM: 536				DRILL AHEAD IN LATERAL			
0:50	0:55	0:05				5.A	SPR							
0:55	1:10	0:15				10	C/S @ 13,164 INC: 94.3° AZM: 1.4° DL: 1.18° TEMP: 163°				TARGET CHANGE @ 2100 HRS 6-8-14			
1:10	1:25	0:15	13215	13235	20	2.A	ROTATE: RPM: 63; WOB: 11K; DIFF: 269; GPM: 507				6758 TVD @ 7792 V-SECT W/ 90.50 DIP			
1:25	1:35	0:10				10	CHECK SHOT @ 13,184 INC: 94.0° AZM: 1.8° DL: ° TEMP: °							
1:35	2:35	1:00	13235	13268	33	2.A	SLIDE @: 180° R GTF; WOB: 29K; DIFF: 146; GPM: 545				TARGET CHANGE @ 07:30 HRS 6-8-14			
2:35	2:45	0:10				10	CHECK SHOT @ 13,217 INC: 92.7° AZM: 1.7° DL: ° TEMP: °				6764 TVD @ 6845 V-SECT W/ 89.5 DIP			
2:45	3:00	0:15	13268	13310	42	2.A	ROTATE: RPM: 63; WOB: 12K; DIFF: 418; GPM: 494							
3:00	3:15	0:15				10	C/S @ 13,259 INC: 91.6° AZM: 2.6° DL: 3.11° TEMP: 165°				TARGET CHANGE @ 13:30 HRS 6-8-14			
3:15	3:50	0:35	13310	13342	32	2.B	SLIDE @: 170° L GTF; WOB: 41K; DIFF: 235; GPM: 540				6759 TVD @ 7127 V-SECT W/ 90.73 DIP			
3:50	3:55	0:05				10	CHECK SHOT @ 13,291 INC: 90.4° AZM: 1.5° DL: ° TEMP: °				Estimated Daily Charges			
3:55	4:15	0:20	13342	13405	63	2.A	ROTATE: RPM: 62; WOB: 19K; DIFF: 606; GPM: 486				Description		Cost	
4:15	4:30	0:15				10	C/S @ 13,354 INC: 88.2° AZM: 1.5° DL: 3.76° TEMP: 167°							
4:30	4:45	0:15	13405	13436	31	2.A	ROTATE: RPM: 45; WOB: 28K; DIFF: 657; GPM: 477							
4:45	5:00	0:15				10	CHECK SHOT @ 13,385 INC: 88.5° AZM: 1.5							
5:00	5:15	0:15	13436	13499	63	2.A	ROTATE: RPM: 45; WOB: 28K; DIFF: 657; GPM: 477							
5:15	5:25	0:10				10	C/S @ 13,448 INC: 91.1° AZM: 1.5° DL: 3.09° TEMP: 167°							
5:25	6:00	0:35	13499	13529	30	2.B	SLIDE @: 180° GTF; WOB: 41K; DIFF: 235; GPM: 540							
6:00	6:10	0:10				10	CHECK SHOT @ 13,470 INC: 90.3° AZM: 358.8°							
6:10	6:50	0:40	13529	13593	64	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 580							
6:50	7:00	0:10				10	C/S @ 13,542 INC: 91.1° AZM: 1.8° DL: .34° TEMP: 165°							
7:00	7:35	0:35	13593	13687	94	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460							
7:35	7:45	0:10				10	C/S @ 13,636 INC: 90.3° AZM: 359.6° DL: 2.46° TEMP: 168°				Estimated Daily Cost (USD) \$ -			
7:45	8:10	0:25	13687	13781	94	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460				Accumulated Cost (USD) \$ -			
8:10	8:20	0:10				10	C/S @ 13,730 INC: 90.2° AZM: 358.6° DL: 1.07° TEMP: 170°				Company Representative (s)			
8:20	9:30	1:10	13781	13811	30	2.B	SLIDE @: 90° GTF; WOB: 41K; DIFF: 235; GPM: 540				JEFF WEST		RODNEY SHULTZ	
9:30	9:40	0:10	13811	13877	66	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460				DAVE WALDRUM		MICHEAL AARON	
9:40	9:50	0:10				10	C/S @ 13,826 INC: 90.0° AZM: 357.9° DL: .76° TEMP: 168°				RYAN Directional Representative (s)			
9:50	11:00	1:10	13877	13927	50	2.B	SLIDE @: 90° GTF; WOB: 41K; DIFF: 235; GPM: 540				JERRY HAMPTON		JARVIS LEHMANN	
11:00	11:15	0:15	13927	13972	45	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460				JAMES RAWLINSON			
11:15	11:25	0:10				10	C/S @ 13,921 INC: 89.7° AZM: 357.8° DL: .33° TEMP: 167°				RYAN MWD Representative (s)			
11:25	12:40	1:15	13972	14032	60	2.B	SLIDE @: 90° GTF; WOB: 41K; DIFF: 235; GPM: 540				JAMIE FRICK		SAMBA JARJU	
12:40	12:50	0:10	14032	14066	34	2.A	ROTATE: RPM: 50; WOB: 35K; DIFF: 657; GPM: 460							
12:50	13:00	0:10				10	C/S @ 14,015 INC: 89.9° AZM: 359.7° DL: 2.03° TEMP: 165°				24 Hour Breakdown			
13:00	13:45	0:45	14066	14096	30	2.B	SLIDE @: 90° GTF; WOB: 41K; DIFF: 235; GPM: 540				Ftg Rot. 715		Time Rot. 5.10	
13:45	14:15	0:30	14096	14162	66	2.A	ROTATE: RPM: 50; WOB: 35K; DIFF: 657; GPM: 460				Ftg Orient 256		Time Orient 6.30	
14:15	14:25	0:10				10	C/S @ 14,111 INC: 90.1° AZM: .9° DL: 1.27° TEMP: 67°				Rot. ROP 140.20		Orient ROP 40.63	

Report #: 9A

Date: 9-Jun-14



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 7566

DAILY DRILLING REPORT

Oil Company: EP ENERGY
 Field: CROCKETT COUNTY, TEXAS
 County, State: CROCKETT, TEXAS
 AFE or PO #: 160579

Customer: EP ENERGY
 Well Name & No.: UNIVERSITY EAST 4411 JH
 Block or Section: SECTION 16 BLOCK 44
 Rig Contractor & No.: SIDEWINDER 221

00:00 Depth: 14162 Footage Today: 461 Drlg Hrs Today: 2.90 ROP Today: 158.97 Last Casing Set: 9 5/8 INCH
 24:00 Depth: 14623 Current Run Ftg: 7625 Run Drlg Hrs: 58.80 Run Avg. ROP: 129.68 Depth: 935 FT

PUMP Data Total Gals/Min = 552				MUD DATA				Previous		Current		MOTOR DATA		CURRENT	
Pump	NATIONAL	NATIONAL	0	Mud Type	OBM	2	BHA #	3	BHA #	Run No.	3	Run No.	3		
Liner (in)	6	6		Sample	IN					Size (in.)	6 3/4				
%	95	95		Time	17:30					Type	7 / 8 6.4 Stg				
Vol (gps)	4.18	4.18	0.00	Wt.	8.80 @ 120°F					Serial No.	675 36 044				
SPM	66	66		VIS	55 @ 120°F					Tool Deflection	1.50° FBH				
DRILLING PARAMETERS				PV	15					26 STDS DP	Avg. Diff. Press.	650			
ST. WT. ROT 1000's:	170			YP	17					SHOCK SUB	Daily Drill Hrs.	2.90			
P/U WT. 1000's:	225			WL	8.5 @ 250°F					AGITATOR	Daily Circ. Hrs.	5.10			
S/O WT. 1000's:	120			CL	66,000						Daily Total Hrs:	8.00			
WOB 1000's:	25			Gels	14 / 17 / 21						Acc. Drill Hrs.	58.80			
ROTARY RPM:	55			% Oil	67						Acc. Circ. Hrs.	24.00			
MOTOR RPM:	164			% Solids	5.9						Depth In	6998			
TOTAL Bit RPM	219			% Sand	NOT REPORTED						Depth Out	14623			
ROT TQ. OFF BTM:	8000			PH	NOT REPORTED						LIH Hrs.	9:35			
ROT TQ. ON BTM:	15200			Temp F	120°F						Acc. LIH Hrs.	99.08			
Current Mag Dec:	6.55°			MWD F	168°F					BHA WT	Acc. Hrs Cir/Drilg	82.80			
Pulse Hight	85			GPM	530					BELOW JARS	Total K Revs	772.63			
"G" Totals	1.001			PSI	3100						Jar # HRS	0			

BIT DATA														DULL CONDITION					
Bit No.	Size (in)	Mfg.	Type	Serial No.	Nozzles or TFA	Depth In	Cum. Footage	Cum. Hrs.	Depth Out	IR	OR	DC	LOC	B/S	G/16"	OC	RPLD		
3	8.75	ULTERA	U 519 M	21311	7 x 18	6998	7625	58.5	14623									TD	
2	8.75	SMITH	Fhi 21	RA 8656	3 x 18	6248	750	9.7	6998	1	1	WT	A	1	I	RR	TD		

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
14:25	15:25	1:00				7	RIG SERVICE				DRILL AHEAD IN LATERAL			
15:25	16:00	0:35				8	CHANGE OUT SWAB AND LINER							
16:00	16:30	0:30	14162	14256	94	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460				TARGET CHANGE @ 2100 HRS 6-8-14			
16:30	16:40	0:10				10	C/S @ 14,205 INC:90.5° AZM: 359.2° DL: 1.86° TEMP:165°				6758 TVD @ 7792 V-SECT W/ 90.50 DIP			
16:40	16:50	0:10	14256	14286	30	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460							
16:50	17:00	0:10				10	CHECK SHOT @ 14,205 INC:90.0° AZM: 358.6°				TARGET CHANGE @ 07:30 HRS 6-8-14			
17:00	17:35	0:35	14286	14326	40	2.B	SLIDE @: 90° GTF; WOB: 41K; DIFF: 235; GPM: 540				6764 TVD @ 6845 V-SECT W/ 89.5 DIP			
17:35	17:50	0:15	14326	14350	24	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460							
17:50	18:00	0:10				10	C/S @ 14,299 INC:89.8° AZM: 358° DL: 1.48° TEMP: 165°				TARGET CHANGE @ 13:30 HRS 6-8-14			
18:00	18:05	0:05	14350	14380	30	2.A	ROTATE: RPM: 40; WOB: 35K; DIFF: 657; GPM: 460				6759 TVD @ 7127 V-SECT W/ 90.73 DIP			
18:05	18:10	0:05				10	CHECK SHOT @ 14,329 INC: 89.6° AZM: 358.7° DL: ° TEMP:				Estimated Daily Charges			
18:10	18:25	0:15	14380	14444	64	2.A	ROTATE: RPM: 64; WOB: 43K; DIFF: 1047; GPM: 457				Description		Cost	
18:25	18:35	0:10				10	C/S @ 14,393 INC: 90.2° AZM: 358.7° DL: 0.86° TEMP: 167°							
18:35	18:45	0:10				5.A	RECYCLE PUMPS. NOISY PUMPS							
18:45	19:10	0:25	14444	14540	96	2.A	ROTATE: RPM: 64; WOB: 42K; DIFF: 968; GPM: 448							
19:10	19:20	0:10				10	C/S @ 14,489 INC: 89.7° AZM: 356.9° DL: 1.95° TEMP: 167°							
19:20	20:00	0:40	14540	14623	83	2.A	ROTATE: RPM: 64; WOB: 22K; DIFF: 538; GPM: 448 (TD)							
20:00	20:10	0:10				10	SVY @ 14,572 INC: 89.6° AZM: 355.6° DL: 1.57° TEMP: 168°							
20:10	23:59	3:49				5.A	CIRCULATE							
											Estimated Daily Cost (USD) \$ -			
											Accumulated Cost (USD) \$ -			
											Company Representative (s)			
							JEFF WEST		RODNEY SHULTZ					
							DAVE WALDRUM		MICHEAL AARON					
							RYAN Directional Representative (s)							
							JERRY HAMPTON		JARVIS LEHMANN					
							JAMES RAWLINSON							
							RYAN MWD Representative (s)							
							JAMIE FRICK		SAMBA JARJU					
							24 Hour Breakdown							
							Ftg Rot.	421	Time Rot.	2.30				
							Ftg Orient	40	Time Orient	0.60				
							Rot. ROP	183.04	Orient ROP	66.67				



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #1

General Information:		In the Event of an Incident:	
Ryan Job #:	7566	Date of Incident:	
Customer:	EP ENERGY	Date Notified Office:	
Location:	CROCKETT, TEXAS	Person Notified:	
Lease:	SECTION 16 BLOCK 44		
Well Name & Number:	UNIVERSITY EAST 4411 JH		
Rig Name & Number:	SIDEWINDER 221	Incident Comments:	
Directional Driller ('s):	JERRY HAMPTON		
	JARVIS LEHMANN		
Motor Information:		Bit Information:	
Motor Serial #:	675 36 219	Bit Size:	8 3/4
Motor Size (OD):	6 3/4	Bit Type:	T 606 X
Motor Company:	NOV	Bit Manufacture:	HUGHES
Motor Stabilizer Size:	8 1/2	Serial #:	7150533
Degree Bent Housing:	1.5° FBH	Jets / TFA:	6 x 14
Rotor / Stator Conf.:	7 / 8 5.0 Stg	Mud Information End of Run:	
Depth In:	935	Mud Type:	OBM
Depth Out:	6248	Mud Weight:	8.80 @ 88° F
Footage:	5313	Viscosity:	51 @ 88° F
Drilg Hours:	26.6	Plastic Vis:	15
Circulating Hours:	10.7	Yield Point:	16
Total Hours:	37.3	Sand %:	NOT REPORTED
Hours Below Rotary Table (LIH):	52.92	Solids %:	5
Motor Yield:	6.1° / 100 FT	LCM (yes or no):	NO
		% LCM per/BBL:	NA
Start of Run: Date		Static Temp:	NOT REPORTED
	June 2, 2014	Circulating Temp:	129° F
GPM'S:	586	OBM Aniline Point:	NOT REPORTED
Standpipe Press / Off Bottom:	1800		
Standpipe Press / On Bottom:	2500		
Weight on Bit Avg :	30K		
End Of Run: Date			
	June 4, 2014		
GPM'S:	586		
Standpipe Press / Off Bottom:	2300		
Standpipe Press / On Bottom:	2600		
Weight on Bit Avg :	20K		
Comments			
GOOD RUN. MINIMAL STALLS. MOTOR PERFORMED WELL. MOTOR DRAINED GOOD AND ROTATION WAS SMOOTH. TENSION GAP WAS NORMAL.			



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #2

General Information:		In the Event of an Incident:	
Ryan Job #:	7566	Date of Incident:	
Customer:	EP ENERGY	Date Notified Office:	
Location:	CROCKETT, TEXAS	Person Notified:	
Lease:	SECTION 16 BLOCK 44		
Well Name & Number:	UNIVERSITY EAST 4411 JH		
Rig Name & Number:	SIDEWINDER 221	Incident Comments:	
Directional Driller ('s):	JERRY HAMPTON JARVIS LEHMANN		
Motor Information:		Bit Information:	
Motor Serial #:	MM390 675 0015	Bit Size:	8 3/4
Motor Size (OD):	6 3/4	Bit Type:	FHi21
Motor Company:	NOV	Bit Manufacture:	SMITH
Motor Stabilizer Size:	SLICK	Serial #:	RA8656
Degree Bent Housing:	2.12° FBH	Jets / TFA:	3 X 18
Rotor / Stator Conf.:	4/5 7.0 STG		
Depth In:	6248	Mud Information End of Run:	
Depth Out:	6998	Mud Type:	OBM
Footage:	750	Mud Weight:	8.80 @ 88° F
Drilg Hours:	9.7	Viscosity:	51 @ 88° F
Circulating Hours:	6.2	Plastic Vis:	15
Total Hours:	15.9	Yield Point:	16
Hours Below Rotary Table (LIH):	20.5	Sand %:	NOT REPORTED
Motor Yield:	7 \ 14 (12 AVG)	Solids %:	5
		LCM (yes or no):	NO
Start of Run: Date	June 2, 2014	% LCM per/BBL:	NA
GPM'S:	477	Static Temp:	NOT REPORTED
Standpipe Press / Off Bottom:	1800	Circulating Temp:	129° F
Standpipe Press / On Bottom:	2400	OBM Aniline Point:	NOT REPORTED
Weight on Bit Avg :	30K		
End Of Run: Date	June 5, 2014		
GPM'S:	450		
Standpipe Press / Off Bottom:	1500		
Standpipe Press / On Bottom:	2000		
Weight on Bit Avg :	40K		
Comments			
GOOD RUN NO STALLS. MOTOR PERFORMED WELL. MOTOR DRAINED GOOD. ROTATION WAS SMOOTH. TENSION GAP WAS NORMAL.			



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #3

General Information:		In the Event of an Incident:	
Ryan Job #:	7566	Date of Incident:	
Customer:	EP ENERGY	Date Notified Office:	
Location:	CROCKETT, TEXAS	Person Notified:	
Lease:	SECTION 16 BLOCK 44		
Well Name & Number:	UNIVERSITY EAST 4411 JH		
Rig Name & Number:	SIDEWINDER 221	Incident Comments:	
Directional Driller ('s):	JERRY HAMPTON		
	JARVIS LEHMANN		
Motor Information:		Bit Information:	
Motor Serial #:	675 36 044	Bit Size:	8 3/4
Motor Size (OD):	6 3/4	Bit Type:	U519M
Motor Company:	NOV	Bit Manufacture:	ULTERA
Motor Stabilizer Size:	SLICK	Serial #:	21311
Degree Bent Housing:	1.5° FBH	Jets / TFA:	7 X 18
Rotor / Stator Conf.:	7/8 6.4 STG		
Depth In:	6998	Mud Information End of Run:	
Depth Out:	14623	Mud Type:	OBM
Footage:	7625	Mud Weight:	8.8
Drilg Hours:	58.6	Viscosity:	55
Circulating Hours:	29	Plastic Vis:	15
Total Hours:	87.6	Yield Point:	17
Hours Below Rotary Table (LIH):	122.25	Sand %:	NOT REPORTED
Motor Yield:	3.91° / 100 FT	Solids %:	5.9
		LCM (yes or no):	No
		% LCM per/BBL:	NA
		Static Temp:	120
		Circulating Temp:	168
		OBM Aniline Point:	NOT REPORTED
Start of Run: Date	June 6, 2014		
GPM'S:	586		
Standpipe Press / Off Bottom:	2950		
Standpipe Press / On Bottom:	3315		
Weight on Bit Avg :	25,000		
End Of Run: Date	June 10, 2014		
GPM'S:	530		
Standpipe Press / Off Bottom:	3100		
Standpipe Press / On Bottom:	3750		
Weight on Bit Avg :	25,000		

Comments

GOOD RUN. NO ISSUES. BUILD RATES WERE AS EXPECTED FROM THIS ASSEMBLY BUT BORDERLINE ADEQUATE FOR THE FORMATION. MOTOR DRAINED GOOD; ROTATION WAS SMOOTH. MOTOR TENSION GAP WAS NORMAL. THE BIT WAS TRASHED ON THE SHOULDER BUT IN GAGE.

EP ENERGY
UNIVERSITY EAST 4411 JH

Drilling Time Only

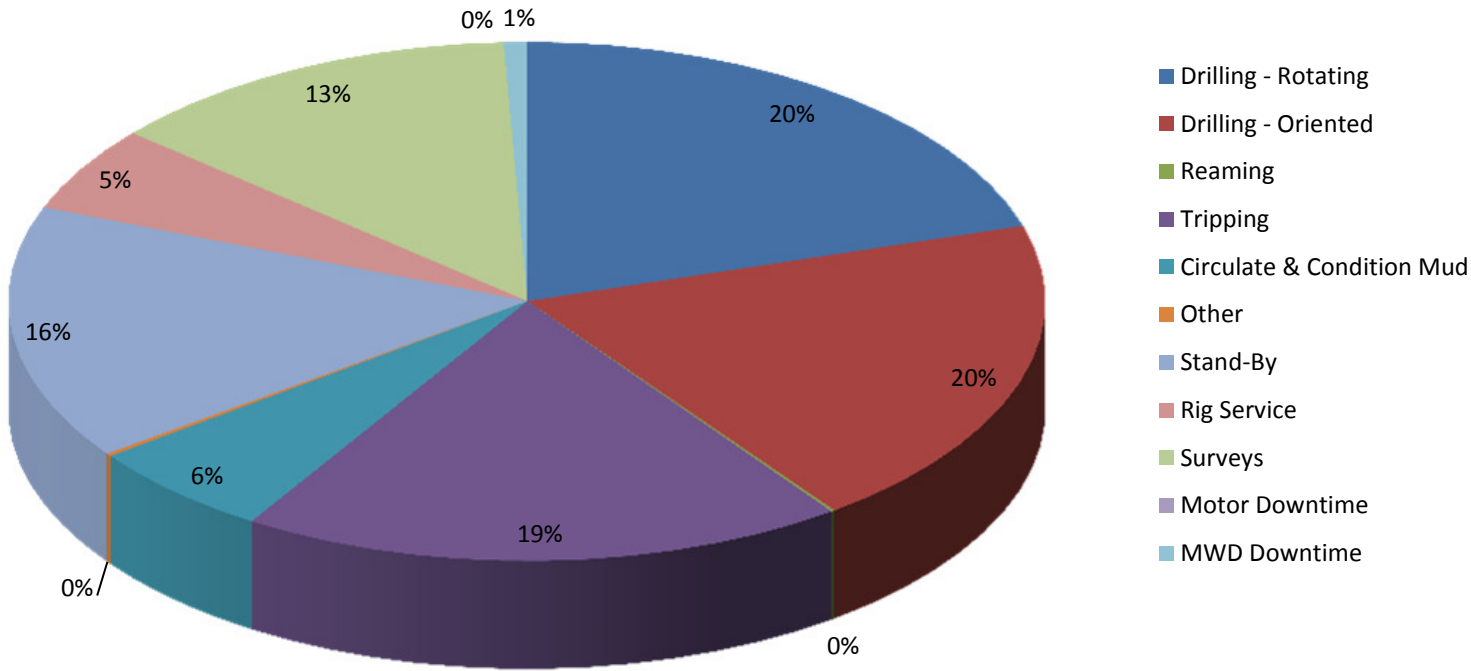
	Rotating Ftg	Rotating Hrs	Rotating ROP	Rotating %	Slide Ftg	Slide Hrs	Slide ROP	Slide %	Total Ftg	Total Hrs	Avg ROP
Vertical Hole	4949.00	20.24	244.52	92.25%	416.00	7.61	54.66	7.75%	5365.00	27.85	192.64
Curve	72.00	0.50	144.00	9.47%	688.00	8.58	80.19	90.53%	760.00	9.08	83.70
Lateral	5634.00	27.85	202.30	74.49%	1929.00	30.69	62.85	25.51%	7563.00	58.54	129.19

Start Depth: 935

Date	Day	Depth	KOP / EOC	Ftg. Today	Ftg. Oriented	Ftg. Rotating	Drilling - Rotating	Drilling - Oriented	Reaming	Tripping	Circulate & Condition Mud	Other	Stand-By	Rig Service	Surveys	Motor Downtime	MWD Downtime	Run Casing, Testing BOP	Fishing	Total Hours
6/1/2014	1	935		0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	23.98	0.00	0.00	0.00	0.00	0.00	0.00	24.00
6/2/2014	2	1177		242	15	227	1.23	0.17	0.25	4.17	0.08	0.25	14.00	3.25	0.58	0.00	0.00	0.00	0.00	24.00
6/3/2014	3	5109		3932	274	3658	11.90	4.08	0.00	0.00	0.08	0.00	0.00	1.42	6.50	0.00	0.00	0.00	0.00	24.00
6/4/2014	4	6248		1139	75	1064	7.08	2.25	0.00	9.57	1.92	0.00	0.00	1.33	1.83	0.00	0.00	0.00	0.00	24.00
6/5/2014	5	6998	KOP @ 6300	750	740	10	0.25	9.67	0.00	8.48	1.67	0.00	0.00	0.00	3.92	0.00	0.00	0.00	0.00	24.00
6/6/2014	6	8911	EOC @ 7060	1913	432	1481	5.82	4.50	0.00	4.50	0.17	0.00	0.00	3.50	3.75	0.00	1.75	0.00	0.00	24.00
6/7/2014	7	11733		2822	585	2237	9.33	6.73	0.00	0.00	0.58	0.00	0.00	1.17	6.17	0.00	0.00	0.00	0.00	24.00
6/8/2014	8	13191		1458	616	842	5.50	12.55	0.00	0.00	0.83	0.17	0.00	0.50	4.42	0.00	0.00	0.00	0.00	24.00
6/9/2014	9	14623		1432	296	1136	7.42	6.92	0.00	0.00	4.07	0.00	0.00	1.58	4.00	0.00	0.00	0.00	0.00	24.00
6/10/2014	10	14623		0	0	0	0.00	0.00	0.00	18.42	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.20
				13688	3033	10655	48.53	46.87	0.25	45.13	14.15	0.42	37.98	12.75	31.17	0.00	1.75	0.00	0.00	239.20

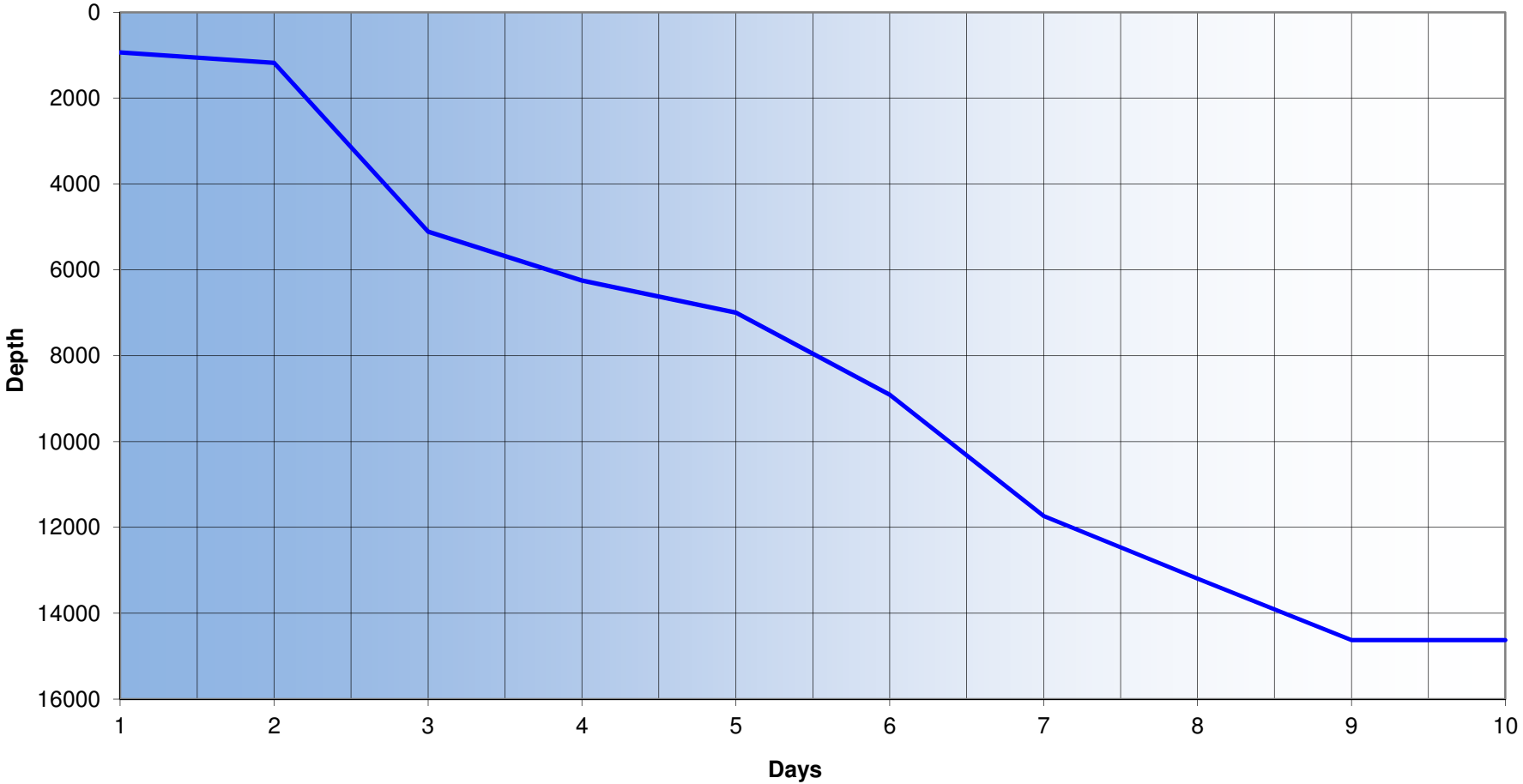
**EP ENERGY
UNIVERSITY EAST 4411 JH**

TIME BREAKDOWN



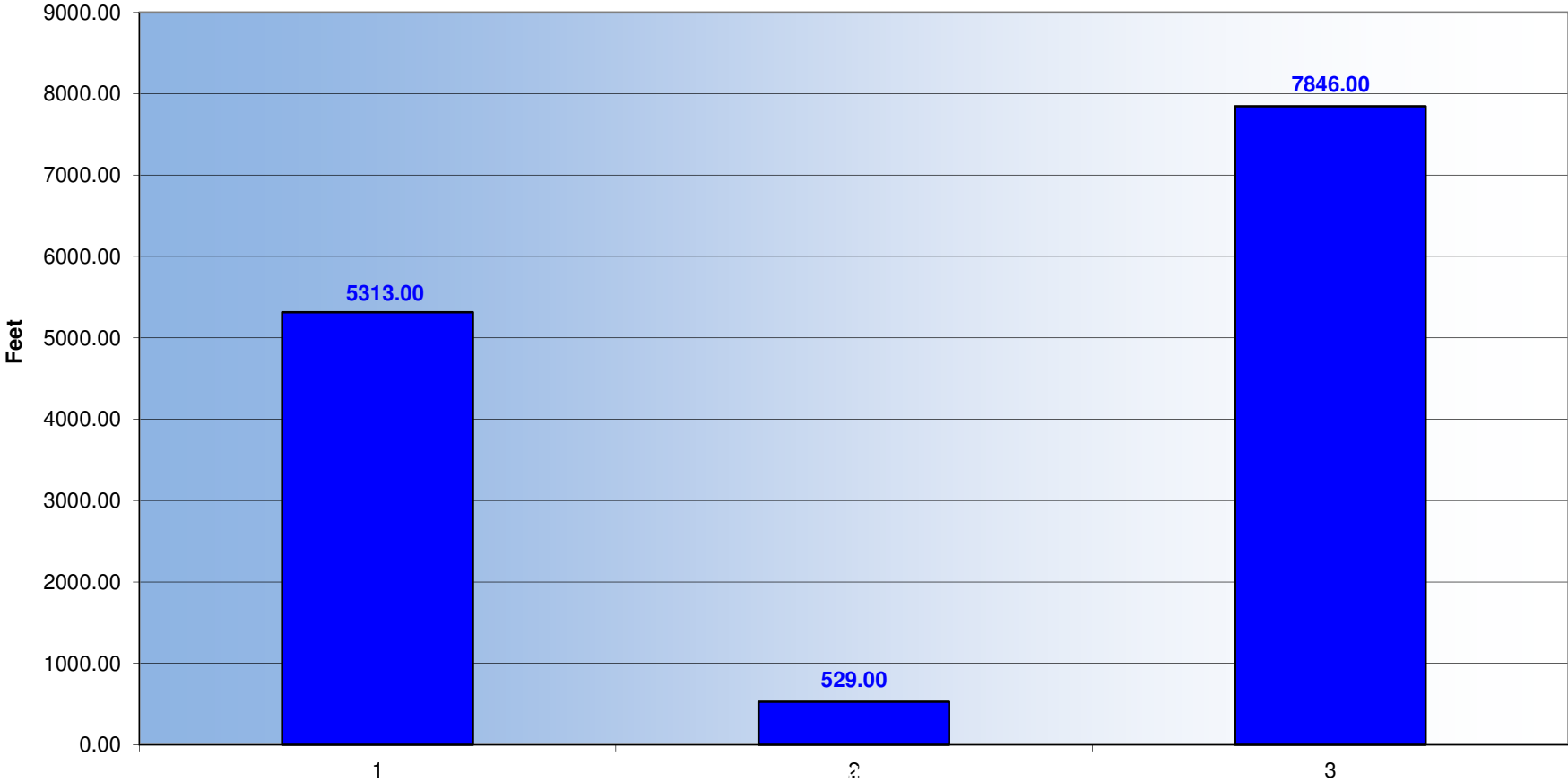
**EP ENERGY
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Days vs. Depth



**EP ENERGY
UNIVERSITY EAST 4411 JH**

Footage Per BHA

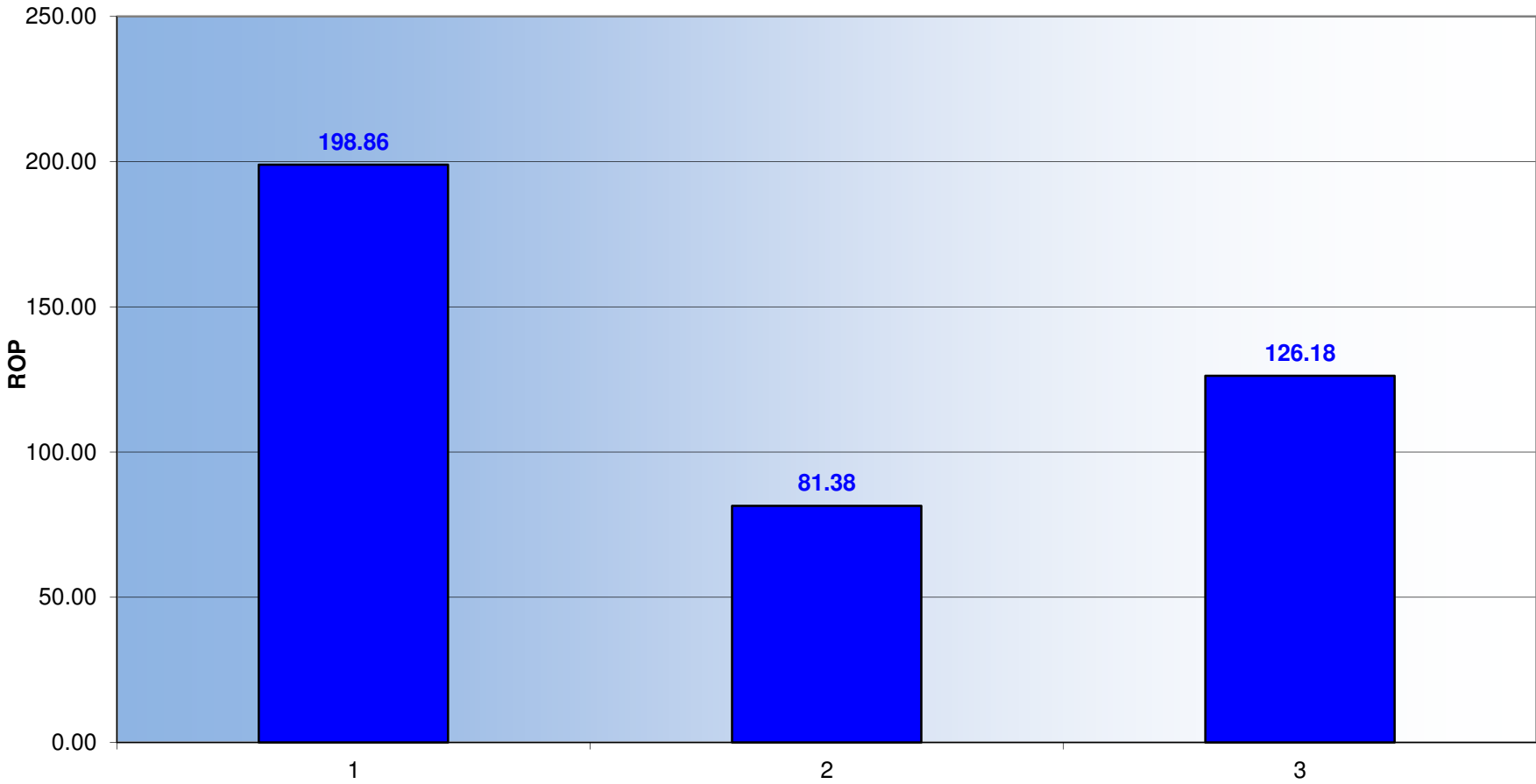


RYAN DIRECTIONAL SERVICES, INC.

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**EP ENERGY
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Average Rate of Penetration Per BHA

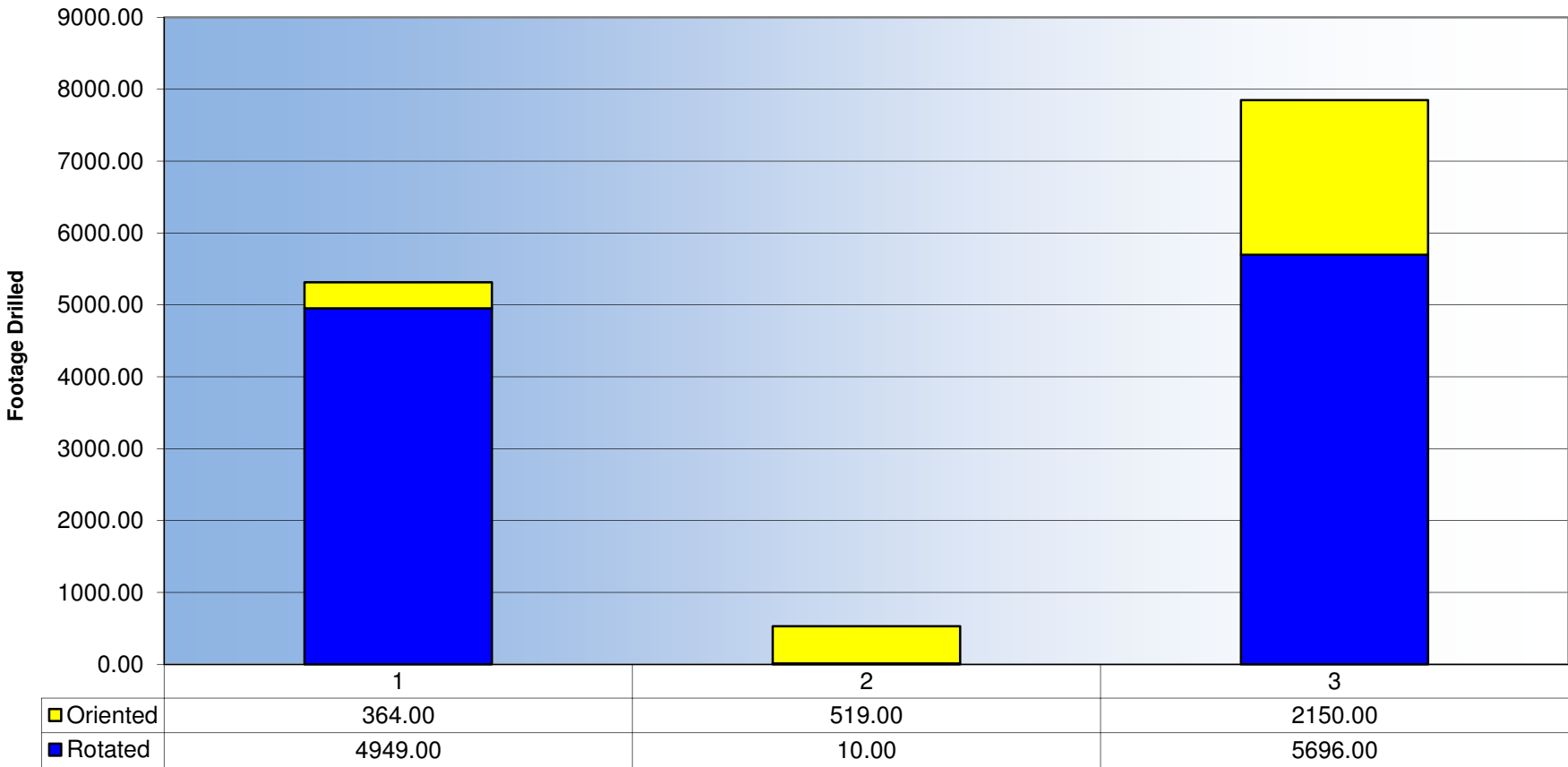


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**EP ENERGY
UNIVERSITY EAST 4411 JH**

Oriented vs. Rotated

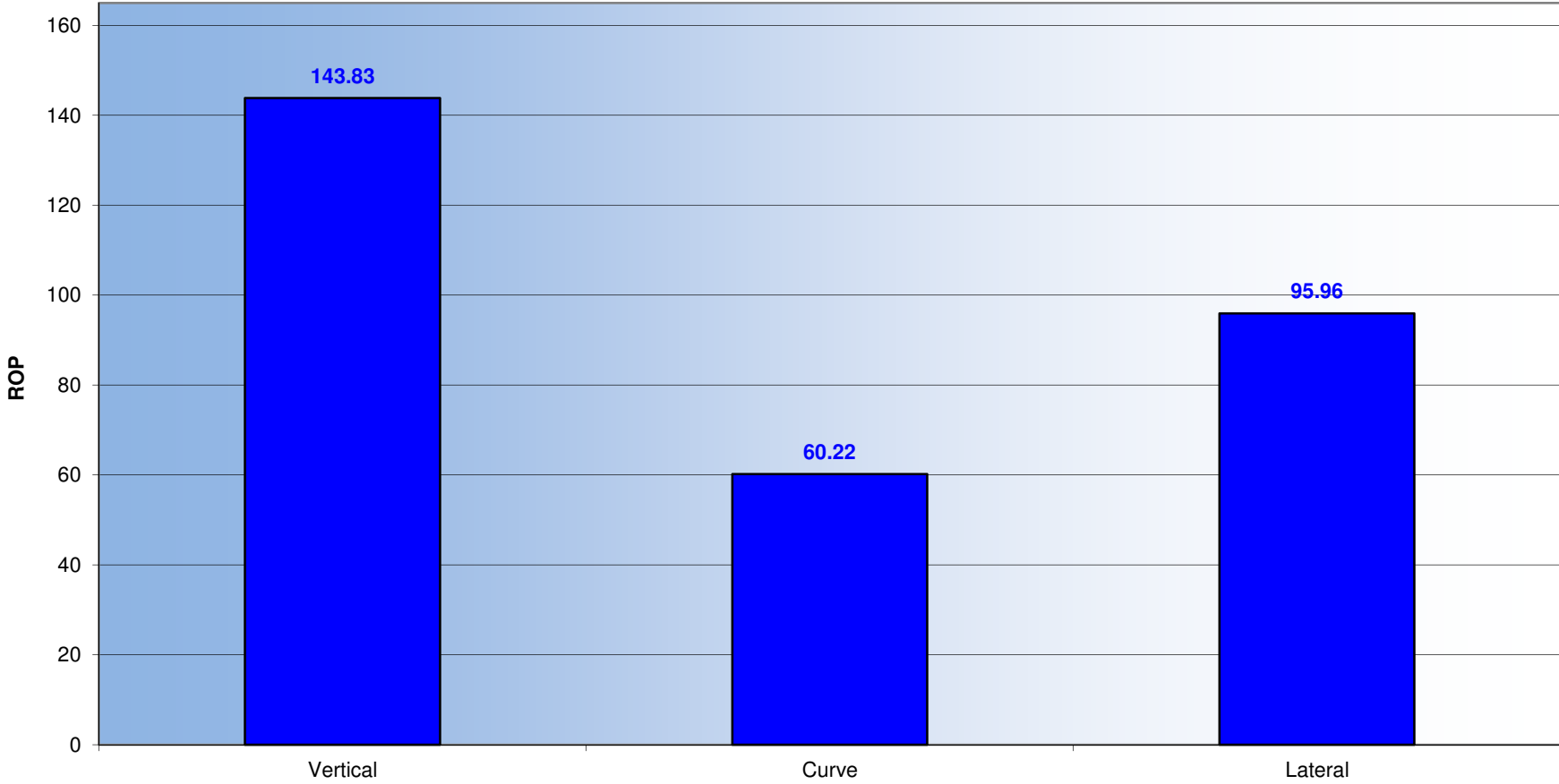


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**EP ENERGY
UNIVERSITY EAST 4411 JH**

Vertical, Curve, and Lateral Average ROP

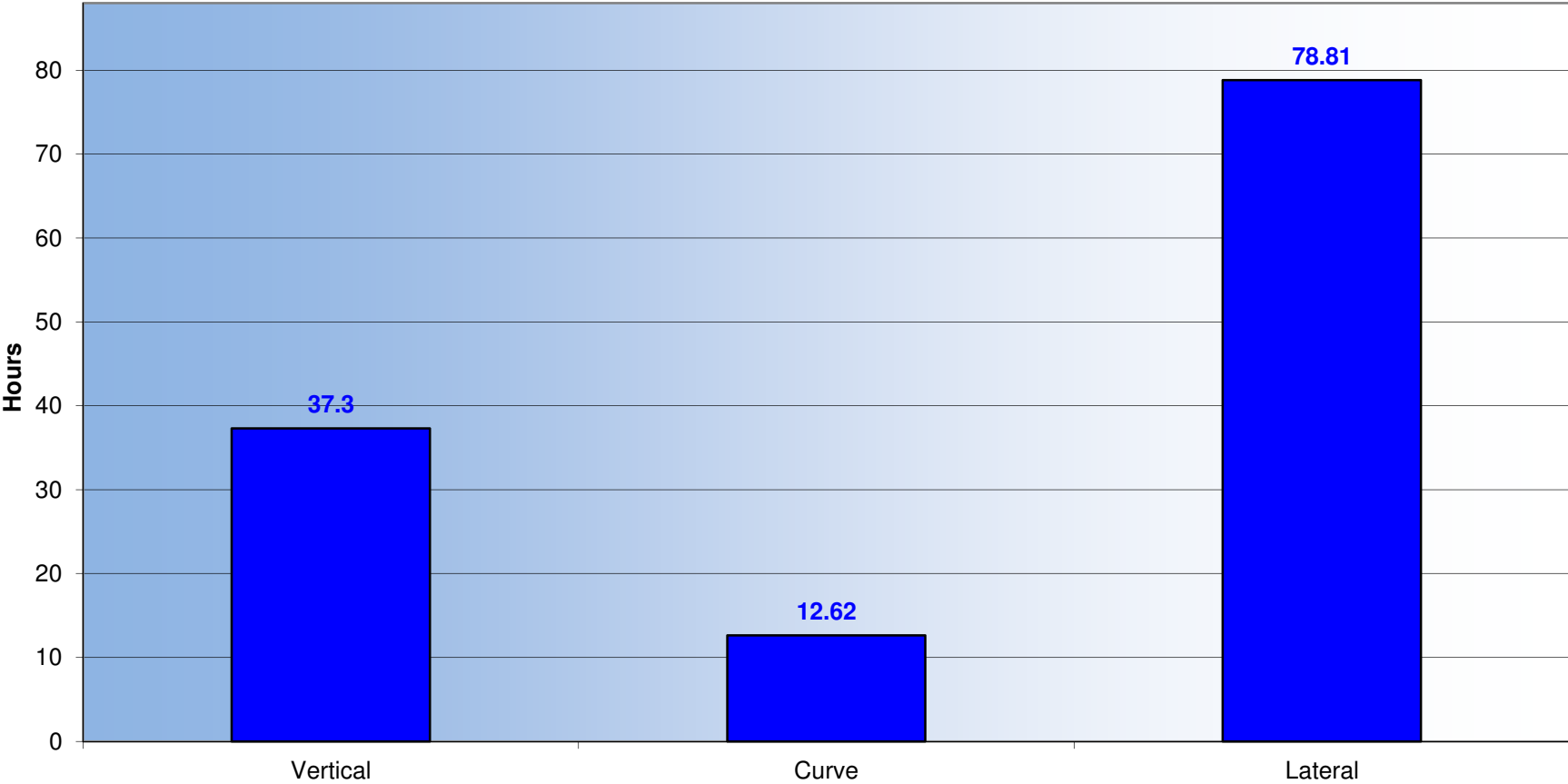


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**EP ENERGY
UNIVERSITY EAST 4411 JH**

Vertical, Curve, and Lateral Hours

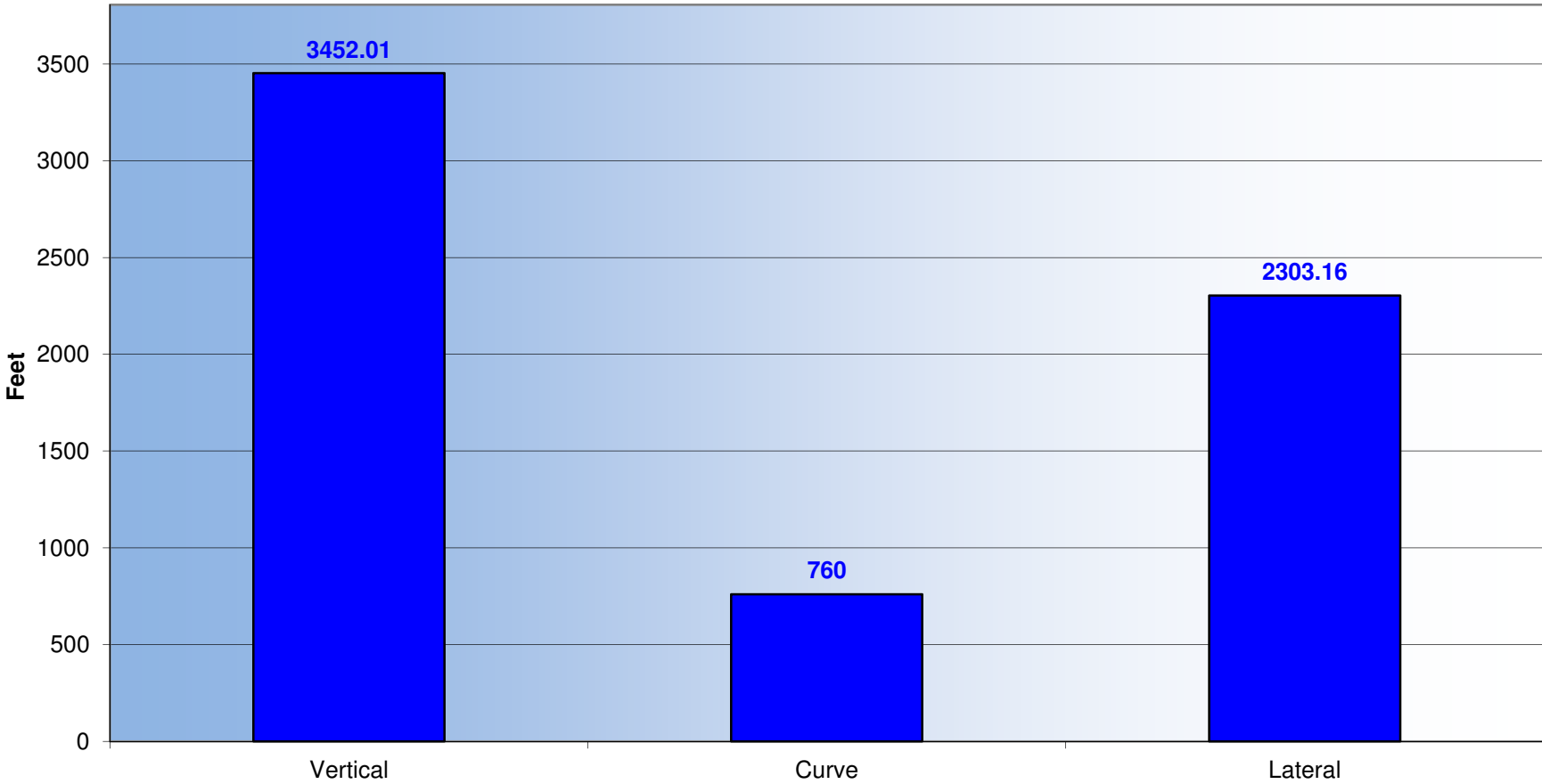


RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

**EP ENERGY
UNIVERSITY EAST 4411 JH**

Vertical, Curve, and Lateral Average Footage Per Day



RYAN DIRECTIONAL SERVICES, INC.

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