



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

**Ryan Directional Services
Directional Drilling Report
Field: Crockett Co, Tx
Site: University Salt Draw 4102
Well: BH
Wellpath: Wellbore #1**

Prepared For:

EP ENERGY 

**Ryan Directional Services
19510 Oil Center BLVD.
Houston, TX 77073
Ph: 281-443-1414
Fx: 281-443-1476
www.nabors.com**



PROJECT DETAILS: Crockett Co, Tx
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Texas Central 4203

System Datum: Mean Sea Level
Local North: Grid

Project: Crockett Co, Tx
Site: University Salt Draw 4102
Well: BH
Wellbore: Wellbore #1
Plan: Plan 2 (BH/Wellbore #1)

WELL DETAILS: BH

Ground Elevation: 2629.00
RKB Elevation: WELL @ 2654.00ft (Original Well Elev)
Rig Name: Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	499208.19	1746773.29	31° 2' 12.41 N	101° 8' 30.84 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
865.00	1.63	58.26	864.92	4.96	8.49	0.00	0.00	4.99	
973.67	0.00	0.00	973.57	5.77	9.80	1.50	180.00	5.81	
1100.00	0.00	0.00	1099.91	5.77	9.80	0.00	0.00	5.81	
1600.00	10.00	203.00	1597.37	-34.29	-7.21	2.00	203.00	-34.31	
1750.00	10.00	203.00	1745.09	-58.27	-17.38	0.00	0.00	-58.32	
2250.00	0.00	0.00	2242.56	-98.33	-34.39	2.00	180.00	-98.44	
6301.00	0.00	0.00	6293.56	-98.33	-34.39	0.00	0.00	-98.44	
6634.33	40.00	0.19	6600.47	13.38	-34.02	12.00	0.19	13.26	
6948.02	89.50	0.19	6730.15	288.35	-33.11	15.78	0.00	288.24	
14952.76	89.50	0.19	6800.00	8292.74	-6.54	0.00	0.00	8292.67	4102BH - BHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
4102BH - BHL	6800.00	8292.74	-6.54	507500.91	1746766.75
4102BH - FTP	6735.00	591.13	-31.46	499799.32	1746741.83

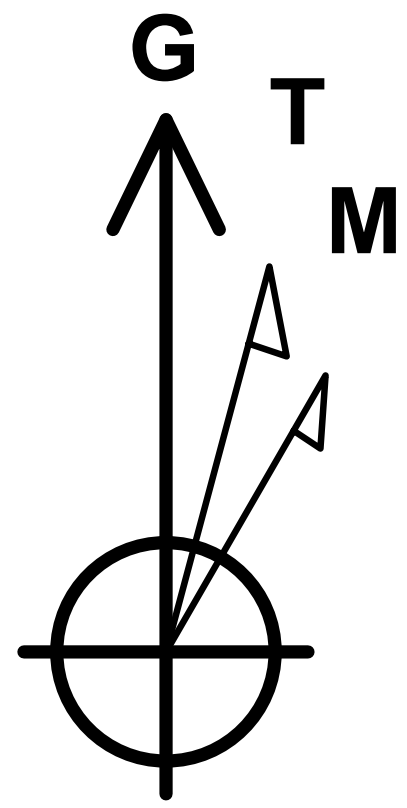
Targetline

6730' TVD @ 0° Vs

6800' TVD @ BHL

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
6293.56	6301.00	0.00	0.00	-98.33	-34.39	-98.44	114.64	KOP: 12° /100'
6600.47	6634.33	40.00	0.19	13.37	-34.02	13.26	226.34	Build: 15.78° /100'
6730.15	6948.02	89.50	0.19	288.35	-33.11	288.24	501.32	EOC: Hold Inc & Azm

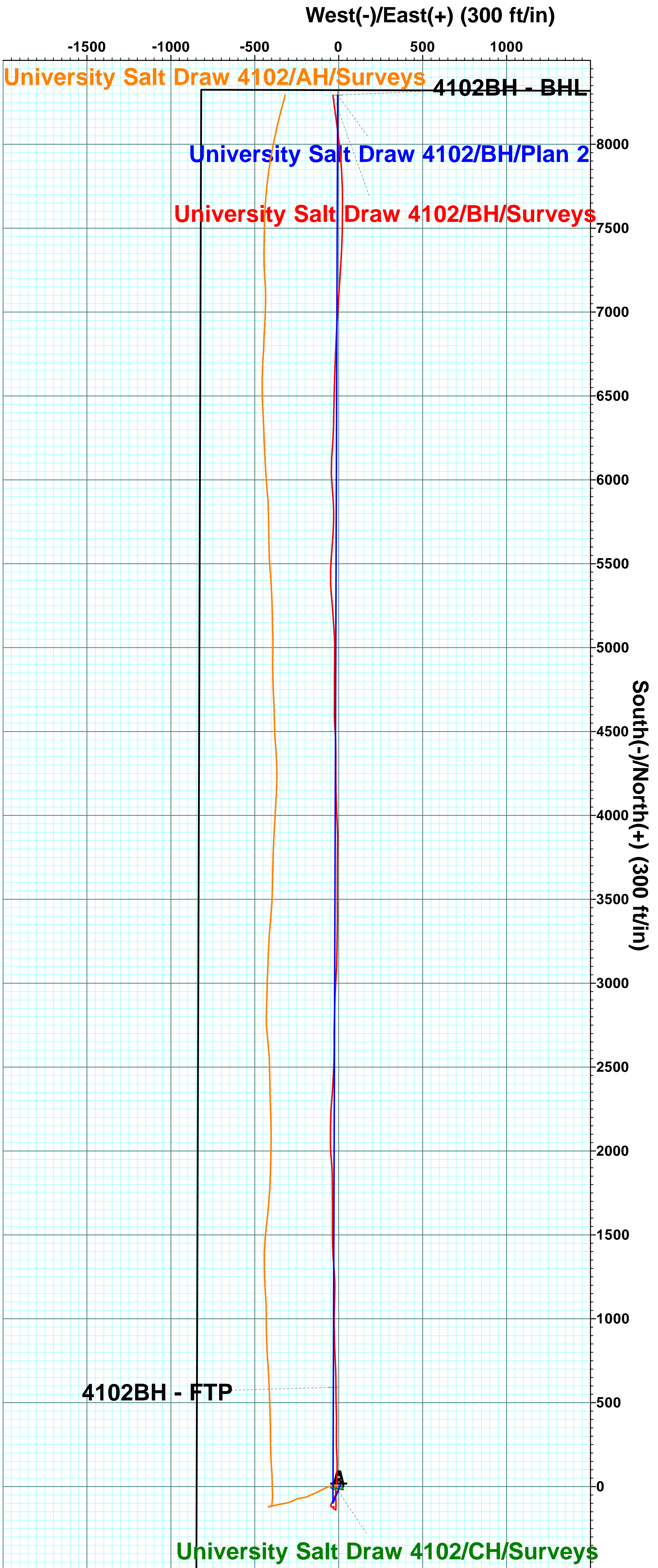
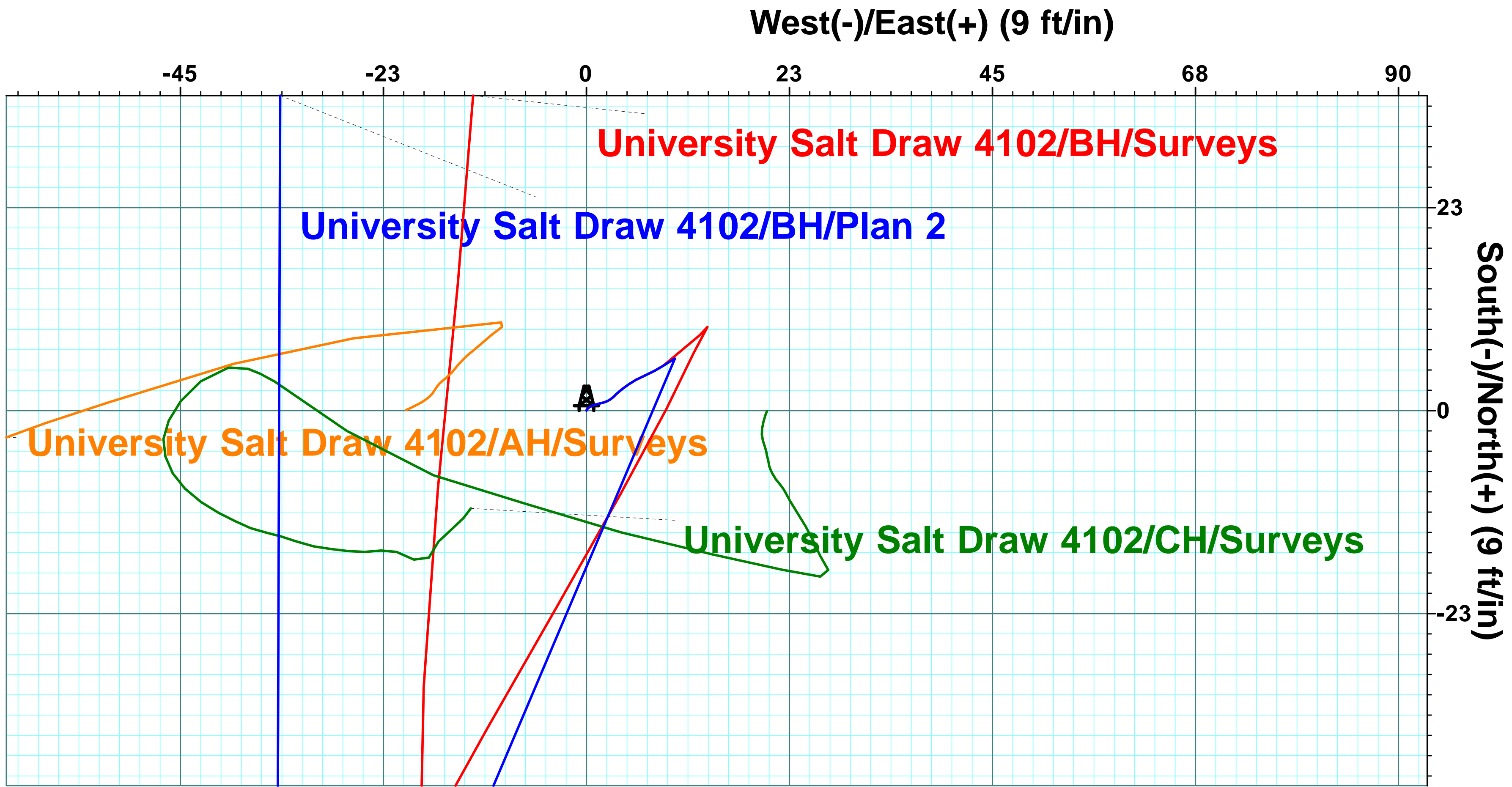
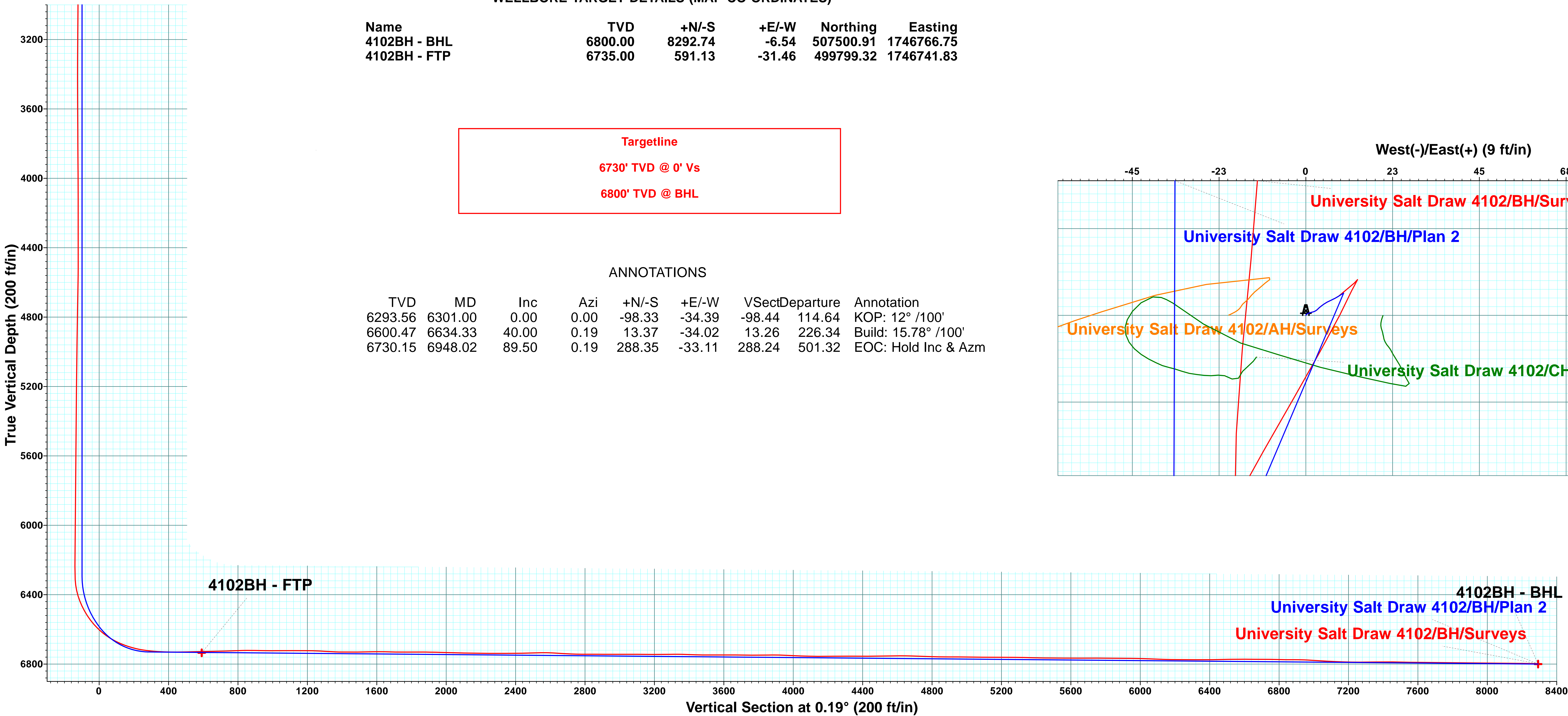


Azimuths to Grid North
True North: 0.42°
Magnetic North: 6.41°

Magnetic Field
Strength: 47744.4snT
Dip Angle: 59.36°
Date: 12/29/2014
Model: BGGM2014



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY





EP Energy E&P Company, L.P.

**Crockett Co, Tx
University Salt Draw 4102
BH**

Wellbore #1

Design: Surveys

Standard Survey Report

26 January, 2015



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Project	Crockett Co, Tx, Crockett Co, Tx		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University Salt Draw 4102		
Site Position:		Northing:	499,208.26 usft
From:	Map	Easting:	1,746,753.29 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	31° 2' 12.40 N
		Longitude:	101° 8' 31.07 W
		Grid Convergence:	-0.42 °

Well	BH		
Well Position	+N-S	0.00 ft	Northing: 499,208.19 usft
	+E-W	0.00 ft	Easting: 1,746,773.29 usft
Position Uncertainty		2.00 ft	Wellhead Elevation: 0.00 ft
			Ground Level: 2,629.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	12/29/2014	6.00	59.36	47,744

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)	
	0.00	0.00	0.00		0.19

Survey Program	Date	1/26/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
25.00	865.00	Survey #1 (Wellbore #1)	Gyro NS R5000	Continuous north-seeking gyro on wireline	
1,055.00	14,986.00	Survey #2 (Wellbore #1)	Ryan-MWD+BGGM	OWSG MWD - BGGM	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	
75.00	0.25	21.79	75.00	0.10	0.04	0.10	0.50	0.50	0.00	
125.00	0.29	54.03	125.00	0.28	0.18	0.28	0.31	0.08	64.48	
175.00	0.48	57.69	175.00	0.46	0.46	0.46	0.38	0.38	7.32	
225.00	0.60	75.32	225.00	0.64	0.89	0.64	0.41	0.24	35.26	
275.00	0.62	75.85	274.99	0.77	1.41	0.78	0.04	0.04	1.06	
325.00	0.56	76.32	324.99	0.90	1.91	0.90	0.12	-0.12	0.94	
375.00	0.47	57.74	374.99	1.07	2.32	1.07	0.38	-0.18	-37.16	
425.00	0.44	66.42	424.99	1.25	2.67	1.26	0.15	-0.06	17.36	

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Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
475.00	0.51	36.42	474.99	1.51	2.98	1.52	0.51	0.14	-60.00
525.00	0.47	52.93	524.98	1.81	3.27	1.82	0.29	-0.08	33.02
575.00	0.58	47.52	574.98	2.10	3.62	2.12	0.24	0.22	-10.82
625.00	0.74	53.15	624.98	2.47	4.07	2.48	0.34	0.32	11.26
675.00	1.04	55.11	674.97	2.92	4.70	2.94	0.60	0.60	3.92
725.00	1.09	61.00	724.96	3.41	5.49	3.43	0.24	0.10	11.78
775.00	1.31	67.36	774.95	3.86	6.43	3.88	0.51	0.44	12.72
825.00	1.52	61.04	824.94	4.40	7.54	4.43	0.52	0.42	-12.64
865.00	1.63	58.26	864.92	4.96	8.49	4.99	0.33	0.28	-6.95
1,055.00	1.60	41.80	1,054.85	8.36	12.55	8.40	0.24	-0.02	-8.66
1,086.00	1.50	43.40	1,085.84	8.98	13.12	9.02	0.35	-0.32	5.16
1,181.00	1.00	222.90	1,180.83	9.27	13.41	9.32	2.63	-0.53	188.95
1,275.00	3.10	203.10	1,274.76	6.33	11.85	6.37	2.33	2.23	-21.06
1,368.00	5.40	207.60	1,367.50	0.14	8.84	0.17	2.50	2.47	4.84
1,463.00	7.50	208.90	1,461.89	-9.25	3.77	-9.24	2.22	2.21	1.37
1,557.00	9.90	209.90	1,554.81	-21.63	-3.22	-21.64	2.56	2.55	1.06
1,652.00	9.20	209.60	1,648.49	-35.31	-11.05	-35.35	0.74	-0.74	-0.32
1,746.00	10.70	207.20	1,741.07	-49.61	-18.75	-49.67	1.66	1.60	-2.55
1,841.00	10.50	205.10	1,834.45	-65.29	-26.45	-65.38	0.46	-0.21	-2.21
1,935.00	9.80	204.40	1,926.98	-80.33	-33.39	-80.44	0.76	-0.74	-0.74
2,029.00	8.00	208.00	2,019.85	-93.39	-39.76	-93.52	2.00	-1.91	3.83
2,124.00	7.00	195.30	2,114.04	-104.81	-44.40	-104.96	2.03	-1.05	-13.37
2,218.00	4.20	195.20	2,207.58	-113.66	-46.81	-113.82	2.98	-2.98	-0.11
2,313.00	0.70	121.00	2,302.49	-117.32	-47.22	-117.48	4.28	-3.68	-78.11
2,407.00	0.90	112.10	2,396.48	-117.89	-46.05	-118.05	0.25	0.21	-9.47
2,501.00	0.90	117.70	2,490.47	-118.51	-44.71	-118.66	0.09	0.00	5.96
2,596.00	0.90	114.30	2,585.46	-119.17	-43.37	-119.31	0.06	0.00	-3.58
2,690.00	1.10	119.90	2,679.44	-119.92	-41.92	-120.06	0.24	0.21	5.96
2,784.00	1.40	120.80	2,773.42	-120.96	-40.15	-121.09	0.32	0.32	0.96
2,879.00	0.30	241.30	2,868.41	-121.67	-39.37	-121.80	1.66	-1.16	126.84
2,973.00	0.10	148.50	2,962.41	-121.86	-39.54	-121.99	0.34	-0.21	-98.72
3,068.00	0.70	123.50	3,057.41	-122.25	-39.01	-122.38	0.64	0.63	-26.32
3,163.00	0.80	125.10	3,152.40	-122.95	-37.99	-123.08	0.11	0.11	1.68
3,257.00	0.80	110.60	3,246.39	-123.56	-36.84	-123.68	0.21	0.00	-15.43
3,350.00	1.00	110.40	3,339.38	-124.07	-35.47	-124.19	0.22	0.22	-0.22
3,444.00	1.10	99.60	3,433.36	-124.51	-33.81	-124.62	0.24	0.11	-11.49
3,537.00	0.80	317.30	3,526.36	-124.18	-33.37	-124.29	1.94	-0.32	-153.01
3,632.00	0.30	343.90	3,621.35	-123.45	-33.89	-123.57	0.58	-0.53	28.00
3,726.00	0.40	54.90	3,715.35	-123.03	-33.69	-123.14	0.44	0.11	75.53
3,821.00	0.60	58.20	3,810.35	-122.58	-32.99	-122.69	0.21	0.21	3.47
3,914.00	0.60	61.80	3,903.34	-122.09	-32.15	-122.20	0.04	0.00	3.87
4,007.00	0.70	34.60	3,996.34	-121.39	-31.40	-121.50	0.34	0.11	-29.25
4,102.00	0.40	50.50	4,091.33	-120.70	-30.81	-120.81	0.35	-0.32	16.74

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Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,196.00	0.70	108.80	4,185.33	-120.68	-30.02	-120.78	0.63	0.32	62.02
4,291.00	0.70	90.00	4,280.32	-120.87	-28.89	-120.96	0.24	0.00	-19.79
4,385.00	0.30	64.90	4,374.32	-120.76	-28.09	-120.86	0.48	-0.43	-26.70
4,479.00	0.10	2.60	4,468.32	-120.58	-27.86	-120.67	0.29	-0.21	-66.28
4,572.00	1.10	233.50	4,561.31	-121.03	-28.58	-121.12	1.25	1.08	-138.82
4,665.00	1.40	219.80	4,654.29	-122.43	-30.02	-122.53	0.45	0.32	-14.73
4,759.00	1.20	214.40	4,748.27	-124.12	-31.31	-124.23	0.25	-0.21	-5.74
4,849.00	1.00	199.10	4,838.25	-125.64	-32.10	-125.75	0.39	-0.22	-17.00
4,943.00	0.80	191.80	4,932.24	-127.06	-32.51	-127.17	0.24	-0.21	-7.77
5,038.00	0.80	166.20	5,027.23	-128.36	-32.48	-128.46	0.37	0.00	-26.95
5,132.00	0.90	150.60	5,121.22	-129.64	-31.96	-129.74	0.27	0.11	-16.60
5,227.00	0.70	139.70	5,216.21	-130.73	-31.22	-130.83	0.26	-0.21	-11.47
5,321.00	0.90	127.40	5,310.20	-131.61	-30.26	-131.71	0.28	0.21	-13.09
5,415.00	0.80	122.40	5,404.19	-132.41	-29.12	-132.51	0.13	-0.11	-5.32
5,509.00	0.80	125.90	5,498.18	-133.15	-28.04	-133.24	0.05	0.00	3.72
5,603.00	0.80	124.70	5,592.17	-133.91	-26.97	-134.00	0.02	0.00	-1.28
5,697.00	1.10	120.30	5,686.16	-134.74	-25.65	-134.82	0.33	0.32	-4.68
5,791.00	1.00	117.90	5,780.14	-135.58	-24.14	-135.66	0.12	-0.11	-2.55
5,885.00	1.00	118.80	5,874.13	-136.36	-22.70	-136.43	0.02	0.00	0.96
5,979.00	0.90	120.10	5,968.12	-137.12	-21.34	-137.19	0.11	-0.11	1.38
6,074.00	1.00	128.80	6,063.10	-138.02	-20.05	-138.08	0.18	0.11	9.16
6,168.00	0.80	119.90	6,157.09	-138.86	-18.84	-138.92	0.26	-0.21	-9.47
6,247.00	1.10	122.60	6,236.08	-139.54	-17.73	-139.60	0.38	0.38	3.42
6,324.00	2.90	1.10	6,313.05	-137.99	-17.07	-138.05	4.67	2.34	-157.79
6,356.00	7.70	359.30	6,344.90	-135.04	-17.08	-135.09	15.01	15.00	-5.63
6,387.00	12.20	0.60	6,375.43	-129.68	-17.07	-129.74	14.53	14.52	4.19
6,419.00	16.60	2.10	6,406.42	-121.73	-16.87	-121.78	13.80	13.75	4.69
6,451.00	21.30	1.30	6,436.67	-111.34	-16.57	-111.40	14.71	14.69	-2.50
6,482.00	25.40	359.40	6,465.13	-99.06	-16.51	-99.11	13.45	13.23	-6.13
6,513.00	28.90	357.30	6,492.71	-84.93	-16.93	-84.98	11.70	11.29	-6.77
6,545.00	32.80	356.60	6,520.18	-68.54	-17.81	-68.60	12.24	12.19	-2.19
6,577.00	37.10	359.40	6,546.40	-50.23	-18.42	-50.29	14.34	13.44	8.75
6,608.00	41.40	2.70	6,570.40	-30.63	-18.04	-30.69	15.42	13.87	10.65
6,640.00	45.40	5.40	6,593.65	-8.71	-16.47	-8.76	13.78	12.50	8.44
6,671.00	49.70	5.70	6,614.57	14.05	-14.25	14.00	13.89	13.87	0.97
6,702.00	54.00	3.60	6,633.72	38.34	-12.29	38.30	14.86	13.87	-6.77
6,734.00	58.40	2.20	6,651.51	64.89	-10.95	64.86	14.22	13.75	-4.38
6,765.00	62.60	1.20	6,666.78	91.86	-10.16	91.82	13.84	13.55	-3.23
6,796.00	66.40	0.50	6,680.12	119.83	-9.75	119.79	12.43	12.26	-2.26
6,828.00	70.10	358.70	6,691.98	149.54	-9.96	149.51	12.69	11.56	-5.63
6,860.00	73.10	357.50	6,702.08	179.89	-10.97	179.85	10.03	9.38	-3.75
6,915.00	78.80	357.70	6,715.42	233.17	-13.20	233.13	10.37	10.36	0.36
6,946.00	82.40	359.10	6,720.49	263.74	-14.05	263.69	12.44	11.61	4.52

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,041.00	87.30	1.20	6,729.01	358.32	-13.80	358.27	5.61	5.16	2.21
7,135.00	90.40	358.10	6,730.90	452.28	-14.38	452.23	4.66	3.30	-3.30
7,229.00	92.10	359.70	6,728.85	546.23	-16.18	546.17	2.48	1.81	1.70
7,323.00	90.20	359.10	6,726.96	640.20	-17.16	640.14	2.12	-2.02	-0.64
7,417.00	92.50	357.40	6,724.75	734.12	-20.03	734.05	3.04	2.45	-1.81
7,512.00	91.30	357.90	6,721.60	828.99	-23.93	828.90	1.37	-1.26	0.53
7,606.00	88.20	358.90	6,722.01	922.94	-26.55	922.84	3.47	-3.30	1.06
7,700.00	90.70	0.30	6,722.91	1,016.92	-27.21	1,016.82	3.05	2.66	1.49
7,794.00	89.80	2.70	6,722.50	1,110.88	-24.75	1,110.79	2.73	-0.96	2.55
7,888.00	89.70	359.10	6,722.91	1,204.85	-23.27	1,204.77	3.83	-0.11	-3.83
7,982.00	86.20	355.20	6,726.27	1,298.64	-27.93	1,298.54	5.57	-3.72	-4.15
8,045.00	87.50	356.10	6,729.74	1,361.36	-32.71	1,361.25	2.51	2.06	1.43
8,171.00	91.40	359.70	6,730.94	1,487.23	-37.32	1,487.10	4.21	3.10	2.86
8,266.00	90.80	0.50	6,729.12	1,582.21	-37.15	1,582.08	1.05	-0.63	0.84
8,361.00	88.30	359.20	6,729.87	1,677.20	-37.40	1,677.06	2.97	-2.63	-1.37
8,456.00	90.50	0.20	6,730.86	1,772.18	-37.90	1,772.05	2.54	2.32	1.05
8,551.00	89.60	358.60	6,730.78	1,867.17	-38.89	1,867.03	1.93	-0.95	-1.68
8,646.00	88.40	354.00	6,732.44	1,961.93	-45.02	1,961.77	5.00	-1.26	-4.84
8,741.00	88.30	0.80	6,735.18	2,056.74	-49.33	2,056.57	7.16	-0.11	7.16
8,835.00	89.30	359.80	6,737.15	2,150.72	-48.83	2,150.54	1.50	1.06	-1.06
8,930.00	89.40	3.80	6,738.22	2,245.65	-45.85	2,245.48	4.21	0.11	4.21
9,026.00	90.40	5.10	6,738.39	2,341.35	-38.40	2,341.21	1.71	1.04	1.35
9,121.00	90.70	1.90	6,737.48	2,436.16	-32.60	2,436.04	3.38	0.32	-3.37
9,216.00	92.20	3.20	6,735.07	2,531.03	-28.38	2,530.92	2.09	1.58	1.37
9,312.00	86.00	358.30	6,736.58	2,626.93	-27.12	2,626.83	8.23	-6.46	-5.10
9,407.00	87.70	1.60	6,741.80	2,721.77	-27.20	2,721.67	3.90	1.79	3.47
9,501.00	90.40	1.20	6,743.36	2,815.72	-24.91	2,815.62	2.90	2.87	-0.43
9,596.00	89.20	1.80	6,743.69	2,910.69	-22.42	2,910.60	1.41	-1.26	0.63
9,691.00	90.80	4.00	6,743.69	3,005.56	-17.61	3,005.48	2.86	1.68	2.32
9,786.00	89.30	2.20	6,743.61	3,100.41	-12.48	3,100.35	2.47	-1.58	-1.89
9,880.00	89.60	0.30	6,744.51	3,194.38	-10.43	3,194.33	2.05	0.32	-2.02
9,975.00	91.20	1.50	6,743.85	3,289.36	-8.93	3,289.31	2.11	1.68	1.26
10,069.00	87.80	359.70	6,744.67	3,383.34	-7.95	3,383.29	4.09	-3.62	-1.91
10,164.00	88.90	0.00	6,747.41	3,478.29	-8.20	3,478.25	1.20	1.16	0.32
10,259.00	91.10	359.30	6,747.41	3,573.29	-8.78	3,573.24	2.43	2.32	-0.74
10,353.00	88.90	1.00	6,747.41	3,667.28	-8.53	3,667.23	2.96	-2.34	1.81
10,448.00	89.50	0.60	6,748.73	3,762.26	-7.21	3,762.21	0.76	0.63	-0.42
10,544.00	91.30	0.10	6,748.06	3,858.25	-6.62	3,858.21	1.95	1.88	-0.52
10,639.00	87.10	356.80	6,749.39	3,953.17	-9.19	3,953.12	5.62	-4.42	-3.47
10,733.00	88.00	357.90	6,753.41	4,046.98	-13.53	4,046.91	1.51	0.96	1.17
10,829.00	89.60	358.90	6,755.42	4,142.92	-16.21	4,142.84	1.97	1.67	1.04
10,924.00	91.10	359.70	6,754.84	4,237.91	-17.37	4,237.83	1.79	1.58	0.84
11,019.00	89.40	0.30	6,754.42	4,332.90	-17.37	4,332.82	1.90	-1.79	0.63
11,114.00	90.00	358.90	6,754.92	4,427.89	-18.03	4,427.81	1.60	0.63	-1.47

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,209.00	91.50	355.70	6,753.68	4,522.77	-22.50	4,522.67	3.72	1.58	-3.37
11,304.00	90.00	0.10	6,752.43	4,617.67	-25.98	4,617.56	4.89	-1.58	4.63
11,399.00	87.80	0.30	6,754.26	4,712.64	-25.65	4,712.53	2.33	-2.32	0.21
11,494.00	88.20	359.80	6,757.57	4,807.59	-25.57	4,807.47	0.67	0.42	-0.53
11,589.00	90.30	1.00	6,758.81	4,902.57	-24.91	4,902.46	2.55	2.21	1.26
11,684.00	89.00	0.00	6,759.40	4,997.56	-24.08	4,997.45	1.73	-1.37	-1.05
11,779.00	89.60	356.00	6,760.56	5,092.48	-27.39	5,092.36	4.26	0.63	-4.21
11,874.00	90.10	356.40	6,760.81	5,187.27	-33.69	5,187.13	0.67	0.53	0.42
11,968.00	89.30	354.80	6,761.30	5,280.98	-40.90	5,280.82	1.90	-0.85	-1.70
12,063.00	88.30	356.30	6,763.29	5,375.67	-48.27	5,375.48	1.90	-1.05	1.58
12,157.00	89.70	3.50	6,764.93	5,469.59	-48.43	5,469.40	7.80	1.49	7.66
12,252.00	89.50	4.30	6,765.59	5,564.37	-41.97	5,564.20	0.87	-0.21	0.84
12,346.00	90.30	4.00	6,765.76	5,658.12	-35.17	5,657.98	0.91	0.85	-0.32
12,441.00	89.90	1.40	6,765.59	5,753.01	-30.69	5,752.88	2.77	-0.42	-2.74
12,536.00	89.20	357.40	6,766.34	5,847.98	-31.69	5,847.84	4.27	-0.74	-4.21
12,632.00	89.80	355.10	6,767.18	5,943.77	-37.97	5,943.61	2.48	0.63	-2.40
12,726.00	87.50	357.90	6,769.39	6,037.55	-43.70	6,037.37	3.85	-2.45	2.98
12,820.00	88.20	4.20	6,772.92	6,131.42	-41.98	6,131.25	6.74	0.74	6.70
12,915.00	90.10	4.10	6,774.33	6,226.15	-35.11	6,226.00	2.00	2.00	-0.11
13,009.00	89.30	1.00	6,774.82	6,320.05	-30.93	6,319.91	3.41	-0.85	-3.30
13,104.00	90.80	1.00	6,774.74	6,415.03	-29.27	6,414.90	1.58	1.58	0.00
13,199.00	91.70	1.40	6,772.67	6,509.99	-27.28	6,509.86	1.04	0.95	0.42
13,293.00	89.10	1.70	6,772.01	6,603.94	-24.74	6,603.82	2.78	-2.77	0.32
13,388.00	90.10	2.10	6,772.67	6,698.88	-21.59	6,698.78	1.13	1.05	0.42
13,483.00	88.40	2.80	6,773.92	6,793.79	-17.53	6,793.69	1.94	-1.79	0.74
13,577.00	90.30	2.90	6,774.98	6,887.66	-12.85	6,887.58	2.02	2.02	0.11
13,672.00	86.30	3.90	6,777.80	6,982.43	-7.22	6,982.37	4.34	-4.21	1.05
13,767.00	86.90	3.50	6,783.44	7,077.06	-1.10	7,077.02	0.76	0.63	-0.42
13,861.00	88.20	4.10	6,787.45	7,170.77	5.12	7,170.75	1.52	1.38	0.64
13,956.00	89.80	2.90	6,789.11	7,265.57	10.92	7,265.57	2.11	1.68	-1.26
14,051.00	91.50	3.70	6,788.03	7,360.41	16.39	7,360.42	1.98	1.79	0.84
14,145.00	88.80	0.90	6,787.79	7,454.31	20.16	7,454.34	4.14	-2.87	-2.98
14,240.00	89.00	0.70	6,789.61	7,549.28	21.48	7,549.31	0.30	0.21	-0.21
14,334.00	89.50	0.40	6,790.84	7,643.27	22.39	7,643.30	0.62	0.53	-0.32
14,429.00	89.60	358.80	6,791.59	7,738.26	21.72	7,738.29	1.69	0.11	-1.68
14,524.00	89.20	356.00	6,792.58	7,833.15	17.41	7,833.17	2.98	-0.42	-2.95
14,619.00	89.20	355.30	6,793.91	7,927.87	10.21	7,927.86	0.74	0.00	-0.74
14,714.00	89.80	353.30	6,794.74	8,022.39	0.78	8,022.35	2.20	0.63	-2.11
14,809.00	89.60	352.00	6,795.24	8,116.60	-11.38	8,116.52	1.38	-0.21	-1.37
14,904.00	89.00	352.60	6,796.40	8,210.74	-24.11	8,210.62	0.89	-0.63	0.63
Last Survey Taken									
14,986.00	89.00	352.60	6,797.83	8,292.04	-34.66	8,291.88	0.00	0.00	0.00
Projection to Bit									

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
14,904.00	6,796.40	8,210.74	-24.11	Last Survey Taken
14,986.00	6,797.83	8,292.04	-34.66	Projection to Bit

Checked By: _____	Approved By: _____	Date: _____
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EP Energy E&P Company, L.P.

**Crockett Co, Tx
University Salt Draw 4102
BH
Wellbore #1**

Design: Surveys

Completion Report

26 January, 2015



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Project	Crockett Co, Tx, Crockett Co, Tx		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University Salt Draw 4102		
Site Position:		Northing:	499,208.26 usft
From:	Map	Easting:	1,746,753.29 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	31° 2' 12.40 N
		Longitude:	101° 8' 31.07 W
		Grid Convergence:	-0.42 °

Well		BH				
Well Position	+N-S	0.00 ft	Northing:	499,208.19 usft	Latitude:	31° 2' 12.41 N
	+E-W	0.00 ft	Easting:	1,746,773.29 usft	Longitude:	101° 8' 30.84 W
Position Uncertainty		2.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	2,629.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	12/29/2014	6.00	59.36	47,744

Design	Surveys			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.19

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey Program		Date 1/26/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
25.00	865.00	Survey #1 (Wellbore #1)	Gyro NS R5000	Continuous north-seeking gyro on wireline
1,055.00	14,986.00	Survey #2 (Wellbore #1)	Ryan-MWD+BGGM	OWSG MWD - BGGM

Survey												
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00			
75.00	0.25	21.79	75.00	0.10	0.04	0.10	0.50	0.11	21.79			
125.00	0.29	54.03	125.00	0.28	0.18	0.28	0.31	0.33	33.52			
175.00	0.48	57.69	175.00	0.46	0.46	0.46	0.38	0.65	44.98			
225.00	0.60	75.32	225.00	0.64	0.89	0.64	0.41	1.10	54.31			
275.00	0.62	75.85	274.99	0.77	1.41	0.78	0.04	1.61	61.21			
325.00	0.56	76.32	324.99	0.90	1.91	0.90	0.12	2.11	64.80			
375.00	0.47	57.74	374.99	1.07	2.32	1.07	0.38	2.55	65.33			
425.00	0.44	66.42	424.99	1.25	2.67	1.26	0.15	2.95	64.88			
475.00	0.51	36.42	474.99	1.51	2.98	1.52	0.51	3.34	63.14			
525.00	0.47	52.93	524.98	1.81	3.27	1.82	0.29	3.74	61.05			
575.00	0.58	47.52	574.98	2.10	3.62	2.12	0.24	4.19	59.85			
625.00	0.74	53.15	624.98	2.47	4.07	2.48	0.34	4.76	58.74			
675.00	1.04	55.11	674.97	2.92	4.70	2.94	0.60	5.53	58.12			
725.00	1.09	61.00	724.96	3.41	5.49	3.43	0.24	6.46	58.12			
775.00	1.31	67.36	774.95	3.86	6.43	3.88	0.51	7.50	59.00			
825.00	1.52	61.04	824.94	4.40	7.54	4.43	0.52	8.73	59.70			
865.00	1.63	58.26	864.92	4.96	8.49	4.99	0.33	9.83	59.69			
1,055.00	1.60	41.80	1,054.85	8.36	12.55	8.40	0.24	15.08	56.34			
1,086.00	1.50	43.40	1,085.84	8.98	13.12	9.02	0.35	15.90	55.62			

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
1,181.00	1.00	222.90	1,180.83	9.27	13.41	9.32	2.63	16.30	55.33	
1,275.00	3.10	203.10	1,274.76	6.33	11.85	6.37	2.33	13.44	61.88	
1,368.00	5.40	207.60	1,367.50	0.14	8.84	0.17	2.50	8.84	89.08	
1,463.00	7.50	208.90	1,461.89	-9.25	3.77	-9.24	2.22	9.99	157.82	
1,557.00	9.90	209.90	1,554.81	-21.63	-3.22	-21.64	2.56	21.87	188.48	
1,652.00	9.20	209.60	1,648.49	-35.31	-11.05	-35.35	0.74	37.00	197.37	
1,746.00	10.70	207.20	1,741.07	-49.61	-18.75	-49.67	1.66	53.03	200.70	
1,841.00	10.50	205.10	1,834.45	-65.29	-26.45	-65.38	0.46	70.44	202.05	
1,935.00	9.80	204.40	1,926.98	-80.33	-33.39	-80.44	0.76	86.99	202.57	
2,029.00	8.00	208.00	2,019.85	-93.39	-39.76	-93.52	2.00	101.50	203.06	
2,124.00	7.00	195.30	2,114.04	-104.81	-44.40	-104.96	2.03	113.83	202.96	
2,218.00	4.20	195.20	2,207.58	-113.66	-46.81	-113.82	2.98	122.92	202.38	
2,313.00	0.70	121.00	2,302.49	-117.32	-47.22	-117.48	4.28	126.47	201.93	
2,407.00	0.90	112.10	2,396.48	-117.89	-46.05	-118.05	0.25	126.57	201.34	
2,501.00	0.90	117.70	2,490.47	-118.51	-44.71	-118.66	0.09	126.67	200.67	
2,596.00	0.90	114.30	2,585.46	-119.17	-43.37	-119.31	0.06	126.81	200.00	
2,690.00	1.10	119.90	2,679.44	-119.92	-41.92	-120.06	0.24	127.04	199.27	
2,784.00	1.40	120.80	2,773.42	-120.96	-40.15	-121.09	0.32	127.45	198.36	
2,879.00	0.30	241.30	2,868.41	-121.67	-39.37	-121.80	1.66	127.88	197.93	
2,973.00	0.10	148.50	2,962.41	-121.86	-39.54	-121.99	0.34	128.12	197.98	
3,068.00	0.70	123.50	3,057.41	-122.25	-39.01	-122.38	0.64	128.33	197.70	
3,163.00	0.80	125.10	3,152.40	-122.95	-37.99	-123.08	0.11	128.69	197.17	
3,257.00	0.80	110.60	3,246.39	-123.56	-36.84	-123.68	0.21	128.94	196.60	
3,350.00	1.00	110.40	3,339.38	-124.07	-35.47	-124.19	0.22	129.04	195.95	
3,444.00	1.10	99.60	3,433.36	-124.51	-33.81	-124.62	0.24	129.02	195.19	
3,537.00	0.80	317.30	3,526.36	-124.18	-33.37	-124.29	1.94	128.59	195.04	
3,632.00	0.30	343.90	3,621.35	-123.45	-33.89	-123.57	0.58	128.02	195.35	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey										
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)	
3,726.00	0.40	54.90	3,715.35	-123.03	-33.69	-123.14	0.44	127.56	195.31	
3,821.00	0.60	58.20	3,810.35	-122.58	-32.99	-122.69	0.21	126.94	195.07	
3,914.00	0.60	61.80	3,903.34	-122.09	-32.15	-122.20	0.04	126.25	194.75	
4,007.00	0.70	34.60	3,996.34	-121.39	-31.40	-121.50	0.34	125.39	194.50	
4,102.00	0.40	50.50	4,091.33	-120.70	-30.81	-120.81	0.35	124.57	194.32	
4,196.00	0.70	108.80	4,185.33	-120.68	-30.02	-120.78	0.63	124.36	193.97	
4,291.00	0.70	90.00	4,280.32	-120.87	-28.89	-120.96	0.24	124.27	193.44	
4,385.00	0.30	64.90	4,374.32	-120.76	-28.09	-120.86	0.48	123.99	193.09	
4,479.00	0.10	2.60	4,468.32	-120.58	-27.86	-120.67	0.29	123.75	193.01	
4,572.00	1.10	233.50	4,561.31	-121.03	-28.58	-121.12	1.25	124.35	193.29	
4,665.00	1.40	219.80	4,654.29	-122.43	-30.02	-122.53	0.45	126.06	193.78	
4,759.00	1.20	214.40	4,748.27	-124.12	-31.31	-124.23	0.25	128.01	194.16	
4,849.00	1.00	199.10	4,838.25	-125.64	-32.10	-125.75	0.39	129.68	194.33	
4,943.00	0.80	191.80	4,932.24	-127.06	-32.51	-127.17	0.24	131.15	194.35	
5,038.00	0.80	166.20	5,027.23	-128.36	-32.48	-128.46	0.37	132.40	194.20	
5,132.00	0.90	150.60	5,121.22	-129.64	-31.96	-129.74	0.27	133.52	193.85	
5,227.00	0.70	139.70	5,216.21	-130.73	-31.22	-130.83	0.26	134.40	193.43	
5,321.00	0.90	127.40	5,310.20	-131.61	-30.26	-131.71	0.28	135.05	192.95	
5,415.00	0.80	122.40	5,404.19	-132.41	-29.12	-132.51	0.13	135.58	192.40	
5,509.00	0.80	125.90	5,498.18	-133.15	-28.04	-133.24	0.05	136.07	191.89	
5,603.00	0.80	124.70	5,592.17	-133.91	-26.97	-134.00	0.02	136.60	191.39	
5,697.00	1.10	120.30	5,686.16	-134.74	-25.65	-134.82	0.33	137.16	190.78	
5,791.00	1.00	117.90	5,780.14	-135.58	-24.14	-135.66	0.12	137.71	190.10	
5,885.00	1.00	118.80	5,874.13	-136.36	-22.70	-136.43	0.02	138.23	189.45	
5,979.00	0.90	120.10	5,968.12	-137.12	-21.34	-137.19	0.11	138.77	188.85	
6,074.00	1.00	128.80	6,063.10	-138.02	-20.05	-138.08	0.18	139.46	188.27	
6,168.00	0.80	119.90	6,157.09	-138.86	-18.84	-138.92	0.26	140.13	187.73	

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
6,247.00	1.10	122.60	6,236.08	-139.54	-17.73	-139.60	0.38	140.66	187.24
6,324.00	2.90	1.10	6,313.05	-137.99	-17.07	-138.05	4.67	139.04	187.05
6,356.00	7.70	359.30	6,344.90	-135.04	-17.08	-135.09	15.01	136.11	187.21
6,387.00	12.20	0.60	6,375.43	-129.68	-17.07	-129.74	14.53	130.80	187.50
6,419.00	16.60	2.10	6,406.42	-121.73	-16.87	-121.78	13.80	122.89	187.89
6,451.00	21.30	1.30	6,436.67	-111.34	-16.57	-111.40	14.71	112.57	188.46
6,482.00	25.40	359.40	6,465.13	-99.06	-16.51	-99.11	13.45	100.43	189.46
6,513.00	28.90	357.30	6,492.71	-84.93	-16.93	-84.98	11.70	86.60	191.27
6,545.00	32.80	356.60	6,520.18	-68.54	-17.81	-68.60	12.24	70.82	194.56
6,577.00	37.10	359.40	6,546.40	-50.23	-18.42	-50.29	14.34	53.50	200.14
6,608.00	41.40	2.70	6,570.40	-30.63	-18.04	-30.69	15.42	35.55	210.49
6,640.00	45.40	5.40	6,593.65	-8.71	-16.47	-8.76	13.78	18.63	242.13
6,671.00	49.70	5.70	6,614.57	14.05	-14.25	14.00	13.89	20.02	314.59
6,702.00	54.00	3.60	6,633.72	38.34	-12.29	38.30	14.86	40.27	342.23
6,734.00	58.40	2.20	6,651.51	64.89	-10.95	64.86	14.22	65.81	350.42
6,765.00	62.60	1.20	6,666.78	91.86	-10.16	91.82	13.84	92.42	353.69
6,796.00	66.40	0.50	6,680.12	119.83	-9.75	119.79	12.43	120.22	355.35
6,828.00	70.10	358.70	6,691.98	149.54	-9.96	149.51	12.69	149.87	356.19
6,860.00	73.10	357.50	6,702.08	179.89	-10.97	179.85	10.03	180.22	356.51
6,915.00	78.80	357.70	6,715.42	233.17	-13.20	233.13	10.37	233.54	356.76
6,946.00	82.40	359.10	6,720.49	263.74	-14.05	263.69	12.44	264.11	356.95
7,041.00	87.30	1.20	6,729.01	358.32	-13.80	358.27	5.61	358.58	357.79
7,135.00	90.40	358.10	6,730.90	452.28	-14.38	452.23	4.66	452.50	358.18
7,229.00	92.10	359.70	6,728.85	546.23	-16.18	546.17	2.48	546.47	358.30
7,323.00	90.20	359.10	6,726.96	640.20	-17.16	640.14	2.12	640.43	358.46
7,417.00	92.50	357.40	6,724.75	734.12	-20.03	734.05	3.04	734.39	358.44
7,512.00	91.30	357.90	6,721.60	828.99	-23.93	828.90	1.37	829.33	358.35

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
7,606.00	88.20	358.90	6,722.01	922.94	-26.55	922.84	3.47	923.32	358.35
7,700.00	90.70	0.30	6,722.91	1,016.92	-27.21	1,016.82	3.05	1,017.28	358.47
7,794.00	89.80	2.70	6,722.50	1,110.88	-24.75	1,110.79	2.73	1,111.15	358.72
7,888.00	89.70	359.10	6,722.91	1,204.85	-23.27	1,204.77	3.83	1,205.08	358.89
7,982.00	86.20	355.20	6,726.27	1,298.64	-27.93	1,298.54	5.57	1,298.94	358.77
8,045.00	87.50	356.10	6,729.73	1,361.36	-32.71	1,361.25	2.51	1,361.76	358.62
8,171.00	91.40	359.70	6,730.94	1,487.23	-37.32	1,487.10	4.21	1,487.70	358.56
8,266.00	90.80	0.50	6,729.12	1,582.21	-37.15	1,582.08	1.05	1,582.65	358.65
8,361.00	88.30	359.20	6,729.87	1,677.20	-37.40	1,677.06	2.97	1,677.61	358.72
8,456.00	90.50	0.20	6,730.86	1,772.18	-37.90	1,772.05	2.54	1,772.59	358.77
8,551.00	89.60	358.60	6,730.78	1,867.17	-38.89	1,867.03	1.93	1,867.58	358.81
8,646.00	88.40	354.00	6,732.44	1,961.93	-45.02	1,961.77	5.00	1,962.45	358.69
8,741.00	88.30	0.80	6,735.18	2,056.74	-49.33	2,056.57	7.16	2,057.33	358.63
8,835.00	89.30	359.80	6,737.14	2,150.72	-48.83	2,150.54	1.50	2,151.27	358.70
8,930.00	89.40	3.80	6,738.22	2,245.65	-45.85	2,245.48	4.21	2,246.11	358.83
9,026.00	90.40	5.10	6,738.39	2,341.35	-38.40	2,341.21	1.71	2,341.67	359.06
9,121.00	90.70	1.90	6,737.48	2,436.16	-32.60	2,436.04	3.38	2,436.38	359.23
9,216.00	92.20	3.20	6,735.07	2,531.03	-28.38	2,530.92	2.09	2,531.19	359.36
9,312.00	86.00	358.30	6,736.58	2,626.93	-27.12	2,626.83	8.23	2,627.07	359.41
9,407.00	87.70	1.60	6,741.80	2,721.77	-27.20	2,721.67	3.90	2,721.91	359.43
9,501.00	90.40	1.20	6,743.36	2,815.72	-24.91	2,815.62	2.90	2,815.83	359.49
9,596.00	89.20	1.80	6,743.69	2,910.69	-22.42	2,910.60	1.41	2,910.77	359.56
9,691.00	90.80	4.00	6,743.69	3,005.56	-17.61	3,005.48	2.86	3,005.61	359.66
9,786.00	89.30	2.20	6,743.61	3,100.41	-12.48	3,100.35	2.47	3,100.44	359.77
9,880.00	89.60	0.30	6,744.51	3,194.38	-10.43	3,194.33	2.05	3,194.40	359.81
9,975.00	91.20	1.50	6,743.85	3,289.36	-8.93	3,289.31	2.11	3,289.37	359.84
10,069.00	87.80	359.70	6,744.67	3,383.33	-7.95	3,383.29	4.09	3,383.34	359.87

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
10,164.00	88.90	0.00	6,747.41	3,478.29	-8.20	3,478.25	1.20	3,478.30	359.86
10,259.00	91.10	359.30	6,747.41	3,573.29	-8.78	3,573.24	2.43	3,573.30	359.86
10,353.00	88.90	1.00	6,747.41	3,667.28	-8.53	3,667.23	2.96	3,667.29	359.87
10,448.00	89.50	0.60	6,748.73	3,762.26	-7.21	3,762.21	0.76	3,762.26	359.89
10,544.00	91.30	0.10	6,748.06	3,858.25	-6.62	3,858.21	1.95	3,858.25	359.90
10,639.00	87.10	356.80	6,749.39	3,953.17	-9.19	3,953.12	5.62	3,953.18	359.87
10,733.00	88.00	357.90	6,753.41	4,046.98	-13.53	4,046.91	1.51	4,047.00	359.81
10,829.00	89.60	358.90	6,755.42	4,142.92	-16.21	4,142.84	1.97	4,142.95	359.78
10,924.00	91.10	359.70	6,754.84	4,237.91	-17.37	4,237.83	1.79	4,237.94	359.77
11,019.00	89.40	0.30	6,754.42	4,332.90	-17.37	4,332.82	1.90	4,332.94	359.77
11,114.00	90.00	358.90	6,754.92	4,427.89	-18.03	4,427.81	1.60	4,427.93	359.77
11,209.00	91.50	355.70	6,753.68	4,522.77	-22.50	4,522.67	3.72	4,522.82	359.71
11,304.00	90.00	0.10	6,752.43	4,617.67	-25.98	4,617.56	4.89	4,617.74	359.68
11,399.00	87.80	0.30	6,754.26	4,712.64	-25.65	4,712.53	2.33	4,712.71	359.69
11,494.00	88.20	359.80	6,757.57	4,807.59	-25.57	4,807.47	0.67	4,807.65	359.70
11,589.00	90.30	1.00	6,758.81	4,902.57	-24.91	4,902.46	2.55	4,902.63	359.71
11,684.00	89.00	0.00	6,759.40	4,997.56	-24.08	4,997.45	1.73	4,997.62	359.72
11,779.00	89.60	356.00	6,760.56	5,092.48	-27.39	5,092.36	4.26	5,092.55	359.69
11,874.00	90.10	356.40	6,760.80	5,187.27	-33.69	5,187.13	0.67	5,187.37	359.63
11,968.00	89.30	354.80	6,761.30	5,280.98	-40.90	5,280.82	1.90	5,281.14	359.56
12,063.00	88.30	356.30	6,763.29	5,375.67	-48.27	5,375.48	1.90	5,375.89	359.49
12,157.00	89.70	3.50	6,764.93	5,469.59	-48.43	5,469.40	7.80	5,469.81	359.49
12,252.00	89.50	4.30	6,765.59	5,564.37	-41.97	5,564.20	0.87	5,564.53	359.57
12,346.00	90.30	4.00	6,765.76	5,658.12	-35.17	5,657.98	0.91	5,658.23	359.64
12,441.00	89.90	1.40	6,765.59	5,753.01	-30.69	5,752.88	2.77	5,753.09	359.69
12,536.00	89.20	357.40	6,766.34	5,847.98	-31.69	5,847.84	4.27	5,848.07	359.69
12,632.00	89.80	355.10	6,767.18	5,943.76	-37.97	5,943.61	2.48	5,943.89	359.63

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Survey									
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	N/S (ft)	E/W (ft)	VS (ft)	DLS (°/100ft)	Closure Distance (ft)	Closure Azimuth (°)
12,726.00	87.50	357.90	6,769.39	6,037.55	-43.70	6,037.37	3.85	6,037.71	359.59
12,820.00	88.20	4.20	6,772.92	6,131.42	-41.98	6,131.24	6.74	6,131.56	359.61
12,915.00	90.10	4.10	6,774.33	6,226.15	-35.11	6,226.00	2.00	6,226.25	359.68
13,009.00	89.30	1.00	6,774.82	6,320.05	-30.93	6,319.91	3.41	6,320.12	359.72
13,104.00	90.80	1.00	6,774.74	6,415.03	-29.27	6,414.90	1.58	6,415.10	359.74
13,199.00	91.70	1.40	6,772.67	6,509.99	-27.28	6,509.86	1.04	6,510.04	359.76
13,293.00	89.10	1.70	6,772.01	6,603.94	-24.74	6,603.82	2.78	6,603.99	359.79
13,388.00	90.10	2.10	6,772.67	6,698.88	-21.59	6,698.78	1.13	6,698.92	359.82
13,483.00	88.40	2.80	6,773.92	6,793.79	-17.53	6,793.69	1.94	6,793.81	359.85
13,577.00	90.30	2.90	6,774.98	6,887.66	-12.85	6,887.58	2.02	6,887.67	359.89
13,672.00	86.30	3.90	6,777.80	6,982.43	-7.22	6,982.37	4.34	6,982.43	359.94
13,767.00	86.90	3.50	6,783.44	7,077.06	-1.10	7,077.02	0.76	7,077.06	359.99
13,861.00	88.20	4.10	6,787.45	7,170.77	5.12	7,170.75	1.52	7,170.77	0.04
13,956.00	89.80	2.90	6,789.11	7,265.57	10.92	7,265.57	2.11	7,265.58	0.09
14,051.00	91.50	3.70	6,788.03	7,360.41	16.39	7,360.42	1.98	7,360.42	0.13
14,145.00	88.80	0.90	6,787.79	7,454.31	20.16	7,454.34	4.14	7,454.34	0.15
14,240.00	89.00	0.70	6,789.61	7,549.28	21.48	7,549.31	0.30	7,549.31	0.16
14,334.00	89.50	0.40	6,790.84	7,643.27	22.39	7,643.30	0.62	7,643.30	0.17
14,429.00	89.60	358.80	6,791.59	7,738.26	21.72	7,738.29	1.69	7,738.29	0.16
14,524.00	89.20	356.00	6,792.58	7,833.15	17.41	7,833.17	2.98	7,833.17	0.13
14,619.00	89.20	355.30	6,793.91	7,927.87	10.21	7,927.86	0.74	7,927.87	0.07
14,714.00	89.80	353.30	6,794.74	8,022.39	0.78	8,022.35	2.20	8,022.39	0.01
14,809.00	89.60	352.00	6,795.24	8,116.60	-11.38	8,116.52	1.38	8,116.61	359.92
14,904.00	89.00	352.60	6,796.40	8,210.74	-24.11	8,210.61	0.89	8,210.78	359.83
Last Survey Taken									
14,986.00	89.00	352.60	6,797.83	8,292.04	-34.66	8,291.88	0.00	8,292.12	359.76
Projection to Bit									

Company:	EP Energy E&P Company, L.P.	Local Co-ordinate Reference:	Well BH
Project:	Crockett Co, Tx	TVD Reference:	WELL @ 2654.00ft (Original Well Elev)
Site:	University Salt Draw 4102	MD Reference:	WELL @ 2654.00ft (Original Well Elev)
Well:	BH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	RyanUSA_Compass

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
14,904.00	6,796.40	8,210.74	-24.11	Last Survey Taken
14,986.00	6,797.83	8,292.04	-34.66	Projection to Bit

Checked By: _____	Approved By: _____	Date: _____
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RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

SLIDE & ROTATING REPORT

Customer:

Field:

County, State:

EP Energy

Crockett County, Texas

Crockett, Texas

Rig Name & No.:

Well Name & No.:

Ryan Job #:

Sidewinder 222

University Salt Draw 4102 BH

8545

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	993	1,139	146	1,086	1.50°	43.40°	0.35°								15.00	20.00	550.00	1550.00
Slide	1,139	1,154	15											200 MTF	10.00		580.00	1350.00
Rotate	1,154	1,234	80	1,181	1.00°	222.90°	2.63°								25.00	40.00	580.00	1350.00
Slide	1,234	1,249	15											190 MTF	10.00		580.00	1350.00
Rotate	1,249	1,328	79	1,275	3.10°	203.10°	2.33°								25.00	40.00	580.00	1350.00
Slide	1,328	1,343	15											200 MTF	10.00		580.00	1350.00
Rotate	1,343	1,421	78	1,368	5.40°	207.60°	2.50°								25.00	40.00	580.00	1350.00
Slide	1,421	1,436	15											HS	10.00		580.00	1350.00
Rotate	1,436	1,516	80	1,463	7.50°	208.90°	2.22°								25.00	40.00	580.00	1350.00
Slide	1,516	1,531	15											HS	10.00		580.00	1350.00
Rotate	1,531	1,705	174	1,652	9.20°	209.60°	0.74°								25.00	40.00	580.00	1350.00
Slide	1,705	1,715	10											30 L	10.00		580.00	1350.00
Rotate	1,715	1,988	273	1,935	9.80°	204.40°	0.76°								25.00	60.00	580.00	1350.00
Slide	1,988	2,000	12											180 GTF	10.00		580.00	1350.00
Rotate	2,000	2,082	82	2,029	8.00°	208.00°	2.00°								25.00	70.00	580.00	1350.00
Slide	2,082	2,097	15											130 L	10.00		580.00	1350.00
Rotate	2,097	2,177	80	2,124	7.00°	195.30°	2.03°								25.00	60.00	580.00	1350.00
Slide	2,177	2,202	25											160 L	10.00		580.00	1350.00
Rotate	2,202	2,271	69	2,218	4.20°	195.20°	2.98°								25.00	60.00	580.00	1350.00
Slide	2,271	2,289	18											15 MTF	10.00		580.00	1350.00
Rotate	2,289	2,837	548	2,784	1.40°	120.80°	0.32°								25.00	60.00	580.00	1350.00
Slide	2,837	2,857	20											300 MTF	10.00		580.00	1350.00
Rotate	2,857	3,497	640	3,444	1.10°	99.60°	0.24°								25.00	60.00	580.00	1350.00
Slide	3,497	3,509	12											300 MTF	10.00		580.00	1350.00
Rotate	3,509	6,300	2,791	6,247	1.10°	122.60°	0.38°								25.00	60.00	580.00	1350.00
Slide	6,300	6,316	16											0 MTF	20.00		600.00	2400.00
Rotate	6,316	6,321	5												25.00	20.00	600.00	2450.00
Slide	6,321	6,347	26											0 MTF	20.00		600.00	2400.00
Rotate	6,347	6,352	5												25.00	20.00	600.00	2450.00
Slide	6,352	6,378	26	6,324	2.90°	1.10°	4.60°	2.30°	18.90°	19.00	49.00	13.70°		0 MTF	20.00		600.00	2400.00
Rotate	6,378	6,382	4												25.00	20.00	600.00	2450.00
Slide	6,382	6,410	28	6,356	7.70°	359.30°	15.00°	15.00°	17.80°	27.00	50.00	12.30°		H/S	20.00		600.00	2400.00
Rotate	6,410	6,415	5												25.00	20.00	600.00	2450.00
Slide	6,415	6,441	26	6,387	12.20°	0.60°	14.50°	14.50°	16.70°	27.00	49.00	12.30°		H/S	20.00		600.00	2400.00
Rotate	6,441	6,446	5												25.00	20.00	600.00	2450.00
Slide	6,446	6,473	27	6,419	16.60°	2.10°	13.80°	13.70°	16.30°	27.00	49.00	12.20°		H/S	20.00		600.00	2400.00
Rotate	6,473	6,478	5												25.00	20.00	600.00	2450.00
Slide	6,478	6,505	27	6,451	21.30°	1.30°	14.70°	14.70°	17.40°	27.00	49.00	11.70°		30 L	20.00		600.00	2400.00
Rotate	6,505	6,512	7												25.00	20.00	600.00	2450.00
Slide	6,512	6,536	24	6,482	25.40°	359.40°	13.40°	13.20°	16.00°	26.00	47.00	12.00°		30 L	20.00		600.00	2400.00
Rotate	6,536	6,541	5												25.00	20.00	600.00	2450.00
Slide	6,541	6,567	26	6,513	28.90°	357.30°	11.70°	11.30°	15.10°	24.00	49.00	13.30°		H/S	20.00		600.00	2400.00
Rotate	6,567	6,570	3												25.00	20.00	600.00	2450.00
Slide	6,570	6,599	29	6,545	32.80°	356.60°	12.20°	12.20°	14.50°	27.00	51.00	12.20°		H/S	20.00		600.00	2400.00
Rotate	6,599	6,601	2												25.00	20.00	600.00	2450.00
Slide	6,601	6,631	30	6,577	37.10°	359.40°	14.30°	13.40°	15.80°	29.00	52.00	11.80°		H/S	20.00		600.00	2400.00
Rotate	6,631	6,634	3												25.00	20.00	600.00	2450.00
Slide	6,634	6,662	28	6,608	41.40°	2.70°	15.40°	13.80°	16.40°	29.00	51.00	11.60°		H/S	20.00		600.00	2400.00
Rotate	6,662	6,667	5												25.00	20.00	600.00	2450.00
Slide	6,667	6,694	27	6,640	45.40°	5.40°	13.70°	12.50°	15.20°	29.00	49.00	11.90°		30 L	20.00		600.00	2400.00
Slide	6,694	6,725	31	6,671	49.70°	5.70°	13.90°	13.80°	16.50°	26.00	54.00	9.90°		40 L	25.00		600.00	2450.00
Rotate	6,725	6,732	7												20.00	20.00	600.00	2400.00
Slide	6,732	6,756	24	6,702	54.00°	3.60°	14.80°	13.80°	14.80°	31.00	47.00	11.00°		30 L	25.00		600.00	2450.00
Rotate	6,756	6,760	4												20.00	20.00	600.00	2400.00
Slide	6,760	6,788	28	6,734	58.40°	2.20°	14.20°	13.70°	18.20°	25.00	50.00	8.30°		20 L	25.00		600.00	2450.00
Rotate	6,788	6,800	12												20.00	20.00	600.00	2400.00
Slide	6,800	6,819	19	6,765	62.60°	1.20°	13.80°	13.50°	15.90°	27.00	42.00	9.00°		20 L	25.00		600.00	2450.00
Rotate	6,819	6,826	7												20.00	20.00	600.00	2400.00
Slide	6,826	6,850	24	6,796	66.40°	0.50°	12.40°	12.20°	16.70°	23.00	47.00	6.80°		40 L	25.00		600.00	2450.00
Rotate	6,850	6,864	14												20.00	20.00	600.00	2400.00
Slide	6,864	6,882	18	6,828	70.10°	358.70°	12.60°	11.50°	19.30°	21.00	40.00	6.20°		20 L	25.00		600.00	2450.00
Rotate	6,882	6,898	16												20.00	20.00	600.00	2400.00
Slide	6,898	6,914	16	6,860	73.10°	357.50°	10.00°	9.30°	14.60°	22.00	33.00	8.40°		H/S	25.00		600.00	2450.00
Slide	6,914	6,968	54	6,915	78.80°	357.70°	10.37°							H/S	25.00		600.00	2450.00
Slide	6,968	6,988	20											H/S	25.00		600.00	2450.00
Rotate	6,988	6,999	11	6,946	82.40°	359.10°	12.44°								20.00	60.00	600.00	2400.00
Rotate	6,999	7,094	95	7,041	87.30°	1.20°	5.61°								20.00	60.00	600.00	2400.00
Slide	7,094	7,104	10											60 L	25.00		600.00	2450.00
Rotate	7,104	7,282	178	7,229	92.10°	359.70°	2.48°								20.00	60.00	600.00	2400.00
Slide	7,282	7,297	15											180.00°	25.00		600.00	2450.00
Rotate	7,297	7,470	173	7,417	92.50°	357.40°	3.04°								20.00	60.00	600.00	2400.00
Slide	7,470	7,490	20											140 R	25.00		600.00	2450.00
Rotate	7,490	7,565	75	7,512	91.30°	357.90°	1.37°								20.00	60.00	600.00	2400.00
Slide	7,565	7,575	10											140 R	25.00		600.00	2450.00
Rotate	7,575	7,753	178	7,700	90.70°	0.30°	3.05°								20.00	60.00	600.00	2400.00

[illegible]

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17-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

8545

DAILY DRILLING REPORT

Oil Company:	EP Energy
Field:	Crockett County, Texas
County, State:	Crockett, Texas
AFE or PO #:	163651

Customer:	EP Energy
Well Name & No.:	University Salt Draw 4102 BH
Block or Section:	Section 02, Block 41
Rig Contractor & No.:	Sidewinder 222

00:00 Depth:	0
24:00 Depth:	0

Footage Today:	0
Current Run Ftg:	0

Drlg Hrs Today:	0.00
Run Drlg Hrs:	0.00

ROP Today:	-
Un Adj. Avg. ROP:	-

Last Casing Set: _____
Depth: _____

PUMP Data Total Gals/Min =					MUD DATA		Previous		Current		MOTOR DATA		CURRENT	
Pump	National	National	0	Mud Type			BHA #	1	BHA #					
Liner (in)				Sample	IN					BIT		Run No.		
%				Time						MOTOR		Size (in.)		
Vol (gps)	0.00	0.00	0.00	Wt.						NMPC		Type		
SPM				VIS						EM TOOL		Serial No.		
DRILLING PARAMETERS				PV						NMDC		Tool Deflection		
ST. WT. ROT 1000's:				YP						X-O		Avg. Diff. Press.		
P/U WT. 1000's:				WL						3 DC'S		Daily Drill Hrs.	0.00	
S/O WT. 1000's:				CL						X-O		Daily Circ. Hrs.	0.00	
WOB 1000's:				Gels								Daily Total Hrs:	0.00	
ROTARY RPM:				% Oil								Acc. Drill Hrs.	0.00	
MOTOR RPM:				% Solids								Acc. Circ. Hrs.	0.00	
TOTAL Bit RPM		0		% Sand								Depth In		
ROT TQ. OFF BTM:				PH								Depth Out		
ROT TQ. ON BTM:				Temp F								LIH Hrs.		
Current Mag Dec:				MWD F			BHA WT					Acc. Hrs Cir/Drilg	0.00	
Pulse Hight				GPM			BELOW JARS					Total K Revs	0.00	
"G" Totals				PSI								Jar # HRS		

[illegible][illegible]

Report #: 2

Date: 18-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 993
 24:00 Depth: 2082

Footage Today: 1089
 Current Run Ftg: 1089

Drig Hrs Today: 2.50
 Run Drig Hrs: 2.50

ROP Today: 435.60
 Run Avg. ROP: 435.60

Last Casing Set: _____
 Depth: _____

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.	1
Liner (in)	6	6		Sample	IN			MOTOR	Size (in.)	6 3/4
%	95	95		Time	15:00			NMPC	Type	7/8 5.0
Vol (gals)	4.18	4.18	0.00	Wt.	9.15			EM TOOL	Serial No.	RY675113
SPM	70	70		VIS	66			NMDC	Tool Deflection	1.75
DRILLING PARAMETERS				PV	29			X-O	Avg. Diff. Press.	600
ST. WT. ROT 1000's:	72			YP	16			3 DC'S	Daily Drill Hrs.	2.50
P/U WT. 1000's:	74			WL	N/A			X-O	Daily Circ. Hrs.	4.10
S/O WT. 1000's:	70			CL	72000				Daily Total Hrs.	6.60
WOB 1000's:	25			Gels	21				Acc. Drill Hrs.	2.50
ROTARY RPM:	50			% Oil	74				Acc. Circ. Hrs.	4.10
MOTOR RPM:	168			% Solids	7.5				Depth In	993
TOTAL Bit RPM	218			% Sand	N/A				Depth Out	
ROT TQ. OFF BTM:	1			PH	N/A				LIH Hrs.	7:05
ROT TQ. ON BTM:	5			Temp F	51				Acc. LIH Hrs.	7.08
Current Mag Dec:	6.41			MWD F	95	BHA WT			Acc. Hrs Cir/Drilg	6.60
Pulse Hight	2.9			GPM	602	BELOW JARS			Total K Revs	32.70
"G" Totals	1.004			PSI	18:00				Jar # HRS	

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations			
0:00	9:30	9:30				S	STANDBY	DA TANGENT			
9:30	11:00	1:30				6.G	P/U BHA 1.				
11:00	11:30	0:30				6.A	TIH				
11:30	14:00	2:30				3.A	DRILL CEMENT				
14:00	14:10	0:10	993	1046	53	2.A	ROTATE 10 WOB, 20 RPM, 200 DIFF				
14:10	14:20	0:10				10	C/S @ 993' MD				
14:20	14:25	0:05	1046	1108	62	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF				
14:25	14:30	0:05				10	C/S @ 1,055' MD 1.6° INC 41.8° AZM 95° TEMP				
14:30	14:35	0:05	1108	1139	31	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF				
14:35	14:40	0:05				10	C/S @ 1,086' MD 1.5° INC 43.4° AZM 95° TEMP				
14:40	14:45	0:05	1139	1154	15	2.B	SLIDE @ 200 MTF, 10 WOB, 300 DIFF	Estimated Daily Charges			
14:45	14:50	0:05	1154	1234	80	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF	Description	Cost		
14:50	14:55	0:05				10	C/S @ 1,181' MD 1.0° INC 222.9° AZM 95° TEMP				
14:55	15:00	0:05	1234	1249	15	2.B	SLIDE @ 190 MTF, 10 WOB, 300 DIFF				
15:00	15:05	0:05	1249	1328	79	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF				
15:05	15:10	0:05				10	C/S @ 1,275' MD 3.1° INC 203.1° AZM 95° TEMP				
15:10	15:15	0:05	1328	1343	15	2.B	SLIDE @ 200 MTF, 10 WOB, 300 DIFF				
15:15	15:20	0:05	1343	1421	78	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF				
15:20	15:25	0:05				10	C/S @ 1,368' MD 5.4° INC 207.6° AZM 95° TEMP				
15:25	15:30	0:05	1421	1436	15	2.B	SLIDE @ HS GTF, 10 WOB, 300 DIFF				
15:30	15:40	0:10	1436	1516	80	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF				
15:40	15:45	0:05				10	C/S @ 1,463' MD 7.5° INC 208.9° AZM 95° TEMP				
15:45	15:50	0:05	1516	1531	15	2.B	SLIDE @ HS GTF, 10 WOB, 300 DIFF	Estimated Daily Cost (USD)		\$	-
15:50	16:00	0:10	1531	1610	79	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF	Accumulated Cost (USD)		\$	-
16:00	16:05	0:05				10	C/S @ 1,557' MD 9.9° INC 209.9° AZM 95° TEMP	Company Representative (s)			
16:05	16:15	0:10	1610	1705	95	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF	Joe Wilkerson		Craig Cart	
16:15	16:25	0:10				10	C/S @ 1,652' MD 9.2° INC 209.6° AZM 95° TEMP	Wes White		Brandon Green	
16:25	16:30	0:05	1705	1715	10	2.B	SLIDE @ 30 L GTF, 10 WOB, 300 DIFF	RYAN Directional Representative (s)			
16:30	16:40	0:10	1715	1799	84	2.A	ROTATE 25 WOB, 40 RPM, 600 DIFF	Lyndon Vestal		Shawn Williamson	
16:40	16:50	0:10				10	C/S @ 1,746' MD 10.7° INC 207.2° AZM 100° TEMP				
16:50	16:55	0:05	1799	1894	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	RYAN MWD Representative (s)			
16:55	17:05	0:10				10	C/S @ 1,841' MD 10.5° INC 205.1° AZM 100° TEMP	Scott Lane		Josh Ferguson	
17:05	17:25	0:20	1894	1988	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
17:25	17:35	0:10				10	C/S @ 1,935' MD 9.8° INC 204.4° AZM 100° TEMP	24 Hour Breakdown			
17:35	17:40	0:05	1988	2000	12	2.B	SLIDE @ 180 GTF, 10 WOB, 300 DIFF	Ftg Rot.	992	Time Rot.	1.90
17:40	17:55	0:15	2000	2082	82	2.A	ROTATE 25 WOB, 70 RPM, 600 DIFF	Ftg Orient	97	Time Orient	0.60
17:55	18:05	0:10				10	C/S @ 2,029' MD 8.0° INC 208.0° AZM 100° TEMP	Rot. ROP	522.11	Orient ROP	161.67

Report #: 2A

Date: 18-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 2082
 24:00 Depth: 3590

Footage Today: 1508
 Current Run Ftg: 2597

Drig Hrs Today: 2.30
 Run Drig Hrs: 4.80

ROP Today: 655.65
 Run Avg. ROP: 541.04

Last Casing Set: _____
 Depth: _____

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	Size (in.)
%	95	95		Time	15:00			NMPC	Type
Vol (gpc)	4.18	4.18	0.00	Wt.	9.15			EM TOOL	Serial No.
SPM	70	70		VIS	66			NMDC	Tool Deflection
DRILLING PARAMETERS				PV	29			X-O	Avg. Diff. Press.
ST. WT. ROT 1000's:	72			YP	16			3 DC'S	Daily Drill Hrs.
P/U WT. 1000's:	74			WL	N/A			X-O	Daily Circ. Hrs.
S/O WT. 1000's:	70			CL	72000				Daily Total Hrs.
WOB 1000's:	25			Gels	21				Acc. Drill Hrs.
ROTARY RPM:	50			% Oil	74				Acc. Circ. Hrs.
MOTOR RPM:	168			% Solids	7.5				Depth In
TOTAL Bit RPM	218			% Sand	N/A				Depth Out
ROT TQ. OFF BTM:	1			PH	N/A				LIH Hrs.
ROT TQ. ON BTM:	5			Temp F	51				Acc. LIH Hrs.
Current Mag Dec:	6.41			MWD F	95	BHA WT			Acc. Hrs Cir/Drilg
Pulse Hight	2.9			GPM	602	BELOW JARS			Total K Revs
"G" Totals	1.004			PSI	18:00				Jar # HRS

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations			
18:05	18:10	0:05	2082	2097	15	2.B	SLIDE @ 130L GTF, 10 WOB, 300 DIFF	DA TANGENT			
18:10	18:20	0:10	2097	2177	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
18:20	18:30	0:10				10	C/S @ 2,124' MD 7.0° INC 195.3° AZM 100° TEMP				
18:30	18:35	0:05	2177	2202	25	2.B	SLIDE @ 160L GTF, 10 WOB, 300 DIFF				
18:35	18:45	0:10	2202	2271	69	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
18:45	18:55	0:10				10	C/S @ 2,218' MD 4.2° INC 195.2° AZM 100° TEMP				
18:55	19:00	0:05	2271	2289	18	2.B	SLIDE @ 15 MTF, 10 WOB, 300 DIFF				
19:00	19:10	0:10	2289	2366	77	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
19:10	19:20	0:10				10	C/S @ 2,313' MD 0.7° INC 121.0° AZM 100° TEMP				
19:20	19:25	0:05	2366	2460	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
19:25	19:35	0:10				10	C/S @ 2,407' MD 0.9° INC 112.1° AZM 100° TEMP	Estimated Daily Charges			
19:35	19:40	0:05	2460	2554	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Description		Cost	
19:40	19:50	0:10				10	C/S @ 2,501' MD 0.9° INC 117.7° AZM 100° TEMP				
19:50	19:55	0:05	2554	2649	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
19:55	20:00	0:05				10	C/S @ 2,596' MD 0.9° INC 114.3° AZM 100° TEMP				
20:00	20:05	0:05	2649	2743	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
20:05	20:15	0:10				10	C/S @ 2,690' MD 1.1° INC 119.9° AZM 100° TEMP				
20:15	20:20	0:05	2743	2837	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
20:20	20:30	0:10				10	C/S @ 2,784' MD 1.4° INC 120.8° AZM 100° TEMP				
20:30	20:35	0:05	2837	2857	20	2.B	SLIDE @ 300 MTF, 10 WOB, 300 DIFF				
20:35	20:45	0:10	2857	2932	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
20:45	20:55	0:10				10	C/S @ 2,879' MD .3° INC 241.3° AZM 100° TEMP				
20:55	21:05	0:10	2932	3026	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Estimated Daily Cost (USD)		\$ -	
21:05	21:15	0:10				10	C/S @ 2,973' MD 0.1° INC 148.5° AZM 100° TEMP	Accumulated Cost (USD)		\$ -	
21:15	21:20	0:05	3026	3121	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Company Representative (s)			
21:20	21:30	0:10				10	C/S @ 3,068' MD 0.7° INC 123.5° AZM 100° TEMP	Joe Wilkerson		Craig Cart	
21:30	21:35	0:05	3121	3216	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Wes White		Brandon Green	
21:35	21:45	0:10				10	C/S @ 3,163' MD 0.8° INC 125.1° AZM 100° TEMP	RYAN Directional Representative (s)			
21:45	21:50	0:05	3216	3310	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Lyndon Vestal		Shawn Williamson	
21:50	22:00	0:10				10	C/S @ 3,257' MD 0.8° INC 110.6° AZM 111° TEMP				
22:00	22:05	0:05	3310	3403	93	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	RYAN MWD Representative (s)			
22:05	22:10	0:05				10	C/S @ 3,350' MD 1.0° INC 110.4° AZM 111° TEMP	Scott Lane		Josh Ferguson	
22:10	22:15	0:05	3403	3497	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
22:15	22:25	0:10				10	C/S @ 3,444' MD 1.1° INC 99.6° AZM 111° TEMP	24 Hour Breakdown			
22:25	22:30	0:05	3497	3509	12	2.B	SLIDE @ 300 MTF, 10 WOB, 300 DIFF	Ftg Rot.	1418	Time Rot.	1.80
22:30	22:40	0:10	3509	3590	81	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Ftg Orient	90	Time Orient	0.40
22:40	22:50	0:10				10	C/S @ 3,537' MD 0.8° INC 317.3° AZM 111° TEMP	Rot. ROP	787.78	Orient ROP	225.00

Report #: 2B

Date: 18-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 3590
 24:00 Depth: 4155

Footage Today: 565
 Current Run Ftg: 3162

Drig Hrs Today: 0.50
 Run Drig Hrs: 5.30

ROP Today: 1130.00
 Run Avg. ROP: 596.60

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM	BHA #	1	BIT	Run No.
Liner (in)	6	6		Sample	IN			MOTOR	Size (in.)
%	95	95		Time	15:00			NMPC	Type
Vol (ggs)	4.18	4.18	0.00	Wt.	9.15			EM TOOL	Serial No.
SPM	70	70		VIS	66			NMDC	Tool Deflection
DRILLING PARAMETERS				PV	29			X-O	Avg. Diff. Press.
ST. WT. ROT 1000's:		72		YP	16			3 DC'S	Daily Drill Hrs.
P/U WT. 1000's:		74		WL	N/A			X-O	Daily Circ. Hrs.
S/O WT. 1000's:		70		CL	72000				Daily Total Hrs.
WOB 1000's:		25		Gels	21				Acc. Drill Hrs.
ROTARY RPM:		50		% Oil	74				Acc. Circ. Hrs.
MOTOR RPM:		168		% Solids	7.5				Depth In
TOTAL Bit RPM		218		% Sand	N/A				Depth Out
ROT TQ. OFF BTM:		1		PH	N/A				LIH Hrs.
ROT TQ. ON BTM:		5		Temp F	51				Acc. LIH Hrs.
Current Mag Dec:		6.41		MWD F	117	BHA WT			Acc. Hrs Cir/Drig
Pulse Hight		2.9		GPM	602	BELOW JARS			Total K Revs
"G" Totals		1.004		PSI					Jar # HRS

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations							
22:50	22:55	0:05	3590	3685	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				DA TANGENT							
22:55	23:00	0:05				10	C/S @ 3,632' MD 0.3° INC 343.9° AZM 111° TEMP											
23:00	23:05	0:05	3685	3779	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:05	23:15	0:10				10	C/S @ 3,726' MD 0.4° INC 54.9° AZM 117° TEMP											
23:15	23:20	0:05	3779	3874	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:20	23:30	0:10				10	C/S @ 3,821' MD 0.6° INC 58.2° AZM 117° TEMP											
23:30	23:35	0:05	3874	3967	93	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:35	23:40	0:05				10	C/S @ 3,914' MD .6° INC 61.8° AZM 117° TEMP											
23:40	23:45	0:05	3967	4060	93	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:45	23:55	0:10				10	C/S @ 4,007' MD 0.7° INC 34.6° AZM 117° TEMP											
23:55	23:59	0:04	4060	4155	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Charges							
											Description		Cost					
											Estimated Daily Cost (USD)		\$ -					
											Accumulated Cost (USD)		\$ -					
											Company Representative (s)							
											Joe Wilkerson		Craig Cart					
											Wes White		Brandon Green					
											RYAN Directional Representative (s)							
											Lyndon Vestal		Shawn Williamson					
											RYAN MWD Representative (s)							
											Scott Lane		Josh Ferguson					
											24 Hour Breakdown							
											Ftg Rot.		565		Time Rot.		0.50	
											Ftg Orient		0		Time Orient		0.00	
											Rot. ROP		1130.00		Orient ROP		-	

Report #: 3

Date: 19-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 4155
 24:00 Depth: 5844

Footage Today: 1689
 Current Run Ftg: 4851

Drig Hrs Today: 4.80
 Run Drig Hrs: 10.10

ROP Today: 351.88
 Run Avg. ROP: 480.30

Last Casing Set: _____
 Depth: _____

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	Size (in.)
%	95	95		Time	15:00			NMPC	Type
Vol (gals)	4.18	4.18	0.00	Wt.	9.15			EM TOOL	Serial No.
SPM	70	70		VIS	66			NMDC	Tool Deflection
DRILLING PARAMETERS				PV	29			X-O	Avg. Diff. Press.
ST. WT. ROT 1000's:	72			YP	16			3 DC'S	Daily Drill Hrs.
P/U WT. 1000's:	74			WL	N/A			X-O	Daily Circ. Hrs.
S/O WT. 1000's:	70			CL	72000				Daily Total Hrs.
WOB 1000's:	25			Gels	21				Acc. Drill Hrs.
ROTARY RPM:	50			% Oil	74				Acc. Circ. Hrs.
MOTOR RPM:	168			% Solids	7.5				Depth In
TOTAL Bit RPM	218			% Sand	N/A				Depth Out
ROT TQ. OFF BTM:	1			PH	N/A				LIH Hrs.
ROT TQ. ON BTM:	5			Temp F	51				Acc. LIH Hrs.
Current Mag Dec:	6.41			MWD F	117	BHA WT			Acc. Hrs Cir/Drilg
Pulse Height	2.9			GPM	602	BELOW JARS			Total K Revs
"G" Totals	1.004			PSI					Jar # HRS

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:10	0:10				10	C/S @ 4,102' MD	0.4° INC	50.5° AZM	117° TEMP	DA TANGENT			
0:10	0:30	0:20	4155	4249	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
0:30	0:40	0:10				10	C/S @ 4,196' MD	.7° INC	108.8° AZM	117° TEMP				
0:40	0:55	0:15	4249	4344	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
0:55	1:05	0:10				10	C/S @ 4,291' MD	0.7° INC	90.0° AZM	117° TEMP				
1:05	1:20	0:15	4344	4438	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
1:20	1:30	0:10				10	C/S @ 4,385' MD	0.3° INC	64.9° AZM	117° TEMP				
1:30	1:50	0:20	4438	4532	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
1:50	2:00	0:10				10	C/S @ 4,479' MD	0.1° INC	2.6° AZM	117° TEMP				
2:00	2:10	0:10	4532	4625	93	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
2:10	2:20	0:10				10	C/S @ 4,572' MD	1.1° INC	233.5° AZM	117° TEMP	Estimated Daily Charges			
2:20	2:40	0:20	4625	4718	93	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Description		Cost	
2:40	2:50	0:10				10	C/S @ 4,665' MD	1.4° INC	219.8° AZM	117° TEMP				
2:50	3:05	0:15	4718	4812	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:05	3:15	0:10				10	C/S @ 4,759' MD	1.2° INC	214.4° AZM	117° TEMP				
3:15	3:25	0:10	4812	4902	90	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:25	3:35	0:10				10	C/S @ 4,849' MD	1.0° INC	199.1° AZM	117° TEMP				
3:35	3:50	0:15	4902	4996	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:50	4:00	0:10				10	C/S @ 4,943' MD	0.8° INC	191.8° AZM	117° TEMP				
4:00	4:15	0:15	4996	5091	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
4:15	4:25	0:10				10	C/S @ 5,038' MD	0.8° INC	166.2° AZM	117° TEMP				
4:25	4:35	0:10	5091	5185	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
4:35	4:45	0:10				10	C/S @ 5,132' MD	0.9° INC	150.6° AZM	117° TEMP	Estimated Daily Cost (USD)		\$	-
4:45	5:00	0:15	5185	5280	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Accumulated Cost (USD)		\$	-
5:00	5:10	0:10				10	C/S @ 5,227' MD	0.7° INC	139.7° AZM	117° TEMP	Company Representative (s)			
5:10	5:20	0:10	5280	5374	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Joe Wilkerson		Craig Cart	
5:20	5:30	0:10				10	C/S @ 5,321' MD	0.9° INC	127.4° AZM	117° TEMP	Wes White		Brandon Green	
5:30	5:50	0:20	5374	5468	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				RYAN Directional Representative (s)			
5:50	6:00	0:10				10	C/S @ 5,415' MD	0.8° INC	122.4° AZM	117° TEMP	Lyndon Vestal		Shawn Williamson	
6:00	6:20	0:20	5468	5562	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
6:20	6:30	0:10				10	C/S @ 5,509' MD	0.8° INC	125.9° AZM	117° TEMP	RYAN MWD Representative (s)			
6:30	6:50	0:20	5562	5656	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Scott Lane		Josh Ferguson	
6:50	7:00	0:10				10	C/S @ 5,603' MD	0.8° INC	124.7° AZM	117° TEMP				
7:00	7:20	0:20	5656	5750	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				24 Hour Breakdown			
7:20	7:30	0:10				10	C/S @ 5,697' MD	1.1° INC	120.3° AZM	123° TEMP	Ftg Rot.	1689	Time Rot.	4.80
7:30	7:50	0:20	5750	5844	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Ftg Orient	0	Time Orient	0.00
7:50	8:00	0:10				10	C/S @ 5,791' MD	1.0° INC	117.9° AZM	123° TEMP	Rot. ROP	351.88	Orient ROP	-

Report #: 3A
Date: 19-Jan-15



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Job # 8545

DAILY DRILLING REPORT

Oil Company: **EP Energy**
Field: **Crockett County, Texas**
County, State: **Crockett, Texas**
AFE or PO #: **163651**

Customer: **EP Energy**
Well Name & No.: **University Salt Draw 4102 BH**
Block or Section: **Section 02, Block 41**
Rig Contractor & No.: **Sidewinder 222**

00:00 Depth: 5844 Footage Today: 456 Drlg Hrs Today: 1.30 ROP Today: 350.77 Last Casing Set: _____
24:00 Depth: 6300 Current Run Ftg: 5307 Run Drlg Hrs: 11.40 Run Avg. ROP: 465.53 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	BHA #	Current	1	BHA #	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM			BIT			Run No.	1
Liner (in)	6	6		Sample	IN			MOTOR			Size (in.)	6 3/4
%	95	95		Time	15:00			NMPC			Type	7/8 5.0
Vol (gals)	4.18	4.18	0.00	Wt.	9.15			EM TOOL			Serial No.	RY675113
SPM	70	70		VIS	66			NMDC			Tool Deflection	1.75
DRILLING PARAMETERS				PV	29			X-O			Avg. Diff. Press.	600
ST. WT. ROT 1000's:			72	YP	16			3 DC'S			Daily Drill Hrs.	1.30
P/U WT. 1000's:			74	WL	N/A			X-O			Daily Circ. Hrs.	1.20
S/O WT. 1000's:			70	CL	72000						Daily Total Hrs:	2.50
WOB 1000's:			25	Gels	21						Acc. Drill Hrs.	11.40
ROTARY RPM:			50	% Oil	74						Acc. Circ. Hrs.	11.70
MOTOR RPM:			168	% Solids	7.5						Depth In	993
TOTAL Bit RPM			218	% Sand	N/A						Depth Out	6300
ROT TQ. OFF BTM:			1	PH	N/A						LIH Hrs.	6:00
ROT TQ. ON BTM:			5	Temp F	51						Acc. LIH Hrs.	27.00
Current Mag Dec:			6.41	MWD F	117		BHA WT				Acc. Hrs Cir/Drilg	23.10
Pulse Hight			2.9	GPM	602		BELOW JARS				Total K Revs	149.11
"G" Totals			1.004	PSI							Jar # HRS	

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993	5307	11.3	6300								

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
8:00	8:20	0:20	5844	5938	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				DA TANGENT			
8:20	8:30	0:10				10	C/S @ 5,885' MD 1.0° INC 118.8° AZM 126° TEMP							
8:30	8:45	0:15	5938	6032	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
8:45	8:55	0:10				10	C/S @ 5,979' MD 0.9° INC 120.1° AZM 126° TEMP							
8:55	9:15	0:20	6032	6127	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
9:15	9:25	0:10				10	C/S @ 6,074' MD 1.0° INC 128.8° AZM 136° TEMP							
9:25	9:40	0:15	6127	6221	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
9:40	9:50	0:10				10	C/S @ 6,168' MD 0.8° INC 119.9° AZM 138° TEMP							
9:50	10:00	0:10	6221	6300	79	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
10:00	10:10	0:10				10	C/S @ 6,247' MD 1.1° INC 120.3° AZM 138° TEMP							
10:10	10:30	0:20				5.A	CIRC				Estimated Daily Charges			
10:30	13:30	3:00				6.G	TOH				Description		Cost	
13:30	14:00	0:30				6.G	L/D BHA 1.							

Report #: 3B

Date: 19-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 6300
 24:00 Depth: 6662

Footage Today: 362
 Current Run Ftg: 362

Drig Hrs Today: 3.80
 Run Drig Hrs: 3.80

ROP Today: 95.26
 Run Avg. ROP: 95.26

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	1	BHA #	2	BHA #	
Liner (in)	6	6		Sample	IN	MOTOR	MOTOR	Run No.		2
%	95	95		Time	15:00	NMPC	NMPC	Size (in.)		6 3/4
Vol (gals)	4.18	4.18	0.00	Wt.	9.15	EM TOOL	EM TOOL	Type		4/5 7.0
SPM	70	70		VIS	66	NMDC	FLEX NMDC	Serial No.		RY675080
DRILLING PARAMETERS				PV	29	X-O		Tool Deflection		2.25
ST. WT. ROT 1000's:		135		YP	16	3 DC'S		Avg. Diff. Press.		300
P/U WT. 1000's:		132		WL	N/A	X-O		Daily Drill Hrs.		3.80
S/O WT. 1000's:		137		CL	72000			Daily Circ. Hrs.		1.70
WOB 1000's:		30		Gels	21			Daily Total Hrs:		5.50
ROTARY RPM:		20		% Oil	74			Acc. Drill Hrs.		3.80
MOTOR RPM:		281		% Solids	7.5			Acc. Circ. Hrs.		1.70
TOTAL Bit RPM		301		% Sand	N/A			Depth In		6300
ROT TQ. OFF BTM:		1		PH	N/A			Depth Out		
ROT TQ. ON BTM:		5		Temp F	51			LIH Hrs.		9:15
Current Mag Dec:		6.41		MWD F	117	BHA WT		Acc. LIH Hrs.		9.25
Pulse Hight		2.9		GPM	602	BELOW JARS		Acc. Hrs Cir/Drig		5.50
"G" Totals		1.004		PSI				Total K Revs		68.63
								Jar # HRS		

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993	5307	11.3	6300	2	1	CT	N	N/A	1/16"	WT	BHA		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations							
14:00	14:45	0:45				6.G	P/U BHA 2.				BUILD CURVE							
14:45	18:30	3:45				6.A	TIH											
18:30	18:50	0:20	6300	6316	16	2.B	SLIDE @ 0 MTF, 30 WOB, 300 DIFF											
18:50	19:00	0:10				10	C/S @ 6,262' MD 1.0° INC 119.5° AZM 138° TEMP											
19:00	19:05	0:05	6316	6321	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
19:05	19:30	0:25	6321	6347	26	2.B	SLIDE @ 0 MTF, 30 WOB, 300 DIFF											
19:30	19:35	0:05	6347	6352	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
19:35	19:55	0:20	6352	6378	26	2.B	SLIDE @ 0 MTF, 30 WOB, 300 DIFF											
19:55	20:05	0:10				10	C/S @ 6,324' MD 2.9° INC 1.1° AZM 138° TEMP											
20:05	20:10	0:05	6378	6382	4	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
20:10	20:20	0:10	6382	6410	28	2.B	SLIDE @ 0 MTF, 30 WOB, 300 DIFF				Estimated Daily Charges							
20:20	20:20	0:00	6410	6410	0	KOP	C/S @ 6,356' MD 7.7° INC 359.3° AZM 138° TEMP				Description		Cost					
20:20	20:35	0:15	6410	6415	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
20:35	20:45	0:10	6415	6441	26	2.B	SLIDE @ 0 MTF, 30 WOB, 300 DIFF											
20:45	20:55	0:10				10	C/S @ 6,387' MD 12.2° INC 0.6° AZM 138° TEMP											
20:55	21:00	0:05	6441	6446	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
21:00	21:10	0:10	6446	6473	27	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF											
21:10	21:20	0:10				10	C/S @ 6,419' MD 16.6° INC 2.1° AZM 138° TEMP											
21:20	21:25	0:05	6473	6478	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
21:25	21:35	0:10	6478	6505	27	2.B	SLIDE @ 30L GTF, 30 WOB, 300 DIFF											
21:35	21:45	0:10				10	C/S @ 6,451' MD 21.3° INC 1.3° AZM 138° TEMP											
21:45	21:50	0:05	6505	6512	7	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF											
21:50	22:00	0:10	6512	6536	24	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF				Estimated Daily Cost (USD)		\$ -					
22:00	22:10	0:10				10	C/S @ 6,482' MD 25.4° INC 359.4° AZM 138° TEMP				Accumulated Cost (USD)		\$ -					
22:10	22:15	0:05	6536	6541	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				Company Representative (s)							
22:15	22:25	0:10	6541	6567	26	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF				Joe Wilkerson		Craig Cart					
22:25	22:35	0:10				10	C/S @ 6,513' MD 28.9° INC 357.3° AZM 138° TEMP				Wes White		Brandon Green					
22:35	22:40	0:05	6567	6570	3	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				RYAN Directional Representative (s)							
22:40	22:50	0:10	6570	6599	29	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF				Lyndon Vestal		Shawn Williamson					
22:50	23:00	0:10				10	C/S @ 6,545' MD 32.8° INC 356.6° AZM 138° TEMP											
23:00	23:05	0:05	6599	6601	2	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				RYAN MWD Representative (s)							
23:05	23:20	0:15	6601	6631	30	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF				Scott Lane		Josh Ferguson					
23:20	23:30	0:10				10	C/S @ 6,577' MD 37.1° INC 359.4° AZM 138° TEMP											
23:30	23:35	0:05	6631	6634	3	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				24 Hour Breakdown							
23:35	23:50	0:15	6634	6662	28	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF				Ftg Rot.		49		Time Rot.		1.10	
23:50	23:59	0:09				10	C/S @ 6,608' MD 41.4° INC 2.7° AZM 138° TEMP				Ftg Orient		313		Time Orient		2.80	
											Rot. ROP		44.55		Orient ROP		111.79	

Report #: 4

Date: 20-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 8545

DAILY DRILLING REPORT

Oil Company: **EP Energy**
 Field: **Crockett County, Texas**
 County, State: **Crockett, Texas**
 AFE or PO #: **163651**

Customer: **EP Energy**
 Well Name & No.: **University Salt Draw 4102 BH**
 Block or Section: **Section 02, Block 41**
 Rig Contractor & No.: **Sidewinder 222**

00:00 Depth: 6662
 24:00 Depth: 6914

Footage Today: 252
 Current Run Ftg: 614

Drig Hrs Today: 3.30
 Run Drig Hrs: 7.10

ROP Today: 76.36
 Run Avg. ROP: 86.48

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM	1	BHA #	2	BHA #
Liner (in)	6	6		Sample	IN	MOTOR	MOTOR	Run No.	2
%	95	95		Time	15:00	NMPC	NMPC	Size (in.)	6 3/4
Vol (gals)	4.18	4.18	0.00	Wt.	9.15	EM TOOL	EM TOOL	Type	4/5 7.0
SPM	70	70		VIS	66	NMDC	FLEX NMDC	Serial No.	RY675080
DRILLING PARAMETERS				PV	29	X-O		Tool Deflection	2.25
ST. WT. ROT 1000's:	135			YP	16	3 DC'S		Avg. Diff. Press.	300
P/U WT. 1000's:	132			WL	N/A	X-O		Daily Drill Hrs.	3.30
S/O WT. 1000's:	137			CL	72000			Daily Circ. Hrs.	2.30
WOB 1000's:	30			Gels	21			Daily Total Hrs:	5.60
ROTARY RPM:	20			% Oil	74			Acc. Drill Hrs.	7.10
MOTOR RPM:	281			% Solids	7.5			Acc. Circ. Hrs.	4.00
TOTAL Bit RPM	301			% Sand	N/A			Depth In	6300
ROT TQ. OFF BTM:	1			PH	N/A			Depth Out	6914
ROT TQ. ON BTM:	5			Temp F	51			LIH Hrs.	8:45
Current Mag Dec:	6.41			MWD F	117	BHA WT		Acc. LIH Hrs.	18.00
Pulse Hight	2.9			GPM	602	BELOW JARS		Acc. Hrs Cir/Drilg	11.10
"G" Totals	1.004			PSI				Total K Revs	128.23
								Jar # HRS	

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 3/4	ALLIBURTC	MM56D	12539224	5x22's	993	5307	11.3	6300	2	1	CT	N	N/A	1/16"	WT	BHA		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:05	0:05	6662	6667	5	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				BUILD CURVE			
0:05	0:15	0:10	6667	6694	27	2.B	SLIDE @ 30L GTF, 30 WOB, 300 DIFF							
0:15	0:25	0:10				10	C/S @ 6.640' MD 45.4° INC 5.4° AZM 138° TEMP							
0:25	0:45	0:20	6694	6725	31	2.B	SLIDE @ 40L GTF, 30 WOB, 300 DIFF							
0:45	0:55	0:10				10	C/S @ 6.671' MD 49.7° INC 5.7° AZM 138° TEMP							
0:55	1:00	0:05	6725	6732	7	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF							
1:00	1:20	0:20	6732	6756	24	2.B	SLIDE @ 30L GTF, 30 WOB, 300 DIFF							
1:20	1:30	0:10				10	C/S @ 6.702' MD 54.0° INC 3.6° AZM 138° TEMP							
1:30	1:35	0:05	6756	6760	4	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF							
1:35	1:50	0:15	6760	6788	28	2.B	SLIDE @ 20L GTF, 30 WOB, 300 DIFF							
1:50	2:00	0:10				10	C/S @ 6.734' MD 58.4° INC 2.2° AZM 138° TEMP				Estimated Daily Charges			
2:00	2:05	0:05	6788	6800	12	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF				Description		Cost	
2:05	2:25	0:20	6800	6819	19	2.B	SLIDE @ 20 L GTF, 30 WOB, 300 DIFF							
2:25	2:35	0:10				10	C/S @ 6.765' MD 62.6° INC 1.2° AZM 138° TEMP							
2:35	2:40	0:05	6819	6826	7	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF							
2:40	3:00	0:20	6826	6850	24	2.B	SLIDE @ 40L GTF, 30 WOB, 300 DIFF							
3:00	3:10	0:10				10	C/S @ 6.796' MD 66.4° INC 0.5° AZM 138° TEMP							
3:10	3:15	0:05	6850	6864	14	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF							
3:15	3:35	0:20	6864	6882	18	2.B	SLIDE @ 20L GTF, 30 WOB, 300 DIFF							
3:35	3:45	0:10				10	C/S @ 6.828' MD 70.1° INC 358.7° AZM 138° TEMP							
3:45	4:05	0:20	6882	6898	16	2.A	ROTATE 25 WOB, 20 RPM, 600 DIFF							
4:05	4:25	0:20	6898	6914	16	2.B	SLIDE @ H/S GTF, 30 WOB, 300 DIFF							
4:25	4:35	0:10				10	C/S @ 6.860' MD 73.1° INC 357.5° AZM 138° TEMP				Estimated Daily Cost (USD)		\$ -	
4:35	5:30	0:55				5.A	CIRCULATE				Accumulated Cost (USD)		\$ -	
5:30	8:00	2:30				6.G	POOH FOR LATERAL ASSEMBLY				Company Representative (s)			
8:00	8:45	0:45				6.G	L/D BHA 2.				Joe Wilkerson		Craig Cart	
											Wes White		Brandon Green	
											RYAN Directional Representative (s)			
											Lyndon Vestal		Shawn Williamson	
											RYAN MWD Representative (s)			
											Scott Lane		Josh Ferguson	
											24 Hour Breakdown			
							Ftg Rot.		65		Time Rot.		0.80	
							Ftg Orient		187		Time Orient		2.40	
							Rot. ROP		81.25		Orient ROP		77.92	

Report #: 4A

Date: 20-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 6914
 24:00 Depth: 8060

Footage Today: 1146
 Current Run Ftg: 1146

Drig Hrs Today: 5.00
 Run Drig Hrs: 5.00

ROP Today: 229.20
 Run Avg. ROP: 229.20

Last Casing Set: _____
 Depth: _____

					Previous		Current				
PUMP Data Total Gals/Min =			586	MUD DATA		2	BHA #	3	BHA #	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM	BIT		BIT		Run No.	3
Liner (in)	6	6		Sample	IN	MOTOR		MOTOR		Size (in.)	6 3/4
%	95	95		Time	15:00	NMPC		NMPC		Type	7/8 5.0
Vol (gps)	4.18	4.18	0.00	Wt.	9.15	EM TOOL		EM TOOL		Serial No.	RY675109
SPM	70	70		VIS	66	FLEX NMDC		NMDC		Tool Deflection	1.83
DRILLING PARAMETERS				PV	29			25 STD'S DP		Avg. Diff. Press.	600
ST. WT. ROT 1000's:		135		YP	16			AGITATOR		Daily Drill Hrs.	5.00
P/U WT. 1000's:		132		WL	N/A			SHOCK SUB		Daily Circ. Hrs.	2.00
S/O WT. 1000's:		137		CL	72000					Daily Total Hrs:	7.00
WOB 1000's:		30		Gels	21					Acc. Drill Hrs.	5.00
ROTARY RPM:		60		% Oil	74					Acc. Circ. Hrs.	2.00
MOTOR RPM:		164		% Solids	7.5					Depth In	6914
TOTAL Bit RPM		224		% Sand	N/A					Depth Out	
ROT TQ. OFF BTM:		1		PH	N/A					LIH Hrs.	11:00
ROT TQ. ON BTM:		5		Temp F	51					Acc. LIH Hrs.	11.00
Current Mag Dec:		6.41		MWD F	117	BHA WT				Acc. Hrs Cir/Drilg	7.00
Pulse Hight		2.9		GPM	602	BELOW JARS				Total K Revs	67.20
"G" Totals		1.004		PSI						Jar # HRS	

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations			
8:45	9:30	0:45				6.G	P/U BHA 3.	DA LATERAL			
9:30	13:30	4:00				6.A	TIH				
13:30	14:00	0:30	6914	6968	54	2.B	SLIDE @ HS GTF, 30 WOB, 300 DIFF	Current Lateral Target			
14:00	14:10	0:10				10	C/S @ 6,915' MD 78.8° INC 357.7° AZM 133° TEMP	Received 1/20/2015 @ 1645			
14:10	14:25	0:15	6968	6988	20	2.B	SLIDE @ HS GTF, 30 WOB, 300 DIFF	6745' TVD @ 3300' VS @ 90.0° Dip			
14:25	14:30	0:05	6988	6999	11	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
14:30	14:40	0:10				10	C/S @ 6,946' MD 82.4° INC 359.1° AZM 133° TEMP				
14:40	15:00	0:20	6999	7094	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
15:00	15:00	0:00	7094	7094	0	EOC	C/S @ 7,041' MD 87.3° INC 1.2° AZM 133° TEMP				
15:00	15:15	0:15	7094	7104	10	2.B	SLIDE @ 60 L GTF, 30 WOB, 300 DIFF				
15:15	15:25	0:10	7104	7188	84	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Estimated Daily Charges			
15:25	15:35	0:10				10	C/S @ 7,135' MD 90.4° INC 358.1° AZM 133° TEMP	Description	Cost		
15:35	15:50	0:15	7188	7282	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
15:50	16:00	0:10				10	C/S @ 7,229' MD 92.1° INC 359.7° AZM 133° TEMP				
16:00	16:10	0:10	7282	7297	15	2.B	SLIDE @ 180 GTF, 30 WOB, 300 DIFF				
16:10	16:30	0:20	7297	7376	79	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
16:30	16:40	0:10				10	C/S @ 7,323' MD 90.2° INC 359.1° AZM 133° TEMP				
16:40	16:55	0:15	7376	7470	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
16:55	17:05	0:10				10	C/S @ 7,417' MD 92.5° INC 357.4° AZM 133° TEMP				
17:05	17:20	0:15	7470	7490	20	2.B	SLIDE @ 140 R GTF, 30 WOB, 300 DIFF				
17:20	17:40	0:20	7490	7565	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				
17:40	17:50	0:10				10	C/S @ 7,512' MD 91.3° INC 357.9° AZM 147° TEMP				
17:50	18:00	0:10	7565	7585	20	2.B	SLIDE @ 140 R GTF, 30 WOB, 300 DIFF	Estimated Daily Cost (USD)	\$	-	
18:00	18:15	0:15	7585	7659	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Accumulated Cost (USD)	\$	-	
18:15	18:25	0:10				10	C/S @ 7,606' MD 91.3° INC 357.9° AZM 147° TEMP	Company Representative (s)			
18:25	18:35	0:10	7659	7753	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Joe Wilkerson	Craig Cart		
18:35	18:45	0:10				10	C/S @ 7,700' MD 90.7° INC 0.3° AZM 147° TEMP	Wes White	Brandon Green		
18:45	18:50	0:05	7753	7773	20	2.B	ROTATE 25 WOB, 60 RPM, 600 DIFF	RYAN Directional Representative (s)			
18:50	19:00	0:10	7773	7847	74	2.A	SLIDE @ 180 GTF, 30 WOB, 300 DIFF	Lyndon Vestal	Shawn Williamson		
19:00	19:10	0:10				10	C/S @ 7,794' MD 89.8° INC 2.7° AZM 147° TEMP				
19:10	19:15	0:05	7847	7859	12	2.B	ROTATE 25 WOB, 60 RPM, 600 DIFF	RYAN MWD Representative (s)			
19:15	19:40	0:25	7859	7941	82	2.A	SLIDE @ 140L GTF, 30 WOB, 300 DIFF	Scott Lane	Josh Ferguson		
19:40	19:50	0:10				10	C/S @ 7,888' MD 89.7° INC 359.1° AZM 147° TEMP				
19:50	20:00	0:10	7941	7961	20	2.B	SLIDE @ 180 GTF, 30 WOB, 300 DIFF	24 Hour Breakdown			
20:00	20:10	0:10	7961	8035	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF	Ftg Rot.	930	Time Rot.	2.90
20:10	20:20	0:10				10	C/S @ 7,982' MD 86.2° INC 355.2° AZM 147° TEMP	Ftg Orient	216	Time Orient	2.10
20:20	20:30	0:10	8035	8060	25	2.B	SLIDE @ 70R GTF, 30 WOB, 300 DIFF	Rot. ROP	320.69	Orient ROP	102.86

Report #: 4B

Date: 20-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 8060
 24:00 Depth: 8414

Footage Today: 354
 Current Run Ftg: 1500

Drig Hrs Today: 1.60
 Run Drig Hrs: 6.60

ROP Today: 221.25
 Run Avg. ROP: 227.27

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #
Liner (in)	6	6		Sample	IN				
%	95	95		Time	15:00				
Vol (gals)	4.18	4.18	0.00	Wt.	9.15				
SPM	70	70		VIS	66				
DRILLING PARAMETERS				PV	29			25 STD'S DP	
ST. WT. ROT 1000's:		135		YP	16			AGITATOR	
P/U WT. 1000's:		132		WL	N/A			SHOCK SUB	
S/O WT. 1000's:		137		CL	72000				
WOB 1000's:		30		Gels	21				
ROTARY RPM:		60		% Oil	74				
MOTOR RPM:		164		% Solids	7.5				
TOTAL Bit RPM		224		% Sand	N/A				
ROT TQ. OFF BTM:		1		PH	N/A				
ROT TQ. ON BTM:		5		Temp F	51				
Current Mag Dec:		6.41		MWD F	117				
Pulse Hight		2.9		GPM	602				
"G" Totals		1.004		PSI					

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations							
20:30	20:50	0:20	8060	8130	70	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				DA LATERAL							
20:50	22:00	1:10				MW	TROUBLE SHOOT EM TOOL											
22:00	22:10	0:10				10	C/S @ 8,045' MD 87.5° INC 356.1° AZM 147° TEMP				Current Lateral Target							
22:10	22:35	0:25	8130	8224	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Received 1/20/2015 @ 21:30							
22:35	22:45	0:10				10	C/S @ 8,171' MD 91.4° INC 359.7° AZM 147° TEMP				6765' TVD @ 3300' VS @ 89.5° Dip							
22:45	22:55	0:10	8224	8234	10	2.B	SLIDE @ 180 GTF, 30 WOB, 300 DIFF											
22:55	23:15	0:20	8234	8319	85	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:15	23:25	0:10				10	C/S @ 8,266' MD 90.8° INC 0.5° AZM 147° TEMP											
23:25	23:30	0:05	8319	8337	18	2.B	ROTATE 25 WOB, 60 RPM, 600 DIFF											
23:30	23:45	0:15	8337	8414	77	2.A	SLIDE @ 180 GTF, 30 WOB, 300 DIFF											
23:45	23:59	0:14				10	C/S @ 8,361' MD 88.5° INC 359.5° AZM 147° TEMP				Estimated Daily Charges							
											Description		Cost					
											Estimated Daily Cost (USD)		\$ -					
											Accumulated Cost (USD)		\$ -					
											Company Representative (s)							
											Joe Wilkerson		Craig Cart					
											Wes White		Brandon Green					
											RYAN Directional Representative (s)							
											Lyndon Vestal		Shawn Williamson					
											RYAN MWD Representative (s)							
											Scott Lane		Josh Ferguson					
											24 Hour Breakdown							
											Ftg Rot.		326		Time Rot.		1.30	
											Ftg Orient		28		Time Orient		0.30	
											Rot. ROP		250.77		Orient ROP		93.33	

Report #: 5

Date: 21-Jan-15


RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: **EP Energy**
 Field: **Crockett County, Texas**
 County, State: **Crockett, Texas**
 AFE or PO #: **163651**

Customer: **EP Energy**
 Well Name & No.: **University Salt Draw 4102 BH**
 Block or Section: **Section 02, Block 41**
 Rig Contractor & No.: **Sidewinder 222**

00:00 Depth: **8414**
 24:00 Depth: **9839**

Footage Today: **1425**
 Current Run Ftg: **2925**

Drig Hrs Today: **5.40**
 Run Drig Hrs: **12.00**

ROP Today: **263.89**
 Run Avg. ROP: **243.75**

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #	
Liner (in)	6	6		Sample	IN					
%	95	95		Time	15:00					
Vol (gals)	4.18	4.18	0.00	Wt.	9.15					
SPM	70	70		VIS	66					
DRILLING PARAMETERS				PV	29					
ST. WT. ROT 1000's:		135		YP	16					
P/U WT. 1000's:		132		WL	N/A					
S/O WT. 1000's:		137		CL	72000					
WOB 1000's:		30		Gels	21					
ROTARY RPM:		60		% Oil	74					
MOTOR RPM:		164		% Solids	7.5					
TOTAL Bit RPM		224		% Sand	N/A					
ROT TQ. OFF BTM:		1		PH	N/A					
ROT TQ. ON BTM:		5		Temp F	51					
Current Mag Dec:		6.41		MWD F	117					
Pulse Hight		2.9		GPM	602					
"G" Totals		1.004		PSI						

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:05	0:05	8414	8509	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				DA LATERAL			
0:05	0:15	0:10				10	C/S @ 8,456' MD 90.5° INC 0.2° AZM 147° TEMP							
0:15	0:25	0:10	8509	8604	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Current Lateral Target			
0:25	0:35	0:10				10	C/S @ 8,551' MD 89.6° INC 358.6° AZM 147° TEMP				Received 1/21/2015 @ 1100			
0:35	0:45	0:10	8604	8699	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				6775' TVD @ 5300' VS @ 89.5° Dip			
0:45	0:55	0:10				10	C/S @ 8,646' MD 88.4° INC 354.0° AZM 147° TEMP							
0:55	1:00	0:05	8699	8724	25	2.B	SLIDE @ 90R GTF, 30 WOB, 300 DIFF							
1:00	1:30	0:30	8724	8794	70	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
1:30	1:40	0:10				10	C/S @ 8,741' MD 88.3° INC 0.8° AZM 147° TEMP							
1:40	2:10	0:30	8794	8888	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
2:10	2:20	0:10				10	C/S @ 8,835' MD 89.3° INC 359.8° AZM 147° TEMP				Estimated Daily Charges			
2:20	2:25	0:05	8888	8903	15	2.B	SLIDE @ 90R GTF, 30 WOB, 300 DIFF				Description		Cost	
2:25	2:55	0:30	8903	8983	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
2:55	3:05	0:10				10	C/S @ 8,930' MD 89.4° INC 3.8° AZM 147° TEMP							
3:05	3:20	0:15	8983	9079	96	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:20	3:30	0:10				10	C/S @ 9,026' MD 90.4° INC 5.1° AZM 147° TEMP							
3:30	3:35	0:05	9079	9094	15	2.B	SLIDE @ 90L GTF, 30 WOB, 300 DIFF							
3:35	3:55	0:20	9094	9174	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:55	4:05	0:10				10	C/S @ 9,121' MD 90.7° INC 1.9° AZM 147° TEMP							
4:05	4:20	0:15	9174	9269	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
4:20	4:30	0:10				10	C/S @ 9,216' MD 92.2° INC 3.2° AZM 147° TEMP							
4:30	4:40	0:10	9269	9294	25	2.B	SLIDE @ 170L GTF, 30 WOB, 300 DIFF							
4:40	4:55	0:15	9294	9365	71	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Cost (USD)		\$ -	
4:55	5:05	0:10				10	C/S @ 9,312' MD 86.0° INC 358.3° AZM 147° TEMP				Accumulated Cost (USD)		\$ -	
5:05	5:10	0:05	9365	9380	15	2.B	SLIDE @ 60R GTF, 30 WOB, 300 DIFF				Company Representative (s)			
5:10	5:35	0:25	9380	9460	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Joe Wilkerson		Craig Cart	
5:35	5:45	0:10				10	C/S @ 9,407' MD 87.7° INC 1.6° AZM 147° TEMP				Wes White		Brandon Green	
5:45	6:05	0:20	9460	9554	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				RYAN Directional Representative (s)			
6:05	6:15	0:10				10	C/S @ 9,501' MD 90.4° INC 1.2° AZM 147° TEMP				Lyndon Vestal		Shawn Williamson	
6:15	6:20	0:05	9554	9569	15	2.B	SLIDE @ 60R GTF, 30 WOB, 300 DIFF							
6:20	6:40	0:20	9569	9649	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				RYAN MWD Representative (s)			
6:40	6:50	0:10				10	C/S @ 9,596' MD 89.2° INC 1.8° AZM 147° TEMP				Scott Lane		Josh Ferguson	
6:50	7:10	0:20	9649	9744	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
7:10	7:20	0:10				10	C/S @ 9,691' MD 90.8° INC 4.0° AZM 147° TEMP				24 Hour Breakdown			
7:20	17:30	10:10				8	REPAIR RIG (CROWN-A-MATIC)				Ftg Rot.	1295	Time Rot.	4.70
17:30	17:40	0:10	9744	9764	20	2.B	SLIDE @ 130 L GTF, 30 WOB, 300 DIFF				Ftg Orient	130	Time Orient	0.80
17:40	17:55	0:15	9764	9839	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Rot. ROP	275.53	Orient ROP	162.50

Report #: 5A

Date: 21-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 9839
 24:00 Depth: 11262

Footage Today: 1423
 Current Run Ftg: 4348

Drig Hrs Today: 3.60
 Run Drig Hrs: 15.60

ROP Today: 395.28
 Run Avg. ROP: 278.72

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #	
Liner (in)	6	6		Sample	IN					
%	95	95		Time	15:00					
Vol (gals)	4.18	4.18	0.00	Wt.	9.15					
SPM	70	70		VIS	66					
DRILLING PARAMETERS				PV	29					
ST. WT. ROT 1000's:		135		YP	16					
P/U WT. 1000's:		132		WL	N/A					
S/O WT. 1000's:		137		CL	72000					
WOB 1000's:		30		Gels	21					
ROTARY RPM:		60		% Oil	74					
MOTOR RPM:		164		% Solids	7.5					
TOTAL Bit RPM		224		% Sand	N/A					
ROT TQ. OFF BTM:		1		PH	N/A					
ROT TQ. ON BTM:		5		Temp F	51					
Current Mag Dec:		6.41		MWD F	117					
Pulse Hight		2.9		GPM	602					
"G" Totals		1.004		PSI						

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
17:55	18:05	0:10				10	C/S @ 9,786' MD	89.3° INC	2.2° AZM	151° TEMP	DA LATERAL			
18:05	18:20	0:15	9839	9933	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
18:20	18:30	0:10				10	C/S @ 9,880' MD	89.6° INC	0.3° AZM	151° TEMP	Current Lateral Target			
18:30	18:40	0:10	9933	10028	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Received 1/21/2015 @ 1100			
18:40	18:50	0:10				10	C/S @ 9,975' MD	91.2° INC	1.5° AZM	151° TEMP	6775' TVD @ 5300' VS @ 89.5° Dip			
18:50	18:55	0:05	10028	10048	20	2.B	SLIDE @ 180 GTF, 35 WOB, 300 DIFF							
18:55	19:10	0:15	10048	10122	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
19:10	19:20	0:10				10	C/S @ 10,069' MD	87.8° INC	359.7° AZM	151° TEMP				
19:20	19:30	0:10	10122	10217	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
19:30	19:40	0:10				10	C/S @ 10,164' MD	88.9° INC	0.0° AZM	151° TEMP				
19:40	19:55	0:15	10217	10312	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Charges			
19:55	20:05	0:10				10	C/S @ 10,259' MD	91.1° INC	359.3° AZM	151° TEMP	Description		Cost	
20:05	20:10	0:05	10312	10332	20	2.B	SLIDE @ 180 GTF, 35 WOB, 300 DIFF							
20:10	20:25	0:15	10332	10406	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
20:25	20:35	0:10				10	C/S @ 10,353' MD	88.9° INC	1.0° AZM	151° TEMP				
20:35	20:45	0:10	10406	10501	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
20:45	20:55	0:10				10	C/S @ 10,448' MD	89.5° INC	0.6° AZM	151° TEMP				
20:55	21:10	0:15	10501	10597	96	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
21:10	21:20	0:10				10	C/S @ 10,544' MD	91.3° INC	0.1° AZM	151° TEMP				
21:20	21:25	0:05	10597	10617	20	2.B	SLIDE @ 180 GTF, 35 WOB, 300 DIFF							
21:25	21:35	0:10	10617	10692	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
21:35	21:45	0:10				10	C/S @ 10,639' MD	87.1° INC	356.8° AZM	151° TEMP				
21:45	22:00	0:15	10692	10786	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Cost (USD)		\$ -	
22:00	22:10	0:10				10	C/S @ 10,733' MD	88.0° INC	357.9° AZM	151° TEMP	Accumulated Cost (USD)		\$ -	
22:10	22:30	0:20	10786	10882	96	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Company Representative (s)			
22:30	22:40	0:10				10	C/S @ 10,829' MD	89.6° INC	358.9° AZM	151° TEMP	Joe Wilkerson		Craig Cart	
22:40	22:50	0:10	10882	10977	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Wes White		Brandon Green	
22:50	23:00	0:10				10	C/S @ 10,924' MD	91.1° INC	359.7° AZM	151° TEMP	RYAN Directional Representative (s)			
23:00	23:05	0:05	10977	10992	15	2.B	SLIDE @ 170R GTF, 35 WOB, 300 DIFF				Lyndon Vestal		Shawn Williamson	
23:05	23:20	0:15	10992	11072	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
23:20	23:30	0:10				10	C/S @ 11,019' MD	89.4° INC	0.3° AZM	151° TEMP	RYAN MWD Representative (s)			
23:30	23:40	0:10	11072	11167	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Scott Lane		Josh Ferguson	
23:40	23:50	0:10				10	C/S @ 11,114' MD	90.0° INC	358.9° AZM	151° TEMP				
23:50	23:59	0:09	11167	11262	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				24 Hour Breakdown			
											Ftg Rot.	1348	Time Rot.	3.20
											Ftg Orient	75	Time Orient	0.30
											Rot. ROP	421.25	Orient ROP	250.00

Report #: 6

Date: 22-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job # 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 11262
 24:00 Depth: 12779

Footage Today: 1517
 Current Run Ftg: 5865

Drig Hrs Today: 4.80
 Run Drig Hrs: 20.40

ROP Today: 316.04
 Run Avg. ROP: 287.50

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #	
Liner (in)	6	6		Sample	IN					
%	95	95		Time	15:00					
Vol (gps)	4.18	4.18	0.00	Wt.	9.3					
SPM	70	70		VIS	56					
DRILLING PARAMETERS				PV	29					
ST. WT. ROT 1000's:		138		YP	16					
P/U WT. 1000's:		185		NL	N/A					
S/O WT. 1000's:		120		CL	72000					
WOB 1000's:		30		Gels	21					
ROTARY RPM:		60		% Oil	74					
MOTOR RPM:		164		% Solids	7.5					
TOTAL Bit RPM		224		% Sand	N/A					
ROT TQ. OFF BTM:		6		PH	N/A					
ROT TQ. ON BTM:		18		Temp F	110					
Current Mag Dec:		6.41		MWD F	180					
Pulse Hight		2.9		GPM	602					
"G" Totals		1.004		PSI						

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
0:00	0:10	0:10				10	C/S @ 11,209' MD	91.5° INC	355.7° AZM	151° TEMP	DA LATERAL			
0:10	0:25	0:15	11262	11282	20	2.B	SLIDE @ 140R GTF, 35 WOB, 300 DIFF							
0:25	0:40	0:15	11282	11357	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Current Lateral Target			
0:40	0:50	0:10				10	C/S @ 11,304' MD	90.0° INC	0.1° AZM	151° TEMP	Received 1/21/2015 @ 1100			
0:50	0:55	0:05	11357	11372	15	2.B	SLIDE @ 180 GTF, 35 WOB, 300 DIFF				6775' TVD @ 5300' VS @ 89.5° Dip			
0:55	1:20	0:25	11372	11452	80	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
1:20	1:30	0:10				10	C/S @ 11,399' MD	87.8° INC	0.3° AZM	151° TEMP				
1:30	1:45	0:15	11452	11547	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
1:45	1:55	0:10				10	C/S @ 11,494' MD	88.2° INC	359.8° AZM	151° TEMP				
1:55	2:05	0:10	11547	11642	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
2:05	2:10	0:05				10	C/S @ 11,589' MD	90.3° INC	1.0° AZM	151° TEMP	Estimated Daily Charges			
2:10	2:20	0:10	11642	11737	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Description		Cost	
2:20	2:30	0:10				10	C/S @ 11,684' MD	89.0° INC	0.0° AZM	151° TEMP				
2:30	2:40	0:10	11737	11832	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
2:40	2:50	0:10				10	C/S @ 11,779' MD	89.6° INC	356.0° AZM	151° TEMP				
2:50	3:00	0:10	11832	11927	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:00	3:10	0:10				10	C/S @ 11,874' MD	90.1° INC	356.4° AZM	151° TEMP				
3:10	3:15	0:05	11927	12021	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:15	3:25	0:10				10	C/S @ 11,968' MD	89.3° INC	354.8° AZM	151° TEMP				
3:25	3:45	0:20	12021	12046	25	2.B	SLIDE @ 100R GTF, 35 WOB, 200 DIFF							
3:45	3:55	0:10	12046	12116	70	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
3:55	4:05	0:10				10	C/S @ 12,063' MD	88.3° INC	356.3° AZM	180° TEMP				
4:05	4:30	0:25	12116	12146	30	2.B	SLIDE @ 90R GTF, 35 WOB, 200 DIFF				Estimated Daily Cost (USD)		\$ -	
4:30	4:45	0:15	12146	12210	64	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Accumulated Cost (USD)		\$ -	
4:45	4:55	0:10				10	C/S @ 12,157' MD	89.7° INC	3.5° AZM	180° TEMP	Company Representative (s)			
4:55	5:05	0:10	12210	12305	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Joe Wilkerson		Craig Cart	
5:05	5:15	0:10				10	C/S @ 12,252' MD	89.5° INC	4.3° AZM	180° TEMP	Wes White		Brandon Green	
5:15	5:25	0:10	12305	12399	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				RYAN Directional Representative (s)			
5:25	5:35	0:10				10	C/S @ 12,346' MD	90.3° INC	4.0° AZM	180° TEMP	Lyndon Vestal		Shawn Williamson	
5:35	5:45	0:10	12399	12494	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
5:45	5:55	0:10				10	C/S @ 12,441' MD	89.9° INC	1.4° AZM	180° TEMP	RYAN MWD Representative (s)			
5:55	6:05	0:10	12494	12589	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Scott Lane		Josh Ferguson	
6:05	6:15	0:10				10	C/S @ 12,536' MD	89.2° INC	357.4° AZM	180° TEMP				
6:15	6:35	0:20	12589	12685	96	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				24 Hour Breakdown			
6:35	6:45	0:10				10	C/S @ 12,632' MD	89.8° INC	355.1° AZM	180° TEMP	Ftg Rot.	1397	Time Rot.	3.40
6:45	7:00	0:15	12685	12715	30	2.B	SLIDE @ 100 R GTF, 35 WOB, 200 DIFF				Ftg Orient	120	Time Orient	1.30
7:00	7:20	0:20	12715	12779	64	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Rot. ROP	410.88	Orient ROP	92.31

Report #: 6A

Date: 22-Jan-15


RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: **EP Energy**
 Field: **Crockett County, Texas**
 County, State: **Crockett, Texas**
 AFE or PO #: **163651**

Customer: **EP Energy**
 Well Name & No.: **University Salt Draw 4102 BH**
 Block or Section: **Section 02, Block 41**
 Rig Contractor & No.: **Sidewinder 222**

00:00 Depth: 12779
 24:00 Depth: 14198

Footage Today: 1419
 Current Run Ftg: 7284

Drig Hrs Today: 7.00
 Run Drig Hrs: 27.40

ROP Today: 202.71
 Run Avg. ROP: 265.84

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #	
Liner (in)	6	6		Sample	IN					
%	95	95		Time	15:00					
Vol (gals)	4.18	4.18	0.00	Wt.	9.3					
SPM	70	70		VIS	56					
DRILLING PARAMETERS				PV	29					
ST. WT. ROT 1000's:		138		YP	16					
P/U WT. 1000's:		185		NL	N/A					
S/O WT. 1000's:		120		CL	72000					
WOB 1000's:		30		Gels	21					
ROTARY RPM:		60		% Oil	74					
MOTOR RPM:		164		% Solids	7.5					
TOTAL Bit RPM		224		% Sand	N/A					
ROT TQ. OFF BTM:		6		PH	N/A					
ROT TQ. ON BTM:		18		Temp F	110					
Current Mag Dec:		6.41		MWD F	180					
Pulse Hight		2.9		GPM	602					
"G" Totals		1.004		PSI						

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		
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA		
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914													

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
7:20	7:30	0:10				10	C/S @ 12,726' MD	87.5° INC	357.9° AZM	180° TEMP	DA LATERAL			
7:30	7:50	0:20	12779	12799	20	2.B	SLIDE @ 90 R GTF, 35 WOB, 200 DIFF							
7:50	8:05	0:15	12799	12873	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Current Lateral Target			
8:05	8:15	0:10				10	C/S @ 12,820' MD	88.2° INC	4.2° AZM	180° TEMP	Received 1/22/2015 @ 0700			
8:15	8:30	0:15	12873	12968	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				6800' TVD @ 7500' VS @ 89.5° Dip			
8:30	8:40	0:10				10	C/S @ 12,915' MD	90.1° INC	4.1° AZM	180° TEMP				
8:40	8:55	0:15	12968	13062	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
8:55	9:05	0:10				10	C/S @ 13,009' MD	89.3° INC	1.0° AZM	180° TEMP				
9:05	9:20	0:15	13062	13157	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
9:20	9:30	0:10				10	C/S @ 13,104' MD	90.8° INC	1.0° AZM	180° TEMP				
9:30	9:45	0:15	13157	13252	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Charges			
9:45	9:55	0:10				10	C/S @ 13,199' MD	91.7° INC	1.4° AZM	180° TEMP	Description		Cost	
9:55	10:25	0:30	13252	13272	20	2.B	SLIDE @ 180 GTF, 35 WOB, 200 DIFF							
10:25	10:45	0:20	13272	13346	74	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
10:45	10:55	0:10				10	C/S @ 13,293' MD	89.1° INC	1.7° AZM	180° TEMP				
10:55	11:10	0:15	13346	13441	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
11:10	11:20	0:10				10	C/S @ 13,388' MD	90.1° INC	2.1° AZM	180° TEMP				
11:20	11:35	0:15	13441	13461	20	2.B	SLIDE @ 180 GTF, 35 WOB, 200 DIFF							
11:35	11:50	0:15	13461	13536	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
11:50	12:00	0:10				10	C/S @ 13,483' MD	88.4° INC	2.8° AZM	180° TEMP				
12:00	12:20	0:20	13536	13630	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
12:20	12:30	0:10				10	C/S @ 13,577' MD	90.3° INC	2.9° AZM	180° TEMP				
12:30	13:10	0:40	13630	13650	20	2.B	SLIDE @ 150 L GTF, 35 WOB, 200 DIFF				Estimated Daily Cost (USD)		\$ -	
13:10	13:35	0:25	13650	13725	75	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Accumulated Cost (USD)		\$ -	
13:35	13:45	0:10				10	C/S @ 13,672' MD	86.3° INC	3.9° AZM	180° TEMP	Company Representative (s)			
13:45	14:00	0:15	13725	13820	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Joe Wilkerson		Craig Cart	
14:00	14:10	0:10				10	C/S @ 13,767' MD	86.9° INC	3.5° AZM	180° TEMP	Wes White		Brandon Green	
14:10	14:40	0:30	13820	13914	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				RYAN Directional Representative (s)			
14:40	14:50	0:10				10	C/S @ 13,861' MD	88.2° INC	4.1° AZM	180° TEMP	Lyndon Vestal		Shawn Williamson	
14:50	15:20	0:30	13914	14009	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
15:20	15:30	0:10				10	C/S @ 13,956' MD	89.8° INC	2.9° AZM	180° TEMP	RYAN MWD Representative (s)			
15:30	16:00	0:30	14009	14104	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Scott Lane		Josh Ferguson	
16:00	16:10	0:10				10	C/S @ 14,051' MD	91.5° INC	3.7° AZM	180° TEMP				
16:10	16:30	0:20	14104	14134	30	2.B	SLIDE @ 135 L GTF, 35 WOB, 200 DIFF				24 Hour Breakdown			
16:30	16:50	0:20	14134	14198	64	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Ftg Rot.	1309	Time Rot.	4.90
16:50	17:00	0:10				10	C/S @ 14,145' MD	88.8° INC	0.9° AZM	183° TEMP	Ftg Orient	110	Time Orient	2.10
17:00	17:30	0:30				7	RIG SERVICE				Rot. ROP	267.14	Orient ROP	52.38

Report #: 6B

Date: 22-Jan-15


RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: **EP Energy**
 Field: **Crockett County, Texas**
 County, State: **Crockett, Texas**
 AFE or PO #: **163651**

Customer: **EP Energy**
 Well Name & No.: **University Salt Draw 4102 BH**
 Block or Section: **Section 02, Block 41**
 Rig Contractor & No.: **Sidewinder 222**

00:00 Depth: 14198
 24:00 Depth: 14986

Footage Today: 788
 Current Run Ftg: 8072

Drig Hrs Today: 2.40
 Run Drig Hrs: 29.80

ROP Today: 328.33
 Run Avg. ROP: 270.87

Last Casing Set: _____
 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA	CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #
Liner (in)	6	6		Sample	IN				
%	95	95		Time	15:00				
Vol (gals)	4.18	4.18	0.00	Wt.	9.3				
SPM	70	70		VIS	56				
DRILLING PARAMETERS				PV	29			25 STD'S DP	
ST. WT. ROT 1000's:		138		YP	16			AGITATOR	
P/U WT. 1000's:		185		WL	N/A			SHOCK SUB	
S/O WT. 1000's:		120		CL	72000				
WOB 1000's:		30		Gels	21				
ROTARY RPM:		60		% Oil	74				
MOTOR RPM:		164		% Solids	7.5				
TOTAL Bit RPM		224		% Sand	N/A				
ROT TQ. OFF BTM:		6		PH	N/A				
ROT TQ. ON BTM:		18		Temp F	110				
Current Mag Dec:		6.41		MWD F	180				
Pulse Hight		2.9		GPM	602				
"G" Totals		1.004		PSI					

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
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914											

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown				Current Operations			
17:30	17:45	0:15	14198	14293	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				DA LATERAL			
17:45	17:55	0:10				10	C/S @ 14,240' MD 89.0° INC 0.7° AZM 183° TEMP							
17:55	18:10	0:15	14293	14387	94	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Current Lateral Target			
18:10	18:20	0:10				10	C/S @ 14,334' MD 89.5° INC 0.4° AZM 183° TEMP				Received 1/22/2015 @ 0700			
18:20	18:40	0:20	14387	14482	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				6800' TVD @ 7500' VS @ 89.5° Dip			
18:40	18:50	0:10				10	C/S @ 14,429' MD 89.6° INC 358.8° AZM 183° TEMP							
18:50	19:10	0:20	14482	14577	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
19:10	19:20	0:10				10	C/S @ 14,524' MD 89.2° INC 356.0° AZM 183° TEMP							
19:20	19:35	0:15	14577	14672	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
19:35	19:45	0:10				10	C/S @ 14,619' MD 89.2° INC 355.3° AZM 183° TEMP							
19:45	20:00	0:15	14672	14767	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF				Estimated Daily Charges			
20:00	20:10	0:10				10	C/S @ 14,714' MD 89.8° INC 353.3° AZM 183° TEMP				Description		Cost	
20:10	20:30	0:20	14767	14862	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
20:30	20:40	0:10				10	C/S @ 14,809' MD 89.6° INC 352.0° AZM 183° TEMP							
20:40	21:00	0:20	14862	14957	95	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
21:00	21:10	0:10				10	C/S @ 14,904' MD 89.0° INC 352.6° AZM 183° TEMP							
21:10	21:15	0:05	14957	14986	29	2.A	ROTATE 25 WOB, 60 RPM, 600 DIFF							
21:15	23:59	2:44				5.A	CIRC							
											Estimated Daily Cost (USD)		\$ -	
											Accumulated Cost (USD)		\$ -	
											Company Representative (s)			
											Joe Wilkerson		Craig Cart	
											Wes White		Brandon Green	
											RYAN Directional Representative (s)			
											Lyndon Vestal		Shawn Williamson	
											RYAN MWD Representative (s)			
											Scott Lane		Josh Ferguson	
											24 Hour Breakdown			
											Ftg Rot.		788	
											Ftg Orient		0	
											Rot. ROP		328.33	
											Orient ROP		-	

Report #: 7

Date: 23-Jan-15



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Job #: 8545

DAILY DRILLING REPORT

Oil Company: EP Energy
 Field: Crockett County, Texas
 County, State: Crockett, Texas
 AFE or PO #: 163651

Customer: EP Energy
 Well Name & No.: University Salt Draw 4102 BH
 Block or Section: Section 02, Block 41
 Rig Contractor & No.: Sidewinder 222

00:00 Depth: 0 Footage Today: 0 Drlg Hrs Today: 0.00 ROP Today: - Last Casing Set: _____
 24:00 Depth: 0 Current Run Ftg: -6914 Run Drlg Hrs: 29.80 Run Avg. ROP: -232.01 Depth: _____

PUMP Data Total Gals/Min = 586				MUD DATA		Previous	Current	MOTOR DATA		CURRENT
Pump	National	National	0	Mud Type	OBM	2	BHA #	3	BHA #	
Liner (in)	6	6		Sample	IN					
%	95	95		Time	15:00					
Vol (gals)	4.18	4.18	0.00	Wt.	9.3					
SPM	70	70		VIS	56					
DRILLING PARAMETERS				PV	29			25 STD'S DP		
ST. WT. ROT 1000's:		138		YP	16			AGITATOR		
P/U WT. 1000's:		185		WL	N/A			SHOCK SUB		
S/O WT. 1000's:		120		CL	72000					
WOB 1000's:		30		Gels	21					
ROTARY RPM:		60		% Oil	74					
MOTOR RPM:		164		% Solids	7.5					
TOTAL Bit RPM		224		% Sand	N/A					
ROT TQ. OFF BTM:		6		PH	N/A					
ROT TQ. ON BTM:		18		Temp F	110					
Current Mag Dec:		6.41		MWD F	180					
Pulse Hight		2.9		GPM	602					
"G" Totals		1.004		PSI						

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
2	8 3/4	HUGHES	VG20M	5251822	3x18's	6300	614	7.0	6914	1	1	WT	G	E	0/16"	MT	BHA
3	8 3/4	HUGHES	T606X	7152704	6x18's	6914	8072	29.6	14986	1	1	WT	G	N/A	1/16"	CT	TD

From	To	Hrs.	Start Depth	End Depth	CL	Code	Time Breakdown	Current Operations			
0:00	1:30	1:30				5.A	CIRC	DA LATERAL			
1:30	10:00	8:30				6.G	TOH TO L/D TOOLS. END OF WELL OPERATIONS.				
10:00	11:00	1:00				6.G	L/D BHA 3.	Current Lateral Target			
11:00	23:59	12:59				S	STANDBY FOR RIG SKID	Received 1/22/2015 @ 0700			
								6800' TVD @ 7500' VS @ 89.5° Dip			



BOTTOM HOLE ASSEMBLY

[illegible]



BOTTOM HOLE ASSEMBLY

[illegible]



BOTTOM HOLE ASSEMBLY

[illegible]



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #1

General Information:		In the Event of an Incident:	
Ryan Job #:	8545	Date of Incident:	
Customer:	EP Energy	Date Notified Office:	
Location:	Crockett, Texas	Person Notified:	
Lease:	Section 02, Block 41		
Well Name & Number:	University Salt Draw 4102 BH		
Rig Name & Number:	Sidewinder 222	Incident Comments:	
Directional Driller ('s):	Lyndon Vestal		
	Shawn Williamson		
Motor Information:		Bit Information:	
Motor Serial #:	RY675113	Bit Size:	8 3/4
Motor Size (OD):	6 3/4"	Bit Type:	MM56D
Motor Company:	RYAN	Bit Manufacture:	HALLIBURTON
Motor Stabilizer Size:	N/S	Serial #:	12539224
Degree Bent Housing:	1.75	Jets / TFA:	5X22'S
Rotor / Stator Conf.:	7/8 5.0	Mud Information End of Run:	
Depth In:	993	Mud Type:	OBM
Depth Out:	6300	Mud Weight:	9.1
Footage:	5307	Viscosity:	66
Drilg Hours:	11.3	Plastic Vis:	29
Circulating Hours:	11.8	Yield Point:	16
Total Hours:	23.1	Sand %:	N/A
Hours Below Rotary Table (LIH):	27	Solids %:	7.5
Motor Yield:	12'S	LCM (yes or no):	NO
Start of Run: Date		% LCM per/BBL:	N/A
January 18, 2015		Static Temp:	95
GPM'S:	550	Circulating Temp:	138
Standpipe Press / Off Bottom:	1350	OBM Aniline Point:	
Standpipe Press / On Bottom:	1550		
Weight on Bit Avg :	10		
End Of Run: Date			
January 19, 2015			
GPM'S:	585		
Standpipe Press / Off Bottom:	1700		
Standpipe Press / On Bottom:	2400		
Weight on Bit Avg :	25		

Comments

MOTOR PERFORMED AS EXPECTED NO ISSUES



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #2

General Information:		In the Event of an Incident:	
Ryan Job #:	8545	Date of Incident:	
Customer:	EP Energy	Date Notified Office:	
Location:	Crockett, Texas	Person Notified:	
Lease:	Section 02, Block 41		
Well Name & Number:	University Salt Draw 4102 BH		
Rig Name & Number:	Sidewinder 222	Incident Comments:	
Directional Driller ('s):	Lyndon Vestal		
	Shawn Williamson		
Motor Information:		Bit Information:	
Motor Serial #:	RY675080	Bit Size:	8 3/4
Motor Size (OD):	6 3/4"	Bit Type:	VG-20M
Motor Company:	RYAN	Bit Manufacture:	HUGHES
Motor Stabilizer Size:	N/A	Serial #:	5251822
Degree Bent Housing:	2.25	Jets / TFA:	3X18'S
Rotor / Stator Conf.:	4/5 7.0	Mud Information End of Run:	
Depth In:	6300	Mud Type:	OBM
Depth Out:	6914	Mud Weight:	9.1
Footage:	614	Viscosity:	66
Drilg Hours:	7	Plastic Vis:	29
Circulating Hours:	4.1	Yield Point:	16
Total Hours:	11.1	Sand %:	N/A
Hours Below Rotary Table (LIH):	18	Solids %:	7.5
Motor Yield:	16'S	LCM (yes or no):	NO
Start of Run: Date		% LCM per/BBL:	N/A
January 19, 2015		Static Temp:	95
GPM'S:	585	Circulating Temp:	120
Standpipe Press / Off Bottom:	1700	OBM Aniline Point:	
Standpipe Press / On Bottom:	2400		
Weight on Bit Avg :	25		
End Of Run: Date			
January 20, 2015			
GPM'S:	585		
Standpipe Press / Off Bottom:	2100		
Standpipe Press / On Bottom:	2400		
Weight on Bit Avg :	50		

Comments

MOTOR PERFORMED AS EXPECTED.



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Motor Run Report #3

General Information:		In the Event of an Incident:	
Ryan Job #:	8545	Date of Incident:	
Customer:	EP Energy	Date Notified Office:	
Location:	Crockett, Texas	Person Notified:	
Lease:	Section 02, Block 41		
Well Name & Number:	University Salt Draw 4102 BH		
Rig Name & Number:	Sidewinder 222	Incident Comments:	
Directional Driller ('s):	Lyndon Vestal		
	Shawn Williamson		
Motor Information:		Bit Information:	
Motor Serial #:	RY675080	Bit Size:	8 3/4
Motor Size (OD):	6 3/4"	Bit Type:	T606X
Motor Company:	RYAN	Bit Manufacture:	HUGHES
Motor Stabilizer Size:	N/A	Serial #:	7152704
Degree Bent Housing:	1.83	Jets / TFA:	6X18'S
Rotor / Stator Conf.:	7/8 5.0	Mud Information End of Run:	
Depth In:	6914	Mud Type:	OBM
Depth Out:	14986	Mud Weight:	9.1
Footage:	8072	Viscosity:	66
Drilg Hours:	29.6	Plastic Vis:	29
Circulating Hours:	18.6	Yield Point:	16
Total Hours:	48.2	Sand %:	N/A
Hours Below Rotary Table (LIH):	72.5	Solids %:	7.5
Motor Yield:	12'S	LCM (yes or no):	NO
Start of Run: Date		% LCM per/BBL:	N/A
January 20, 2015		Static Temp:	95
GPM'S:	585	Circulating Temp:	120
Standpipe Press / Off Bottom:	2300	OBM Aniline Point:	
Standpipe Press / On Bottom:	3000		
Weight on Bit Avg :	25		
End Of Run: Date			
January 23, 2015			
GPM'S:	520		
Standpipe Press / Off Bottom:	2900		
Standpipe Press / On Bottom:	3700		
Weight on Bit Avg :	25		

Comments

MOTOR PERFORMED AS EXPECTED.

EP Energy E&P Company, L.P.

University Salt Draw 4102BH

Sidewinder 222

Drilling Time Only

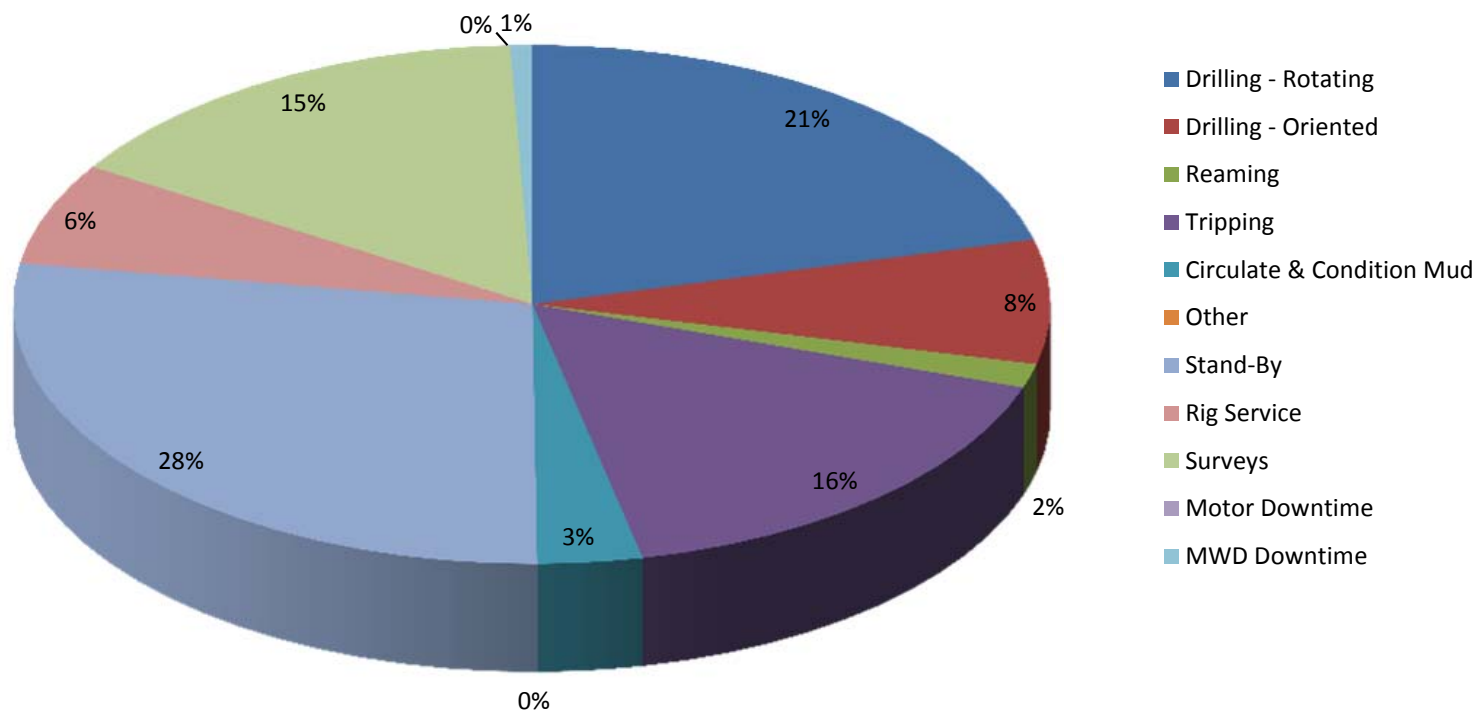
	Rotating Ftg	Rotating Hrs	Rotating ROP	Rotating %	Slide Ftg	Slide Hrs	Slide ROP	Slide %	Total Ftg	Total Hrs	Avg ROP
Vertical Hole	5134.00	10.59	484.80	94.78%	283.00	2.21	128.05	5.22%	5417.00	12.80	423.20
Curve	206.00	2.03	101.48	30.12%	478.00	4.67	102.36	69.88%	684.00	6.70	102.09
Lateral	7287.00	22.50	323.87	92.33%	605.00	6.06	99.83	7.67%	7892.00	28.56	276.33

Start Depth: 993

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
1/17/2015	1	993	KOP @ 6410 EOC @ 7094	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
1/18/2015	2	4155		3162	187	2975	4.23	1.00	2.50	2.00	0.00	0.00	9.50	0.00	4.75	0.00	0.00	0.00	0.00	24.00
1/19/2015	3	6662		2507	313	2194	7.25	2.75	0.00	8.00	0.33	0.00	0.00	0.00	5.65	0.00	0.00	0.00	0.00	24.00
1/20/2015	4	8414		1752	431	1321	5.08	4.75	0.00	8.00	0.92	0.00	0.00	0.00	4.07	0.00	1.17	0.00	0.00	24.00
1/21/2015	5	11262		2848	205	2643	7.90	1.08	0.00	0.00	0.00	0.00	0.00	10.17	4.83	0.00	0.00	0.00	0.00	24.00
1/22/2015	6	14986		3724	230	3494	10.75	3.42	0.00	0.00	2.73	0.00	0.00	0.50	6.58	0.00	0.00	0.00	0.00	24.00
1/23/2015	7	14986		0	0	0	0.00	0.00	0.00	9.50	1.50	0.00	12.98	0.00	0.00	0.00	0.00	0.00	0.00	24.00
				13993	1366	12627	35.22	13.00	2.50	27.50	5.48	0.00	46.47	10.67	25.88	0.00	1.17	0.00	0.00	168.00

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TIME BREAKDOWN

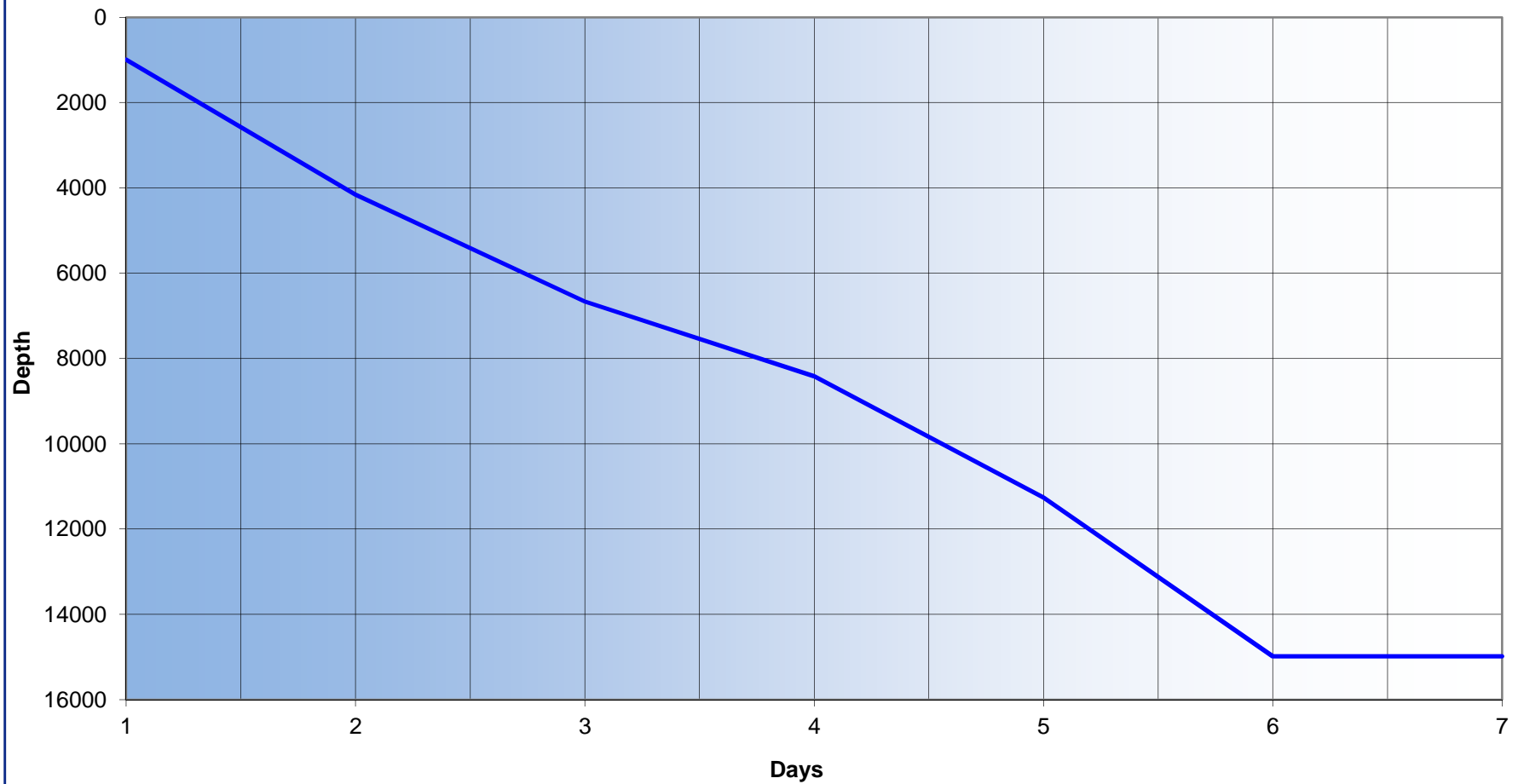


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Days vs. Depth

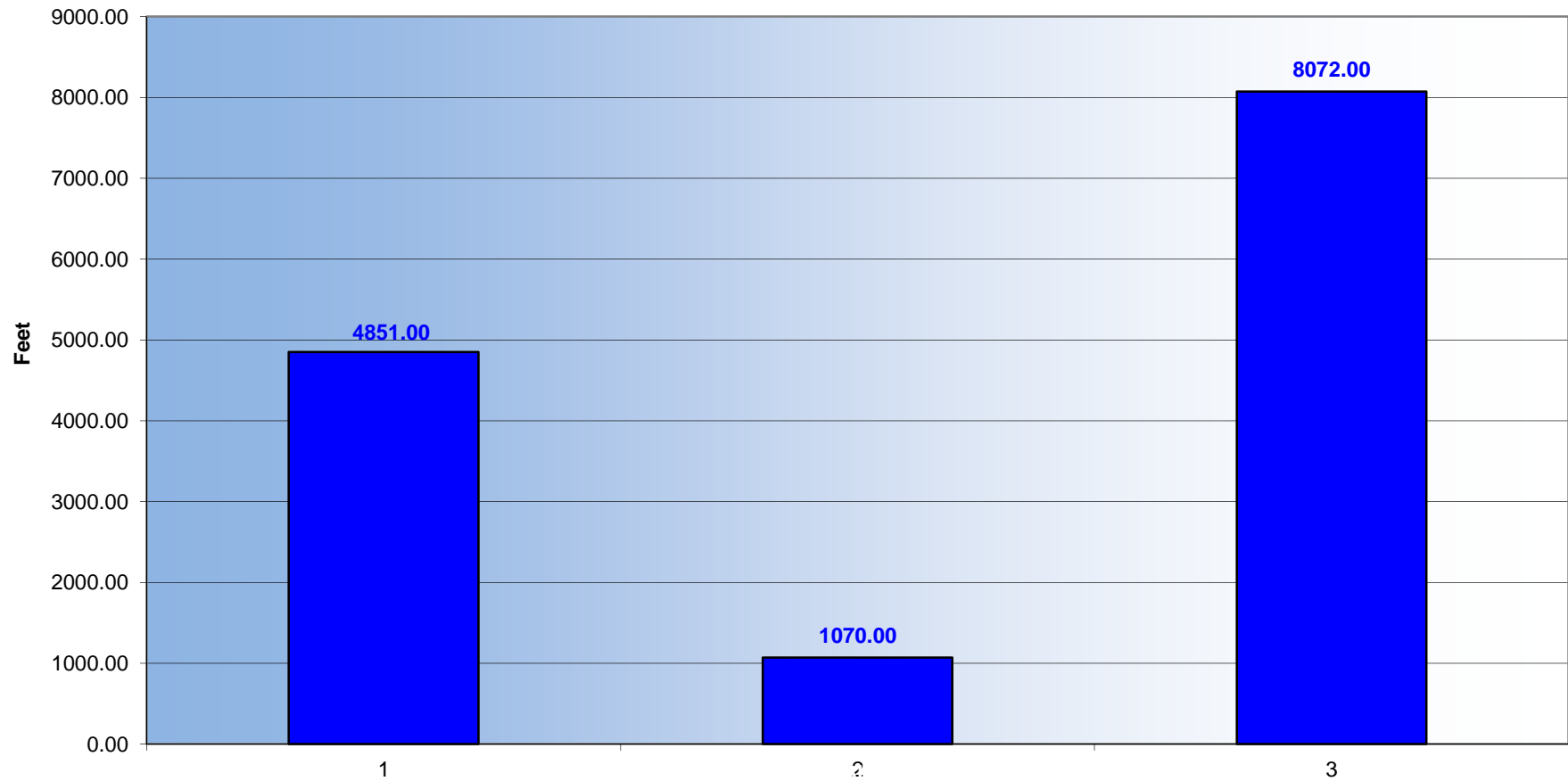


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Footage Per BHA

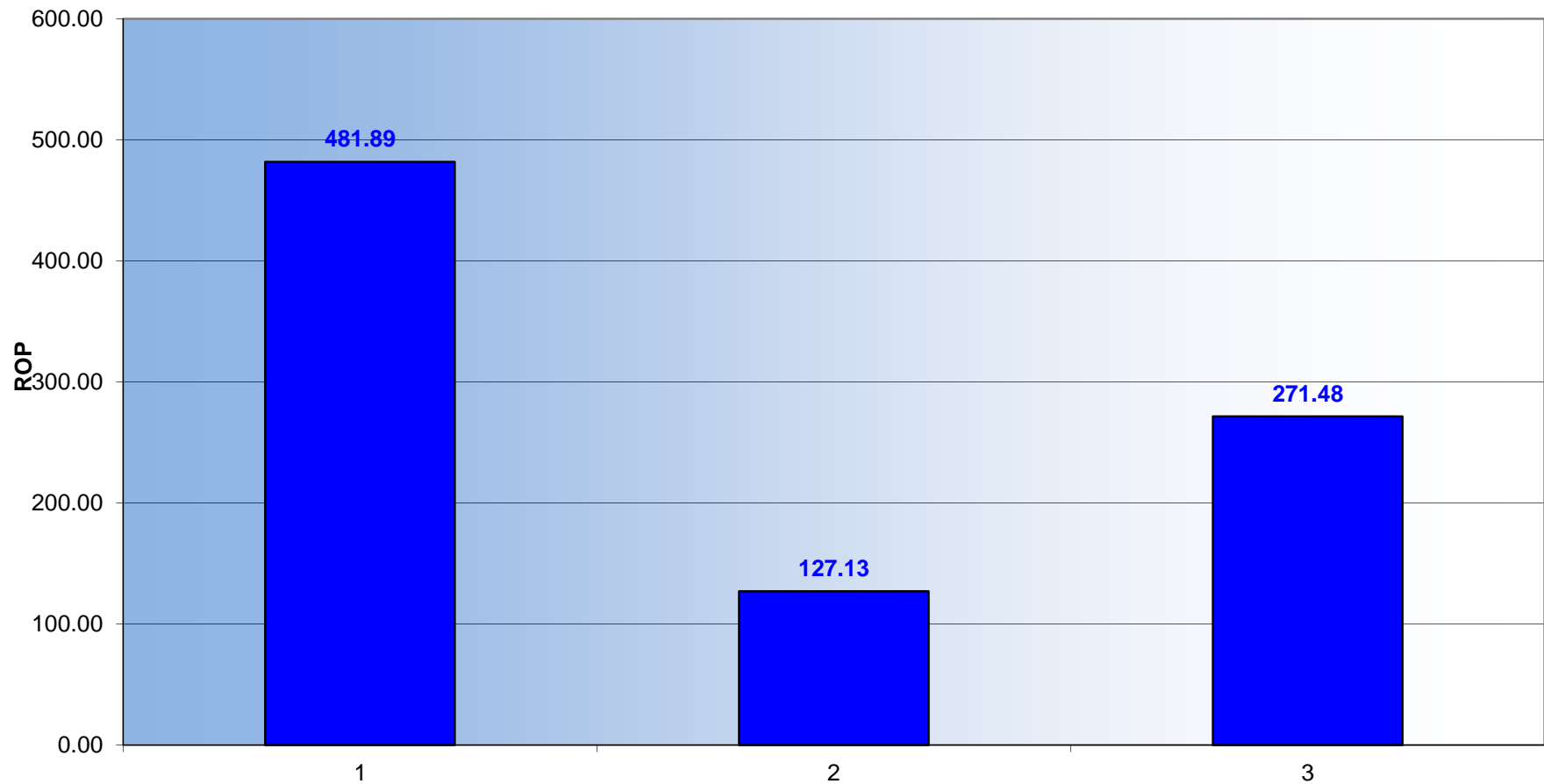


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Average Rate of Penetration Per BHA

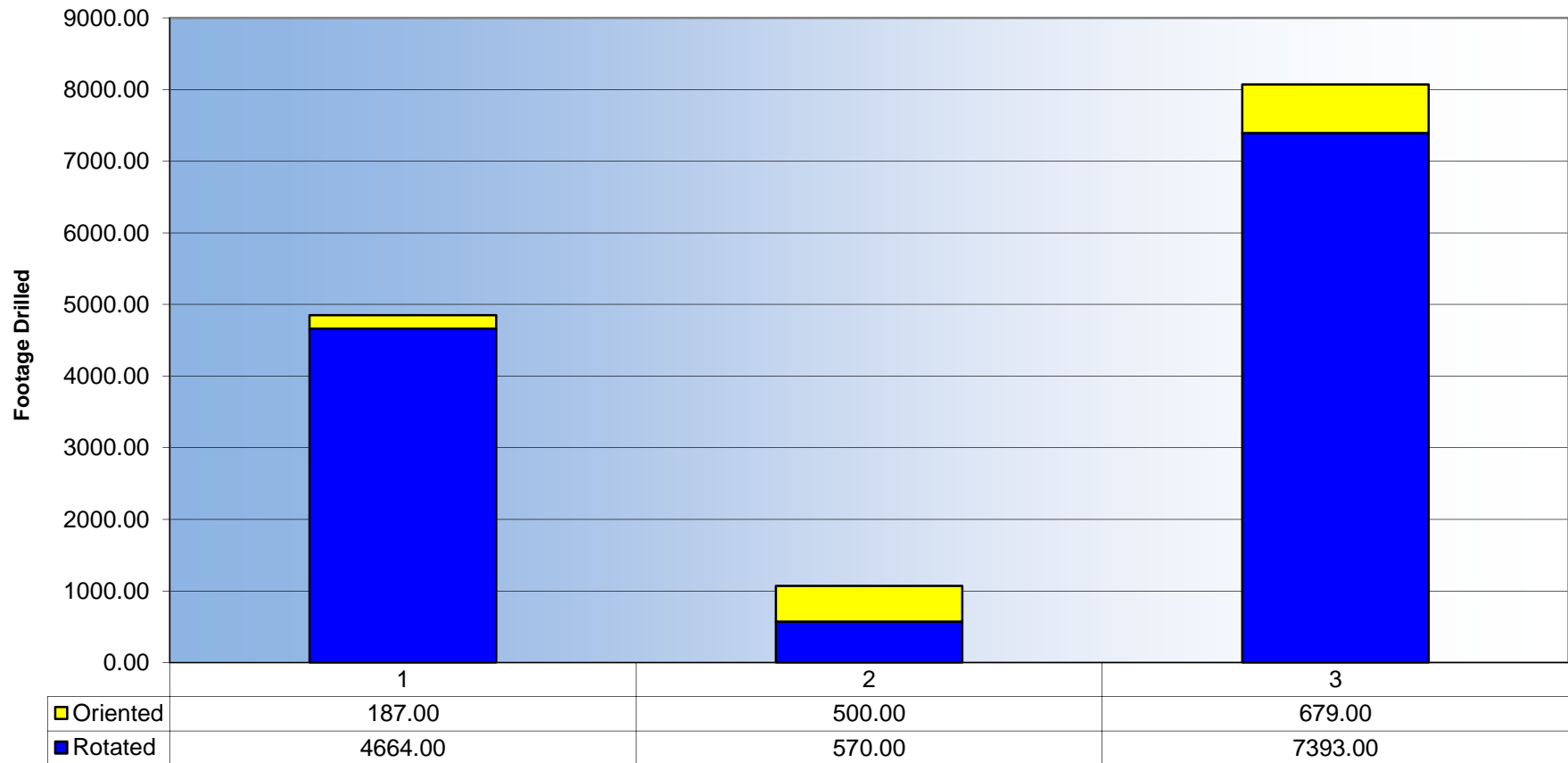


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Oriented vs. Rotated

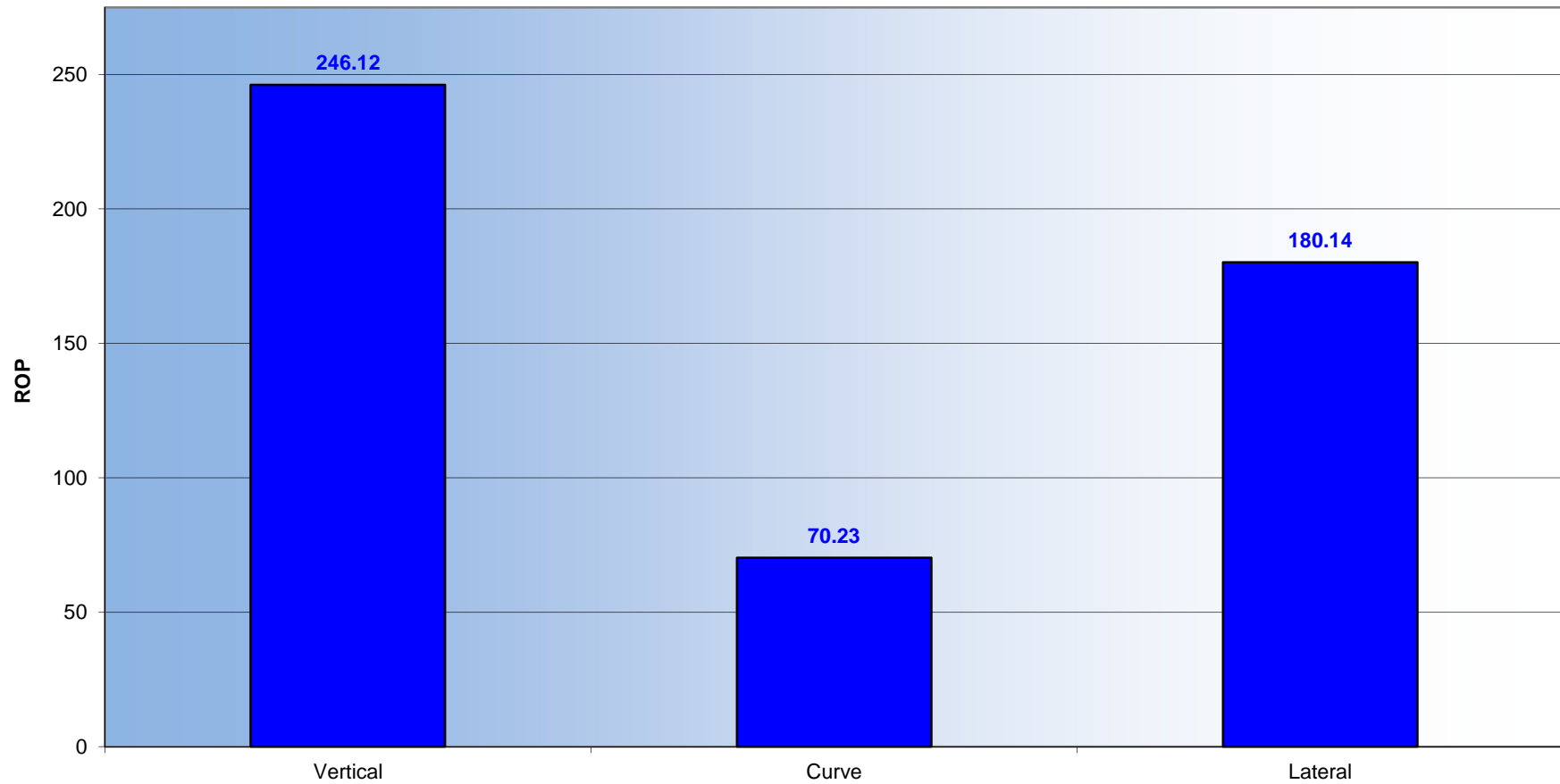


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Vertical, Curve, and Lateral Average ROP

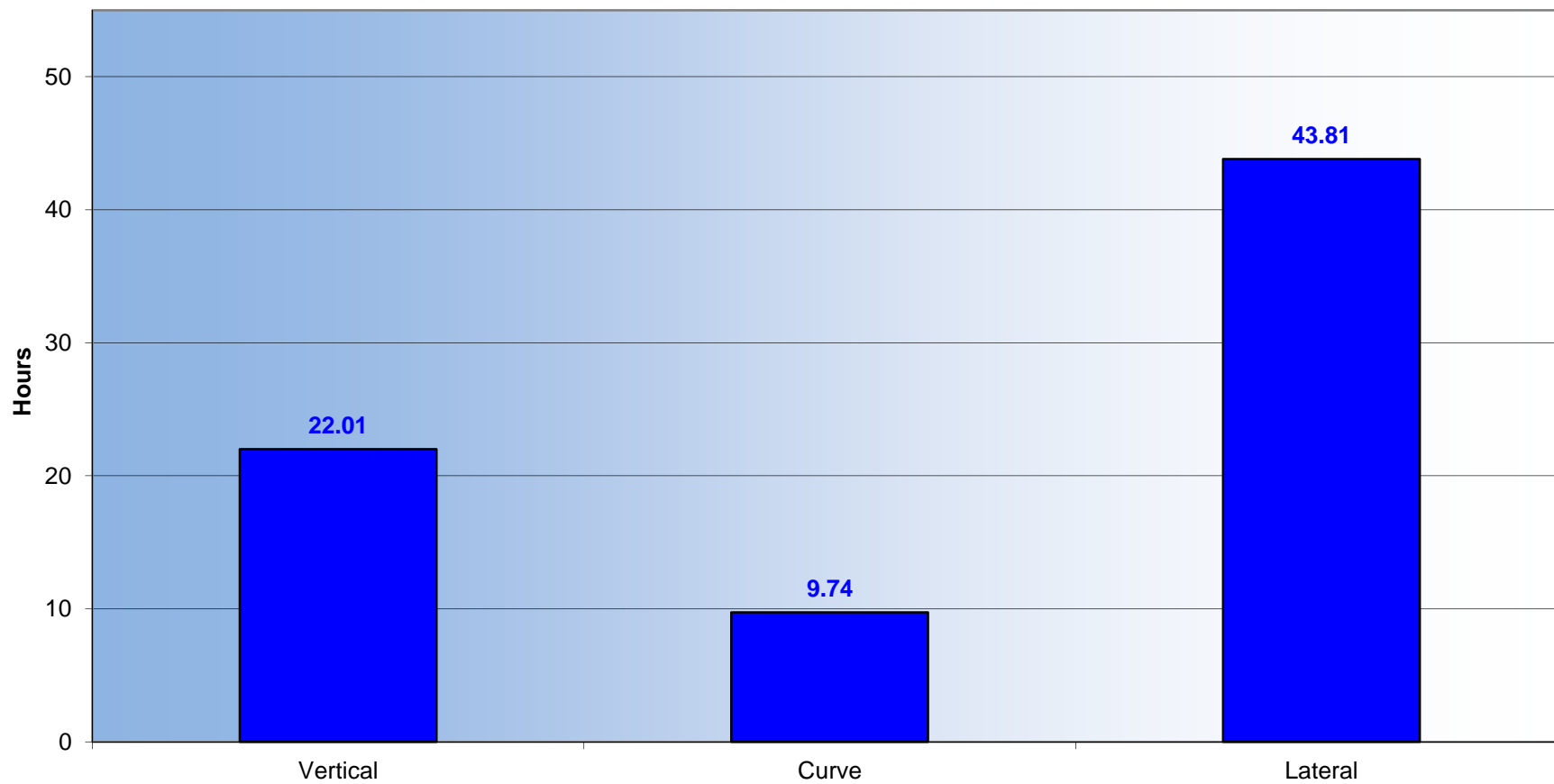


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Vertical, Curve, and Lateral Hours

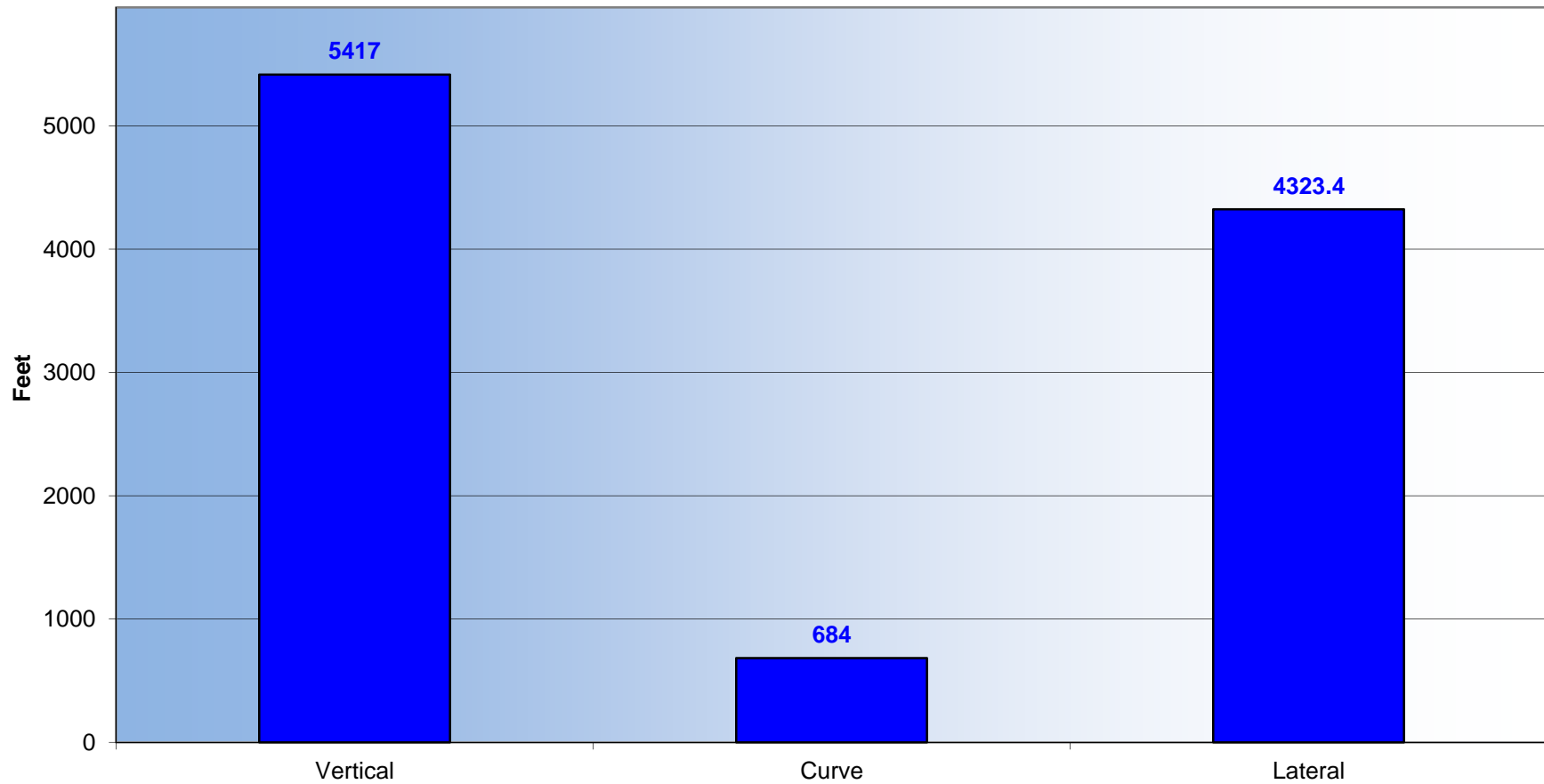


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Vertical, Curve, and Lateral Average Footage Per Day



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