



Where energy meets innovation.

EQT PRODUCTION

Wetzel County, WV

Big 190

Well #513926

API # 47-103-03109

Stk

Design: Stk

Standard Survey Report

18 December, 2015

Received
Office of Oil & Gas
MAY 04 2016



05/27/2016



Where energy meets innovation.

EQT PRODUCTION
Big 190
Wetzel County, WV
Well #513926
Plan 9 - STK AVP FINAL (Grid)
KB@23 @ 1497.00usft



PRO DIRECTIONAL



True North: 0.70 Azimuths to Grid North
Magnetic North: -7.95°
Geodetic System: US State Plane 1927 (East solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: West Virginia North 4701
System Datum: Mean Sea Level
Magnetic Field
Strength: 52225.8anT
Dip Angle: 66.89°
Date: 11/12/2015
Model: IGRF2015

Azimuth Corrections

To convert a Magnetic Direction to a Grid Direction, Subtract 7.95°

RKB Elevation: KB@23 @ 1497.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	385255.46	1688243.35	39°33' 8.94 N	80°36' 20.34 W	

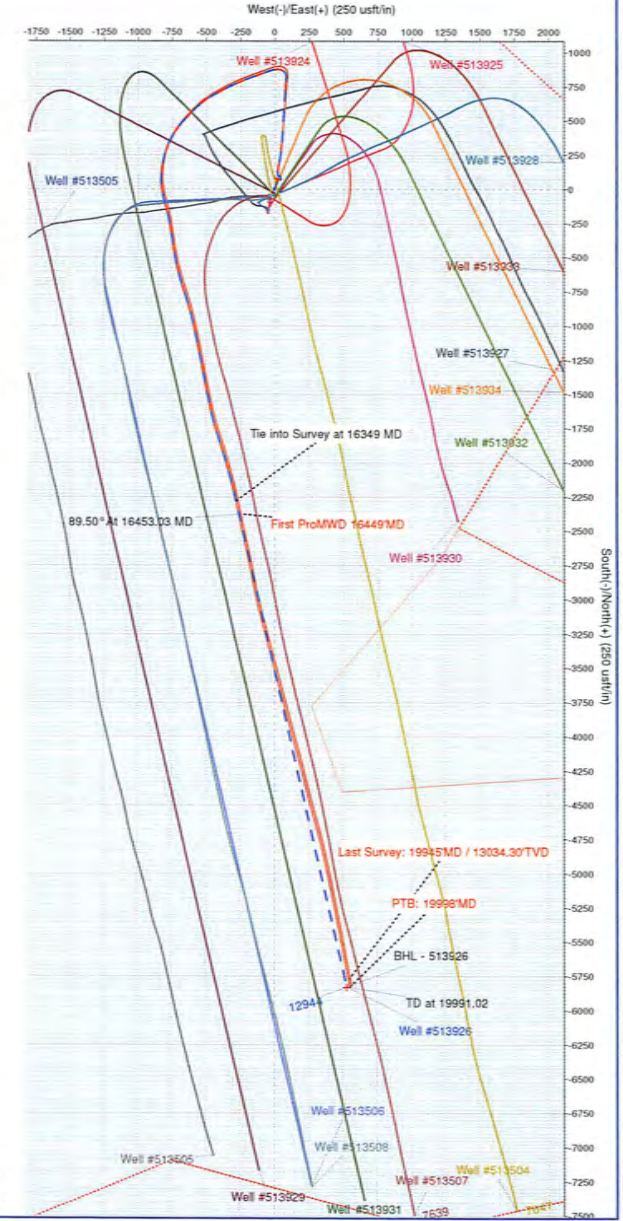
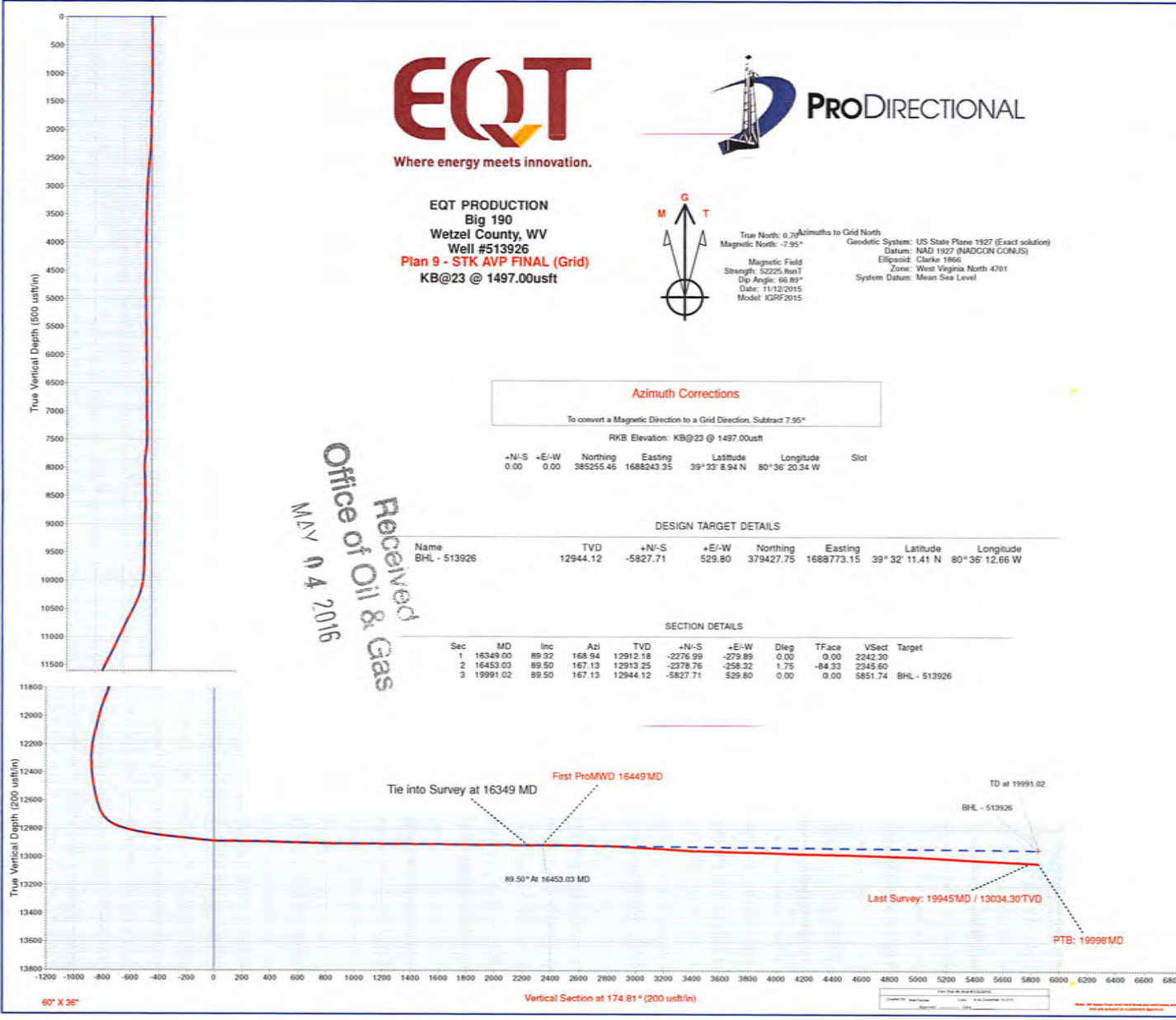
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - 513926	12944.12	-5827.71	529.80	379427.75	1688773.15	39°32' 11.41 N	80°36' 12.66 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	16349.00	89.32	168.94	12912.18	-2276.99	-279.89	0.00	0.00	2242.30	
2	16453.03	89.50	167.13	12913.25	-2378.76	-258.32	1.75	-84.33	2345.60	
3	19991.02	89.50	167.13	12944.12	-5827.71	529.80	0.00	0.00	5851.74	BHL - 513926

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Professional Directional Survey Report



Company: EQT PRODUCTION	Local Co-ordinate Reference: Well Well #513926
Project: Wetzel County, WV	TVD Reference: KB@23 @ 1497.00usft
Site: Big 190	MD Reference: KB@23 @ 1497.00usft
Well: Well #513926	North Reference: Grid
Wellbore: Stk	Survey Calculation Method: Minimum Curvature
Design: Stk	Database: Well_Planner1

Project Wetzel County, WV
Map System: US State Plane 1927 (Exact solution) System Datum: Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: West Virginia North 4701

Site Big 190
Site Position: Northing: 385,255.46 usft Latitude: 39° 33' 8.94 N
From: Map Easting: 1,688,243.35 usft Longitude: 80° 36' 20.34 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: -0.71 °

Well Well #513926
Well Position +N/-S 0.00 usft Northing: 385,255.46 usft Latitude: 39° 33' 8.94 N
+E/-W 0.00 usft Easting: 1,688,243.35 usft Longitude: 80° 36' 20.34 W
Position Uncertainty 0.00 usft Wellhead Elevation: usft Ground Level: 1,474.00 usft

Wellbore Stk					
Magnetics	Model Name IGRF2015	Sample Date 11/12/2015	Declination (°) -8.66	Dip Angle (°) 66.89	Field Strength (nT) 52,226

Design Stk				
Audit Notes:				
Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00				
Vertical Section:	Depth From (TVD) (usft) 0.00	+N/-S (usft) 0.00	+E/-W (usft) 0.00	Direction (°) 174.81

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Survey Program	Date 12/18/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	11,800.00	#1 Gyrodata Gyro (Stk)	GYD_DP_MS	Gyrodata gyro-compassing and drop
11,955.00	16,349.00	#2 MWD Survey (Stk)	MWD+IGRF	MWD+IGRF v3:standard declination
16,449.00	19,998.00	#3 ProDirectional (Stk)	MWD+IGRF	MWD+IGRF v3:standard declination

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.59	220.45	100.00	-0.39	-0.33	0.36	0.59	0.59	0.00
200.00	0.53	223.33	199.99	-1.12	-0.99	1.03	0.07	-0.06	2.88
300.00	0.53	225.63	299.99	-1.78	-1.63	1.62	0.02	0.00	2.30
400.00	0.56	224.28	399.98	-2.45	-2.31	2.23	0.03	0.03	-1.35
500.00	0.56	226.83	499.98	-3.14	-3.00	2.85	0.02	0.00	2.55
600.00	0.57	238.23	599.98	-3.73	-3.78	3.38	0.11	0.01	11.40
700.00	0.56	249.28	699.97	-4.17	-4.66	3.73	0.11	-0.01	11.05
800.00	0.55	249.34	799.97	-4.51	-5.57	3.99	0.01	-0.01	0.06



Professional Directional
Survey Report



Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #513926
Project:	Wetzel County, WV	TVD Reference:	KB@23 @ 1497.00usft
Site:	Big 190	MD Reference:	KB@23 @ 1497.00usft
Well:	Well #513926	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	Well_Planner1

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.00	0.53	254.53	899.96	-4.80	-6.46	4.20	0.05	-0.02	5.19
1,000.00	0.53	261.24	999.96	-5.00	-7.37	4.31	0.06	0.00	6.71
1,100.00	0.58	274.70	1,099.95	-5.03	-8.33	4.25	0.14	0.05	13.46
1,200.00	0.60	294.54	1,199.95	-4.77	-9.31	3.91	0.20	0.02	19.84
1,300.00	0.80	337.36	1,299.94	-3.91	-10.05	2.98	0.54	0.20	42.82
1,400.00	1.10	351.85	1,399.93	-2.31	-10.46	1.36	0.38	0.30	14.49
1,500.00	1.34	4.03	1,499.90	-0.19	-10.51	-0.76	0.35	0.24	12.18
1,600.00	1.51	14.04	1,599.87	2.25	-10.11	-3.16	0.30	0.17	10.01
1,700.00	1.56	26.75	1,699.84	4.74	-9.18	-5.55	0.34	0.05	12.71
1,800.00	1.43	46.40	1,799.80	6.82	-7.66	-7.49	0.53	-0.13	19.65
1,900.00	1.25	67.57	1,899.78	8.10	-5.75	-8.58	0.52	-0.18	21.17
2,000.00	1.28	67.17	1,999.75	8.95	-3.71	-9.25	0.03	0.03	-0.40
2,100.00	1.37	63.35	2,099.73	9.92	-1.61	-10.02	0.13	0.09	-3.82
2,200.00	2.14	35.37	2,199.68	11.97	0.54	-11.88	1.13	0.77	-27.98
2,300.00	3.83	19.62	2,299.54	16.64	2.74	-16.33	1.86	1.69	-15.75
2,400.00	4.38	17.05	2,399.29	23.44	4.98	-22.89	0.58	0.55	-2.57
2,500.00	4.42	17.02	2,498.99	30.78	7.23	-30.00	0.04	0.04	-0.03
2,600.00	4.26	19.53	2,598.70	37.96	9.60	-36.94	0.25	-0.16	2.51
2,700.00	4.16	20.65	2,698.43	44.85	12.12	-43.57	0.13	-0.10	1.12
2,800.00	3.93	19.30	2,798.19	51.48	14.53	-49.96	0.25	-0.23	-1.35
2,900.00	2.98	15.52	2,898.00	57.22	16.36	-55.51	0.98	-0.95	-3.78
3,000.00	2.02	4.60	2,997.91	61.48	17.19	-59.68	1.07	-0.96	-10.92
3,100.00	1.61	356.45	3,097.86	64.64	17.25	-62.82	0.48	-0.41	-8.15
3,200.00	1.30	349.61	3,197.82	67.16	16.96	-65.35	0.35	-0.31	-6.84
3,300.00	1.28	337.49	3,297.80	69.31	16.32	-67.55	0.27	-0.02	-12.12
3,400.00	1.10	331.86	3,397.78	71.19	15.44	-69.50	0.21	-0.18	-5.63
3,500.00	1.10	329.18	3,497.76	72.86	14.50	-71.25	0.05	0.00	-2.68
3,600.00	0.95	327.00	3,597.74	74.38	13.56	-72.85	0.15	-0.15	-2.18
3,700.00	0.92	325.91	3,697.73	75.74	12.65	-74.28	0.03	-0.03	-1.09
3,800.00	0.87	323.89	3,797.72	77.01	11.76	-75.64	0.06	-0.05	-2.02
3,900.00	0.66	321.32	3,897.71	78.08	10.95	-76.77	0.21	-0.21	-2.57
4,000.00	0.53	320.63	3,997.70	78.88	10.30	-77.63	0.13	-0.13	-0.69
4,100.00	0.51	319.10	4,097.70	79.58	9.71	-78.37	0.02	-0.02	-1.53
4,200.00	0.56	319.02	4,197.69	80.28	9.10	-79.13	0.05	0.05	-0.08
4,300.00	0.58	319.89	4,297.69	81.04	8.45	-79.94	0.02	0.02	0.87
4,400.00	0.55	320.35	4,397.68	81.80	7.82	-80.75	0.03	-0.03	0.46
4,500.00	0.44	328.82	4,497.68	82.49	7.32	-81.49	0.13	-0.11	8.47
4,600.00	0.30	5.71	4,597.68	83.08	7.14	-82.10	0.27	-0.14	36.89
4,700.00	0.34	51.24	4,697.68	83.53	7.40	-82.52	0.25	0.04	45.53
4,800.00	0.48	80.82	4,797.68	83.78	8.05	-82.71	0.25	0.14	29.58
4,900.00	0.76	103.60	4,897.67	83.69	9.10	-82.53	0.37	0.28	22.78
5,000.00	0.87	113.45	4,997.66	83.24	10.44	-81.95	0.18	0.11	9.85
5,100.00	0.96	116.68	5,097.65	82.56	11.89	-81.14	0.10	0.09	3.23

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Company: EQT PRODUCTION
Project: Wetzel County, WV
Site: Big 190
Well: Well #513926
Wellbore: Stk
Design: Stk

Local Co-ordinate Reference: Well Well #513926
TVD Reference: KB@23 @ 1497.00usft
MD Reference: KB@23 @ 1497.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	0.96	116.60	5,197.63	81.81	13.39	-80.26	0.00	0.00	-0.08
5,300.00	1.00	119.15	5,297.62	81.01	14.90	-79.33	0.06	0.04	2.55
5,400.00	1.03	117.68	5,397.60	80.16	16.46	-78.35	0.04	0.03	-1.47
5,500.00	1.02	118.77	5,497.59	79.32	18.03	-77.36	0.02	-0.01	1.09
5,600.00	0.94	114.45	5,597.57	78.55	19.56	-76.46	0.11	-0.08	-4.32
5,700.00	0.94	110.41	5,697.56	77.92	21.07	-75.70	0.07	0.00	-4.04
5,800.00	0.98	110.33	5,797.54	77.34	22.65	-74.98	0.04	0.04	-0.08
5,900.00	1.01	110.38	5,897.53	76.74	24.27	-74.23	0.03	0.03	0.05
6,000.00	1.03	110.97	5,997.51	76.11	25.94	-73.45	0.02	0.02	0.59
6,100.00	1.03	110.92	6,097.50	75.47	27.62	-72.66	0.00	0.00	-0.05
6,200.00	1.00	111.13	6,197.48	74.83	29.27	-71.88	0.03	-0.03	0.21
6,300.00	0.93	115.14	6,297.47	74.17	30.82	-71.08	0.10	-0.07	4.01
6,400.00	0.88	113.49	6,397.45	73.52	32.26	-70.30	0.06	-0.05	-1.65
6,500.00	0.77	115.56	6,497.44	72.92	33.57	-69.59	0.11	-0.11	2.07
6,600.00	0.69	119.53	6,597.44	72.34	34.70	-68.90	0.09	-0.08	3.97
6,700.00	0.66	112.22	6,697.43	71.82	35.76	-68.29	0.09	-0.03	-7.31
6,800.00	0.54	110.71	6,797.42	71.44	36.73	-67.82	0.12	-0.12	-1.51
6,900.00	0.53	111.00	6,897.42	71.11	37.60	-67.41	0.01	-0.01	0.29
7,000.00	0.53	109.38	6,997.42	70.79	38.47	-67.02	0.01	0.00	-1.62
7,100.00	0.46	108.48	7,097.41	70.51	39.29	-66.66	0.07	-0.07	-0.90
7,200.00	0.46	102.51	7,197.41	70.29	40.06	-66.38	0.05	0.00	-5.97
7,300.00	0.51	96.18	7,297.40	70.16	40.89	-66.17	0.07	0.05	-6.33
7,400.00	0.37	89.20	7,397.40	70.11	41.66	-66.06	0.15	-0.14	-6.98
7,500.00	0.40	84.76	7,497.40	70.15	42.33	-66.03	0.04	0.03	-4.44
7,600.00	2.58	351.67	7,597.37	72.41	42.35	-68.28	2.63	2.18	-93.09
7,700.00	6.95	348.53	7,697.00	80.57	40.82	-76.55	4.38	4.37	-3.14
7,800.00	5.67	344.61	7,796.39	91.26	38.31	-87.42	1.35	-1.28	-3.92
7,900.00	3.11	326.08	7,896.09	98.28	35.48	-94.66	2.89	-2.56	-18.53
8,000.00	1.36	284.17	7,996.02	100.82	32.82	-97.44	2.29	-1.75	-41.91
8,100.00	1.46	193.72	8,096.00	99.87	31.37	-96.63	2.00	0.10	-90.45
8,200.00	1.00	200.91	8,195.97	97.82	30.75	-94.64	0.48	-0.46	7.19
8,300.00	0.42	218.15	8,295.97	96.72	30.21	-93.59	0.61	-0.58	17.24
8,400.00	0.30	218.68	8,395.96	96.22	29.82	-93.13	0.12	-0.12	0.53
8,500.00	0.33	219.06	8,495.96	95.80	29.48	-92.74	0.03	0.03	0.38
8,600.00	0.43	231.86	8,595.96	95.34	29.00	-92.33	0.13	0.10	12.80
8,700.00	0.57	277.60	8,695.96	95.17	28.21	-92.23	0.41	0.14	45.74
8,800.00	0.70	288.77	8,795.95	95.44	27.14	-92.59	0.18	0.13	11.17
8,900.00	0.66	281.18	8,895.94	95.74	26.00	-93.00	0.10	-0.04	-7.59
9,000.00	0.79	287.44	8,995.93	96.06	24.78	-93.43	0.15	0.13	6.26
9,100.00	0.63	320.62	9,095.93	96.69	23.77	-94.15	0.43	-0.16	33.18
9,200.00	0.62	334.55	9,195.92	97.61	23.19	-95.11	0.15	-0.01	13.93
9,300.00	0.48	347.33	9,295.92	98.51	22.86	-96.03	0.19	-0.14	12.78
9,400.00	0.67	344.49	9,395.91	99.48	22.62	-97.02	0.19	0.19	-2.84

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May 04 2016



Professional Directional Survey Report



Company: EQT PRODUCTION
Project: Wetzel County, WV
Site: Big 190
Well: Well #513926
Wellbore: Stk
Design: Stk

Local Co-ordinate Reference: Well Well #513926
TVD Reference: KB@23 @ 1497.00usft
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,500.00	0.83	336.07	9,495.90	100.70	22.17	-98.28	0.19	0.16	-8.42
9,600.00	1.09	328.60	9,595.89	102.18	21.38	-99.82	0.29	0.26	-7.47
9,700.00	1.31	343.51	9,695.87	104.08	20.56	-101.80	0.38	0.22	14.91
9,800.00	2.23	354.33	9,795.82	107.12	20.04	-104.86	0.97	0.92	10.82
9,900.00	3.49	1.78	9,895.69	112.09	19.94	-109.83	1.31	1.26	7.45
10,000.00	6.22	2.26	9,995.32	120.55	20.25	-118.23	2.73	2.73	0.48
10,100.00	10.60	4.97	10,094.23	135.14	21.26	-132.66	4.40	4.38	2.71
10,200.00	14.56	8.49	10,191.81	156.74	23.91	-153.93	4.03	3.96	3.52
10,300.00	18.16	11.10	10,287.74	184.47	28.77	-181.11	3.67	3.60	2.61
10,400.00	20.18	10.79	10,382.19	216.71	35.00	-212.66	2.02	2.02	-0.31
10,500.00	22.40	8.23	10,475.37	252.52	40.96	-247.78	2.41	2.22	-2.56
10,600.00	22.89	5.35	10,567.66	290.74	45.50	-285.43	1.21	0.49	-2.88
10,700.00	23.22	6.25	10,659.67	329.70	49.46	-323.87	0.48	0.33	0.90
10,800.00	21.69	5.94	10,752.09	367.68	53.52	-361.33	1.53	-1.53	-0.31
11,955.00	21.95	3.61	11,824.36	795.42	89.20	-784.09	0.08	0.02	-0.20
12,050.00	20.00	4.53	11,913.06	829.33	91.60	-817.65	2.08	-2.05	0.97
12,145.00	13.31	355.25	12,004.04	856.46	91.98	-844.63	7.56	-7.04	-9.77
12,240.00	17.64	324.86	12,095.72	879.18	82.77	-868.09	9.52	4.56	-31.99
12,335.00	17.86	292.87	12,186.41	896.65	61.01	-887.46	10.15	0.23	-33.67
12,430.00	19.77	270.40	12,276.45	902.43	31.48	-895.89	7.84	2.01	-23.65
12,524.00	24.26	256.66	12,363.63	898.08	-3.25	-894.70	7.24	4.78	-14.62
12,619.00	30.00	249.17	12,448.17	885.12	-44.48	-885.52	7.02	6.04	-7.88
12,714.00	37.69	249.35	12,527.01	866.41	-93.93	-871.35	8.10	8.09	0.19
12,809.00	46.69	250.97	12,597.33	844.85	-153.90	-855.31	9.54	9.47	1.71
12,904.00	56.61	248.40	12,656.20	818.91	-223.64	-835.79	10.65	10.44	-2.71
12,999.00	65.82	244.75	12,701.91	785.75	-299.89	-809.65	10.26	9.69	-3.84
13,093.00	73.11	241.55	12,734.87	745.97	-378.33	-777.14	8.38	7.76	-3.40
13,188.00	77.03	237.82	12,759.35	699.63	-457.53	-738.15	5.60	4.13	-3.93
13,283.00	79.38	228.93	12,778.80	644.19	-532.06	-689.68	9.49	2.47	-9.36
13,378.00	81.02	224.71	12,794.98	580.15	-600.30	-632.07	4.71	1.73	-4.44
13,473.00	81.35	221.50	12,809.54	511.62	-664.44	-569.62	3.36	0.35	-3.38
13,567.00	83.87	213.25	12,821.65	437.60	-720.95	-501.02	9.11	2.68	-8.78
13,662.00	82.71	203.47	12,832.78	354.68	-765.72	-422.49	10.30	-1.22	-10.29
13,757.00	84.08	193.78	12,843.73	265.36	-795.81	-336.26	10.23	1.44	-10.20
13,852.00	84.82	189.05	12,852.92	172.70	-814.52	-245.68	5.02	0.78	-4.98
13,947.00	82.97	176.97	12,863.06	78.56	-819.49	-152.36	12.79	-1.95	-12.72
13,976.00	83.84	173.43	12,866.40	49.85	-817.07	-123.56	12.49	3.00	-12.21
14,071.00	86.18	165.31	12,874.67	-43.07	-799.62	-29.44	8.86	2.46	-8.55
14,115.00	88.83	163.31	12,876.59	-85.39	-787.73	13.78	7.54	6.02	-4.55
14,166.00	89.57	164.87	12,877.30	-134.43	-773.76	63.88	3.39	1.45	3.06
14,261.00	89.51	170.98	12,878.06	-227.28	-753.89	158.15	6.43	-0.06	6.43
14,356.00	89.54	171.31	12,878.85	-321.14	-739.27	252.95	0.35	0.03	0.35
14,451.00	88.43	170.81	12,880.53	-414.97	-724.51	347.73	1.28	-1.17	-0.53
14,546.00	88.43	168.18	12,883.14	-508.34	-707.20	442.28	2.77	0.00	-2.77



Professional Directional Survey Report



Company: EQT PRODUCTION
Project: Wetzel County, WV
Site: Big 190
Well: Well #513926
Wellbore: Stk
Design: Stk

Local Co-ordinate Reference: Well Well #513926
TVD Reference: KB@23 @ 1497.00usft
MD Reference: KB@23 @ 1497.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,640.00	88.55	165.23	12,885.61	-599.78	-685.59	535.30	3.14	0.13	-3.14
14,735.00	88.49	161.14	12,888.07	-690.66	-658.12	628.30	4.30	-0.06	-4.31
14,830.00	88.43	162.65	12,890.62	-780.93	-628.61	720.86	1.59	-0.06	1.59
14,925.00	89.08	164.39	12,892.69	-872.00	-601.67	814.00	1.95	0.68	1.83
15,020.00	89.91	167.02	12,893.52	-964.04	-578.22	907.79	2.90	0.87	2.77
15,115.00	89.94	168.93	12,893.65	-1,056.95	-558.43	1,002.11	2.01	0.03	2.01
15,210.00	89.57	168.13	12,894.05	-1,150.06	-539.53	1,096.53	0.93	-0.39	-0.84
15,305.00	89.51	169.30	12,894.82	-1,243.21	-520.95	1,190.99	1.23	-0.06	1.23
15,400.00	89.57	169.85	12,895.58	-1,336.64	-503.76	1,285.59	0.58	0.06	0.58
15,494.00	89.57	169.18	12,896.29	-1,429.07	-486.65	1,379.19	0.71	0.00	-0.71
15,589.00	89.38	168.14	12,897.16	-1,522.21	-467.97	1,473.64	1.11	-0.20	-1.09
15,684.00	89.66	167.17	12,897.95	-1,615.01	-447.66	1,567.89	1.06	0.29	-1.02
15,779.00	89.38	162.98	12,898.75	-1,706.78	-423.20	1,661.50	4.42	-0.29	-4.41
15,874.00	89.38	162.11	12,899.78	-1,797.40	-394.71	1,754.33	0.92	0.00	-0.92
15,969.00	89.51	162.83	12,900.70	-1,887.98	-366.09	1,847.13	0.77	0.14	0.76
16,064.00	89.57	164.25	12,901.46	-1,979.08	-339.18	1,940.29	1.50	0.06	1.49
16,159.00	90.03	164.46	12,901.79	-2,070.56	-313.56	2,033.71	0.53	0.48	0.22
16,254.00	89.29	166.04	12,902.35	-2,162.43	-289.37	2,127.39	1.84	-0.78	1.66
16,349.00	89.32	168.94	12,912.18	-2,276.99	-279.89	2,242.34	0.00	0.00	0.00
Tie in at 16349'MD									
16,449.00	90.10	168.30	12,912.69	-2,375.02	-260.16	2,341.75	1.01	0.78	-0.64
First ProMWD 16449'MD									
16,544.00	90.20	168.30	12,912.44	-2,468.05	-240.89	2,436.14	0.11	0.11	0.00
16,639.00	88.90	167.70	12,913.18	-2,560.97	-221.14	2,530.46	1.51	-1.37	-0.63
16,734.00	89.30	167.70	12,914.68	-2,653.77	-200.91	2,624.72	0.42	0.42	0.00
16,828.00	88.80	169.10	12,916.23	-2,745.84	-182.01	2,718.12	1.58	-0.53	1.49
16,923.00	89.00	169.10	12,918.06	-2,839.11	-164.05	2,812.63	0.21	0.21	0.00
17,018.00	87.50	169.10	12,920.96	-2,932.35	-146.09	2,907.11	1.58	-1.58	0.00
17,113.00	86.10	166.30	12,926.26	-3,025.01	-125.89	3,001.22	3.29	1.47	-2.95
17,208.00	86.80	164.80	12,932.15	-3,116.83	-102.23	3,094.80	1.74	0.74	-1.58
17,303.00	86.50	164.80	12,937.70	-3,208.35	-77.37	3,188.19	0.32	-0.32	0.00
17,398.00	86.60	164.80	12,943.41	-3,299.86	-52.50	3,281.58	0.11	0.11	0.00
17,493.00	87.20	165.20	12,948.55	-3,391.48	-27.95	3,375.05	0.76	0.63	0.42
17,587.00	88.70	165.70	12,951.91	-3,482.41	-4.35	3,467.74	1.68	1.60	0.53
17,686.00	88.70	165.60	12,954.16	-3,578.29	20.18	3,565.45	0.10	0.00	-0.10
17,781.00	87.90	163.80	12,956.98	-3,669.88	45.23	3,658.93	2.07	-0.84	-1.89
17,875.00	88.80	166.30	12,959.69	-3,760.66	69.47	3,751.52	2.83	0.96	2.66
17,970.00	89.10	164.80	12,961.43	-3,852.63	93.17	3,845.27	1.61	0.32	-1.58
18,065.00	88.10	164.40	12,963.75	-3,944.19	118.39	3,938.73	1.13	-1.05	-0.42
18,160.00	87.80	164.30	12,967.15	-4,035.61	144.00	4,032.09	0.33	-0.32	-0.11
18,255.00	88.40	164.70	12,970.30	-4,127.11	169.37	4,125.51	0.76	0.63	0.42
18,350.00	88.60	165.80	12,972.78	-4,218.94	193.55	4,219.15	1.18	0.21	1.16
18,437.00	89.10	166.20	12,974.53	-4,303.34	214.60	4,305.11	0.74	0.57	0.46

Received
 Office of Oil & Gas
 MAY 04 2016

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #513926
Project:	Wetzel County, WV	TVD Reference:	KB@23 @ 1497.00usft
Site:	Big 190	MD Reference:	KB@23 @ 1497.00usft
Well:	Well #513926	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	Well_Planner1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,540.00	89.10	166.40	12,976.15	-4,403.40	238.99	4,406.96	0.19	0.00	0.19
18,634.00	88.60	165.00	12,978.03	-4,494.46	262.20	4,499.76	1.58	-0.53	-1.49
18,729.00	88.00	164.00	12,980.85	-4,585.97	287.58	4,593.18	1.23	-0.63	-1.05
18,833.00	88.20	164.90	12,984.30	-4,686.10	315.44	4,695.43	0.89	0.19	0.87
18,919.00	88.40	165.70	12,986.85	-4,769.25	337.25	4,780.21	0.96	0.23	0.93
19,014.00	88.20	166.90	12,989.67	-4,861.51	359.74	4,874.12	1.28	-0.21	1.26
19,108.00	88.20	168.30	12,992.62	-4,953.27	379.92	4,967.33	1.49	0.00	1.49
19,203.00	87.00	168.40	12,996.60	-5,046.23	399.08	5,061.64	1.27	-1.26	0.11
19,298.00	86.40	168.40	13,002.07	-5,139.13	418.15	5,155.89	0.63	-0.63	0.00
19,393.00	86.80	168.60	13,007.70	-5,232.06	437.06	5,250.15	0.47	0.42	0.21
19,488.00	86.90	169.00	13,012.92	-5,325.11	455.49	5,344.48	0.43	0.11	0.42
19,583.00	87.30	168.70	13,017.73	-5,418.20	473.83	5,438.85	0.53	0.42	-0.32
19,678.00	87.40	169.20	13,022.12	-5,511.34	492.02	5,533.25	0.54	0.11	0.53
19,773.00	87.20	169.60	13,026.60	-5,604.61	509.48	5,627.72	0.47	-0.21	0.42
19,868.00	87.80	169.00	13,030.74	-5,697.87	527.10	5,722.19	0.89	0.63	-0.63
19,945.00	86.90	168.50	13,034.30	-5,773.31	542.10	5,798.68	1.34	-1.17	-0.65
Last Survey: 19945'MD / 13034.30'TVD									
19,998.00	86.90	168.50	13,037.17	-5,825.17	552.66	5,851.28	0.00	0.00	0.00
PTB: 19998'MD									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - 513926	0.00	0.00	12,944.1	-5,827.71	529.80	379,427.75	1,688,773.15	39° 32' 11.41 N	80° 36' 12.66 W
- hit/miss target									
- Shape									
- actual wellpath misses target center by 94.16usft at 19998.00usft MD (13028.49 TVD, -5803.33 N, 563.75 E)									
- Point									

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
16,349.00	12,912.18	-2,276.99	-279.89	Tie in at 16349'MD
16,449.00	12,912.69	-2,375.02	-260.16	First ProMWD 16449'MD
19,945.00	13,034.30	-5,773.31	542.10	Last Survey: 19945'MD / 13034.30'TVD
19,998.00	13,037.17	-5,825.17	552.66	PTB: 19998'MD

Received
Office
Nov 24 2010