

Company Name: Jay-Bee Oil & Gas
 Dopey 7
 Tyler County
 Rig: Nomac #81
 Created By: Will Jircik
 Date: 2/21/2018

Dopey 7
 Tyler County
 Q180207 & AM-180183
 Design #2

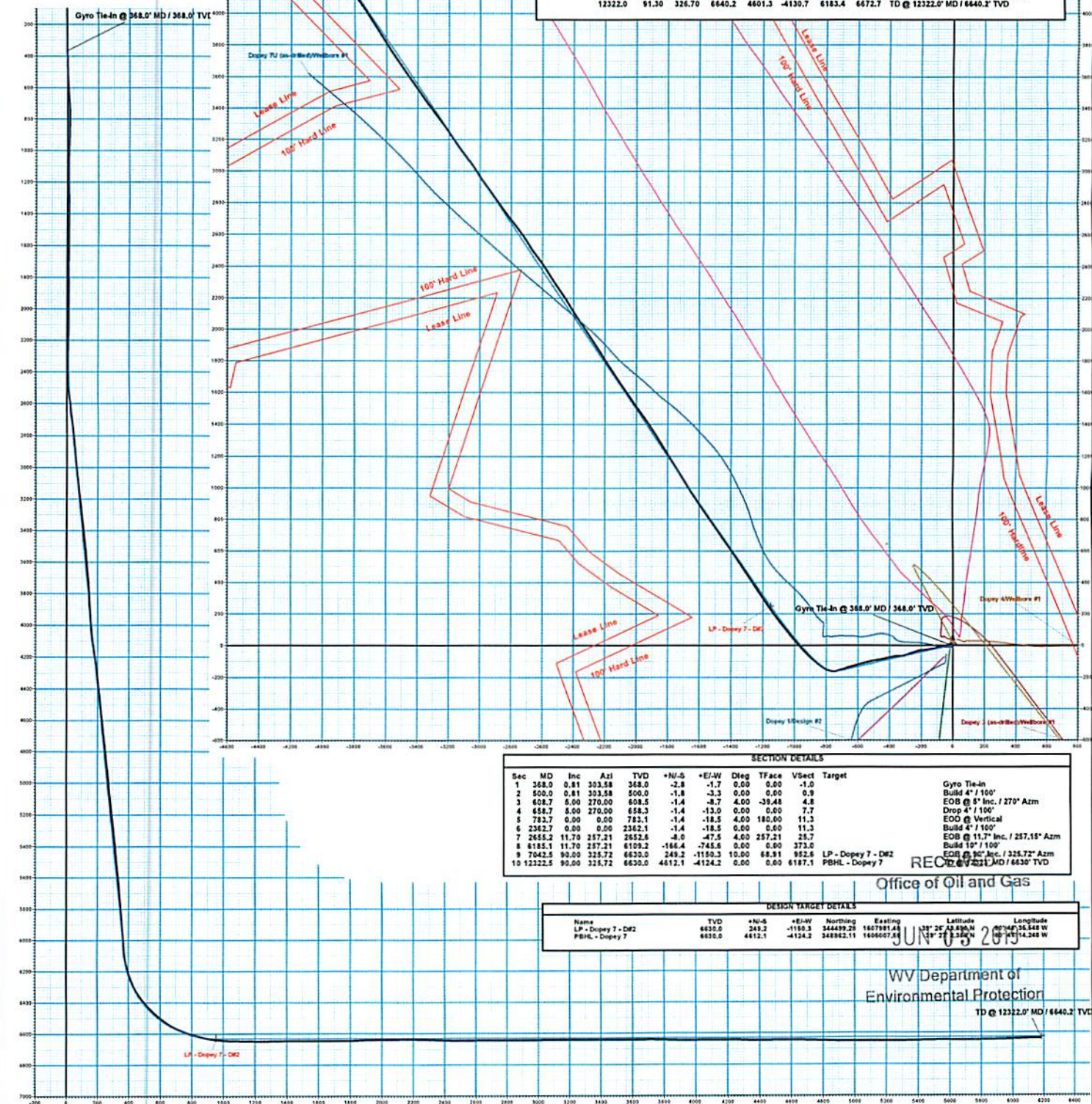
PROJECT DETAILS: Tyler County
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: West Virginia Northern Zone
 System Datum: Mean Sea Level

WELL DETAILS: Dopey 7
 Ground Level: 912.7
 Easting: 1609131.90
 Northing: 344250.06
 Latitude: 39° 26' 17.368 N
 Longitude: 80° 46' 20.842 W



ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	VSec	Departure	Annotation
368.0	0.81	303.58	368.0	-2.8	-1.7	-1.0	4.8	Gyro Tie-In @ 368.0' MD / 368.0' TVD
12322.0	91.30	326.70	6640.2	4601.3	-4130.7	6183.4	6672.7	TD @ 12322.0' MD / 6640.2' TVD



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	368.0	0.81	303.58	368.0	-2.8	-1.7	0.00	0.00	-1.0	
2	500.0	0.81	303.58	500.0	-1.8	-3.3	0.00	0.00	0.9	Gyro Tie-In Build 4' / 100'
3	608.7	5.00	270.00	608.5	-1.4	-8.7	4.00	-39.48	4.8	EOB @ 8' Inc. / 270° Azm
4	658.7	5.00	270.00	658.3	-1.4	-13.0	0.00	0.00	7.7	Drop 4' / 100'
5	782.7	0.00	0.00	782.1	-1.4	-18.5	4.00	180.00	11.3	EOD @ Vertical
6	2362.7	0.00	0.00	2362.1	-1.4	-18.5	0.00	0.00	11.3	Build 4' / 100'
7	2655.2	11.70	257.21	2652.6	-8.0	-47.5	4.00	257.21	25.7	EOB @ 11.7' Inc. / 257.15° Azm
8	6185.1	11.70	257.21	6109.2	-166.4	-745.6	0.00	0.00	373.0	Build 10' / 100'
9	7042.5	90.00	325.72	6620.0	249.2	-1150.3	10.00	68.91	952.6	EOB @ 90° Inc. / 325.72° Azm
10	12322.5	90.00	325.72	6620.0	4612.1	-4124.2	0.00	0.00	6187.1	TD @ 12322.0' MD / 6630' TVD

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
LP - Dopey 7 - DW2	6620.0	249.2	-1150.3	344499.28	1607981.48	39° 26' 17.368 N	80° 46' 20.842 W
PBHL - Dopey 7	6620.0	4612.1	-4124.2	348982.11	1606607.48	39° 26' 17.368 N	80° 46' 20.842 W

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 TD @ 12322.0' MD / 6640.2' TVD



Jay-Bee Oil & Gas

Tyler County

Dopey Pad

Dopey 7

Wellbore #1

Design: Wellbore #1

QES Survey Certification Report

21 February, 2018

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Environmental Protection



Quintana Energy Services

11390 FM 830
Willis, TX 77318
Phone: (936) 856-4332
Fax: (936) 856-8678



Survey Certification Sheet

Company	Job Number	Date
Jay- Bee Oil& Gas	AM-180183	4/23/2018

Lease	Well Name	County & State
N/A	Dopey #7	Tyler County, West Virginia

API No.	Survey Depth Range	Survey Type
47-095-02467	368 feet to 12322 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
Click here to enter text.	Steve Spicer

Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Quintana Energy Services (QES). This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

Christopher Hughes

Digitally signed by Christopher Hughes
DN: cn=Christopher Hughes, o=QES,
ou=compliance, email=chrish@qeslp.com, c=US
Date: 2018.04.24 13:46:32 -05'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services

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WV Department of
Environmental Protection
Out of State CERT Report
QES-WP-F-010



QES Survey Certification Report



Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well Dopey 7
Project:	Tyler County	TVD Reference:	well @ 931.3usft (Nomac #81)
Site:	Dopey Pad	MD Reference:	well @ 931.3usft (Nomac #81)
Well:	Dopey 7	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Tyler County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Northern Zone		

Site	Dopey Pad				
Site Position:		Northing:	344,194.77 usft	Latitude:	39° 26' 16.836 N
From:	Lat/Long	Easting:	1,609,090.36 usft	Longitude:	80° 46' 21.360 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.81 °

Well	Dopey 7					
Well Position	+N/-S	0.0 usft	Northing:	344,250.06 usft	Latitude:	39° 26' 17.388 N
	+E/-W	0.0 usft	Easting:	1,609,131.80 usft	Longitude:	80° 46' 20.842 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	910.7 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/9/2018	-8.59	66.64	51,931.18594617

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	318.19

Survey Program	Date	2/21/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
50.0	368.0	Gyro (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro	
422.0	12,322.0	QES MWD Surveys (Wellbore #1)	OWSG MWD - Standard	OWSG MWD - Standard	

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
368.0	0.81	303.58	368.0	-2.8	-1.7	3.3	211.61
Gyro Tie-In @ 368.0' MD / 368.0' TVD							
422.0	1.13	339.11	422.0	-2.1	-2.3	3.1	226.62
517.0	2.12	308.24	516.9	-0.2	-4.0	4.0	267.56
612.0	5.18	286.86	611.7	2.2	-9.5	9.7	282.89
707.0	4.21	269.51	706.4	3.4	-17.0	17.4	281.21
802.0	1.34	180.12	801.3	2.2	-20.5	20.7	276.21
896.0	1.71	109.58	895.3	0.7	-19.2	19.2	271.99
990.0	1.38	107.51	989.2	-0.1	-16.8	16.8	269.51
1,085.0	0.10	103.85	1,084.2	-0.5	-15.6	15.9	268.14
1,180.0	0.08	42.72	1,179.2	-0.5	-15.5	15.9	268.23

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QES Survey Certification Report



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Well:	Dopey 7	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)		
1,275.0	0.25	277.65	1,274.2	-0.4	-15.7	15.7	268.53		
1,370.0	0.22	298.29	1,369.2	-0.3	-16.0	16.1	268.97		
1,464.0	0.27	14.18	1,463.2	0.0	-16.2	16.2	270.04		
1,558.0	0.38	94.78	1,557.2	0.2	-15.8	15.8	270.73		
1,653.0	0.46	86.38	1,652.2	0.2	-15.1	15.1	270.75		
1,748.0	0.74	47.56	1,747.2	0.6	-14.3	14.3	272.56		
1,843.0	0.76	15.80	1,842.2	1.7	-13.6	13.7	276.93		
1,937.0	0.99	359.26	1,936.2	3.1	-13.5	13.8	282.83		
2,032.0	0.36	117.30	2,031.2	3.8	-13.2	13.7	285.84		
2,126.0	0.82	146.35	2,125.2	3.1	-12.6	13.0	283.65		
2,221.0	0.84	149.32	2,220.2	1.9	-11.9	12.0	279.07		
2,315.0	0.75	129.40	2,314.2	0.9	-11.0	11.1	274.71		
2,410.0	2.53	258.35	2,409.2	0.1	-12.6	12.6	270.41		
2,505.0	6.30	265.85	2,503.9	-0.7	-19.9	19.9	267.95		
2,599.0	9.63	267.99	2,596.9	-1.4	-32.9	32.9	267.63		
2,695.0	12.19	263.83	2,691.2	-2.7	-51.0	51.0	266.93		
2,789.0	13.12	256.11	2,782.9	-6.4	-71.2	71.5	264.90		
2,884.0	11.74	249.87	2,875.7	-12.3	-90.7	91.6	262.30		
2,979.0	11.88	257.18	2,968.7	-17.8	-109.3	110.8	260.77		
3,074.0	12.13	260.41	3,061.6	-21.6	-128.7	130.5	260.47		
3,168.0	11.54	262.35	3,153.6	-24.5	-147.8	149.8	260.59		
3,263.0	12.42	261.84	3,246.5	-27.2	-167.3	169.5	260.76		
3,358.0	12.07	263.90	3,339.4	-29.7	-187.3	189.6	260.98		
3,453.0	11.65	261.57	3,432.4	-32.2	-206.7	209.2	261.15		
3,548.0	12.22	252.73	3,525.3	-36.6	-225.8	228.7	260.80		
3,642.0	11.89	252.94	3,617.2	-42.4	-244.5	248.2	260.17		
3,737.0	11.46	251.49	3,710.3	-48.2	-262.8	267.2	259.60		
3,831.0	10.77	241.83	3,802.5	-55.3	-279.4	284.8	258.80		
3,926.0	9.37	250.40	3,896.1	-62.1	-294.5	301.0	258.09		
4,024.0	8.99	258.40	3,992.8	-66.3	-309.5	316.6	257.90		
4,118.0	10.42	268.80	4,085.5	-68.0	-325.2	332.3	258.19		
4,213.0	12.30	271.81	4,178.6	-67.9	-343.9	350.6	258.84		
4,308.0	13.34	261.21	4,271.2	-69.2	-364.9	371.4	259.26		
4,401.0	12.44	255.76	4,361.9	-73.3	-385.2	392.1	259.22		
4,496.0	12.56	256.90	4,454.6	-78.2	-405.2	412.7	259.08		
4,591.0	13.11	255.32	4,547.3	-83.3	-425.7	433.7	258.93		
4,686.0	11.16	260.13	4,640.1	-87.6	-445.1	453.7	258.87		
4,781.0	11.41	263.20	4,733.3	-90.2	-463.5	472.2	258.98		
4,876.0	12.30	262.08	4,826.3	-92.8	-482.9	491.7	259.13		
4,971.0	11.84	255.87	4,919.2	-96.5	-502.4	511.6	259.12		
5,065.0	12.48	255.89	5,011.1	-101.4	-521.6	531.3	259.00		
5,159.0	12.27	253.80	5,102.9	-106.6	-541.0	551.4	258.85		
5,254.0	12.50	256.57	5,195.7	-111.8	-560.7	571.7	258.72		
5,348.0	13.03	259.05	5,287.4	-116.2	-581.0	592.5	258.69		

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QES Survey Certification Report



Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well Dopey 7
Project:	Tyler County	TVD Reference:	well @ 931.3usft (Nomac #81)
Site:	Dopey Pad	MD Reference:	well @ 931.3usft (Nomac #81)
Well:	Dopey 7	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,442.0	13.32	252.85	5,378.9	-121.4	-601.8	613.9	258.59
5,537.0	11.89	250.96	5,471.6	-127.8	-621.5	634.5	258.38
5,632.0	11.68	256.38	5,564.6	-133.3	-640.1	653.8	258.24
5,726.0	12.18	255.33	5,656.6	-138.0	-658.9	673.2	258.17
5,821.0	11.42	246.21	5,749.6	-144.4	-677.2	692.4	257.97
5,915.0	11.02	251.54	5,841.8	-151.0	-694.2	710.5	257.73
6,010.0	11.19	257.97	5,935.0	-155.8	-711.9	728.7	257.66
6,102.0	10.90	252.60	6,025.3	-160.2	-728.9	746.3	257.60
6,149.0	10.90	253.90	6,071.4	-162.8	-737.4	755.2	257.55
6,197.0	14.10	266.80	6,118.3	-164.4	-747.6	765.5	257.60
6,244.0	17.30	277.00	6,163.6	-163.8	-760.3	777.7	257.84
6,292.0	20.20	286.40	6,209.0	-160.6	-775.3	791.8	258.30
6,339.0	22.90	294.20	6,252.7	-154.6	-791.4	806.4	258.95
6,387.0	25.70	302.70	6,296.5	-145.1	-808.7	821.6	259.83
6,434.0	30.80	305.10	6,337.9	-132.7	-827.2	837.7	260.89
6,482.0	36.30	307.00	6,377.9	-117.1	-848.6	856.6	262.15
6,529.0	41.50	309.30	6,414.4	-98.8	-871.8	877.3	263.53
6,576.0	45.30	310.70	6,448.6	-78.1	-896.5	899.9	265.02
6,623.0	48.00	314.50	6,480.9	-54.9	-921.6	923.2	266.59
6,671.0	52.40	316.80	6,511.6	-28.5	-947.4	947.8	268.27
6,718.0	56.40	319.00	6,538.9	-0.2	-973.0	973.0	269.99
6,766.0	61.30	320.00	6,563.8	31.1	-999.6	1,000.1	271.78
6,813.0	66.90	320.90	6,584.3	63.6	-1,026.5	1,028.5	273.55
6,861.0	72.50	321.10	6,600.9	98.6	-1,054.9	1,059.5	275.34
6,908.0	75.40	321.90	6,613.9	134.0	-1,083.0	1,091.2	277.05
6,955.0	77.20	322.70	6,625.0	170.1	-1,110.9	1,123.8	278.71
7,002.0	79.00	325.10	6,634.7	207.3	-1,138.0	1,156.7	280.32
7,050.0	84.40	326.00	6,641.7	246.4	-1,164.8	1,190.6	281.94
7,097.0	88.30	326.00	6,644.7	285.3	-1,191.1	1,224.7	283.47
7,145.0	87.90	326.10	6,646.2	325.1	-1,217.8	1,260.5	284.95
7,239.0	88.90	327.60	6,648.9	403.7	-1,269.2	1,331.9	287.65
7,334.0	90.70	327.10	6,649.2	483.7	-1,320.5	1,406.3	290.12
7,428.0	90.80	326.60	6,648.0	562.4	-1,371.9	1,482.7	292.29
7,523.0	89.90	325.30	6,647.4	641.1	-1,425.1	1,562.6	294.22
7,617.0	90.60	326.80	6,647.0	719.1	-1,477.6	1,643.3	295.95
7,712.0	89.60	324.40	6,646.8	797.5	-1,531.2	1,726.5	297.51
7,807.0	89.90	326.90	6,647.2	875.9	-1,584.8	1,810.8	298.93
7,902.0	91.30	327.30	6,646.2	955.7	-1,636.4	1,895.0	300.28
7,997.0	92.20	327.70	6,643.3	1,035.7	-1,687.4	1,980.0	301.54
8,092.0	90.50	327.70	6,641.1	1,116.0	-1,738.2	2,065.6	302.70
8,187.0	90.70	327.80	6,640.1	1,196.4	-1,788.9	2,152.1	303.77
8,282.0	89.90	329.00	6,639.6	1,277.3	-1,838.7	2,239.8	304.79
8,377.0	88.40	325.20	6,641.0	1,357.0	-1,890.2	2,327.9	305.67
8,472.0	87.70	325.10	6,644.2	1,434.9	-1,944.5	2,416.6	306.43

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
8,567.0	88.40	323.20	6,647.5	1,511.9	-2,000.1	2,507.2	307.09
8,661.0	91.60	326.10	6,647.5	1,588.5	-2,054.5	2,597.0	307.71
8,756.0	90.20	325.80	6,646.0	1,667.2	-2,107.7	2,687.4	308.35
8,851.0	90.30	326.40	6,645.6	1,746.1	-2,160.6	2,778.0	308.94
8,945.0	90.70	328.60	6,644.8	1,825.4	-2,211.1	2,867.2	309.54
9,040.0	89.20	326.10	6,644.8	1,905.3	-2,262.4	2,957.8	310.10
9,134.0	91.30	327.30	6,644.4	1,983.9	-2,314.0	3,048.0	310.61
9,229.0	89.40	325.30	6,643.8	2,062.9	-2,366.7	3,139.6	311.08
9,324.0	91.30	329.80	6,643.3	2,143.1	-2,417.7	3,230.8	311.55
9,419.0	89.00	324.80	6,643.0	2,223.0	-2,469.0	3,322.3	312.00
9,513.0	89.80	326.30	6,644.0	2,300.5	-2,522.1	3,413.7	312.37
9,608.0	91.20	327.10	6,643.2	2,379.9	-2,574.3	3,505.8	312.75
9,703.0	88.90	321.30	6,643.1	2,456.9	-2,629.8	3,598.9	313.05
9,798.0	90.90	328.10	6,643.3	2,534.4	-2,684.7	3,692.0	313.35
9,893.0	88.60	323.50	6,643.7	2,612.9	-2,738.1	3,784.8	313.66
9,987.0	88.70	321.40	6,645.9	2,687.4	-2,795.3	3,877.6	313.87
10,082.0	90.60	323.00	6,646.5	2,762.5	-2,853.6	3,971.7	314.07
10,176.0	90.00	323.70	6,646.0	2,837.9	-2,909.7	4,064.5	314.28
10,271.0	90.00	325.10	6,646.0	2,915.1	-2,965.0	4,158.0	314.51
10,365.0	90.20	326.80	6,645.8	2,993.0	-3,017.6	4,250.2	314.77
10,460.0	87.60	322.30	6,647.6	3,070.4	-3,072.7	4,343.8	314.98
10,555.0	90.90	325.10	6,648.9	3,146.9	-3,128.9	4,437.7	315.16
10,650.0	91.50	325.80	6,646.9	3,225.1	-3,182.7	4,531.2	315.38
10,745.0	89.40	323.20	6,646.1	3,302.5	-3,237.9	4,625.0	315.57
10,839.0	88.40	322.30	6,647.9	3,377.3	-3,294.8	4,718.2	315.71
10,934.0	88.70	324.40	6,650.4	3,453.5	-3,351.5	4,812.4	315.86
11,029.0	89.30	324.50	6,652.0	3,530.7	-3,406.7	4,906.3	316.02
11,124.0	89.80	325.40	6,652.8	3,608.5	-3,461.3	5,000.2	316.19
11,219.0	89.90	325.10	6,653.0	3,686.6	-3,515.4	5,094.0	316.36
11,314.0	90.00	325.90	6,653.1	3,764.9	-3,569.2	5,187.8	316.53
11,409.0	90.80	328.00	6,652.4	3,844.5	-3,621.0	5,281.3	316.71
11,504.0	91.00	328.40	6,650.9	3,925.2	-3,671.1	5,374.4	316.92
11,598.0	91.30	327.20	6,649.0	4,004.7	-3,721.2	5,466.7	317.10
11,693.0	89.20	322.90	6,648.6	4,082.6	-3,775.6	5,560.8	317.24
11,787.0	90.00	323.60	6,649.3	4,157.9	-3,831.8	5,654.3	317.34
11,882.0	90.20	324.00	6,649.1	4,234.5	-3,887.9	5,748.7	317.44
11,976.0	90.20	325.90	6,648.8	4,311.5	-3,941.9	5,841.9	317.56
12,071.0	91.70	327.20	6,647.2	4,390.7	-3,994.2	5,935.7	317.71
12,166.0	91.90	327.40	6,644.2	4,470.6	-4,045.5	6,029.4	317.86
12,261.0	91.30	326.70	6,641.6	4,550.3	-4,097.2	6,123.2	318.00
12,322.0	91.30	326.70	6,640.2	4,601.3	-4,130.7	6,183.4	318.09

TD @ 12322.0' MD / 6640.2' TVD

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6,183.4 318.09

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QES Survey Certification Report



Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well Dopey 7
Project:	Tyler County	TVD Reference:	well @ 931.3usft (Nomac #81)
Site:	Dopey Pad	MD Reference:	well @ 931.3usft (Nomac #81)
Well:	Dopey 7	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
368.0	368.0	-2.8	-1.7	Gyro Tie-In @ 368.0' MD / 368.0' TVD
12,322.0	6,640.2	4,601.3	-4,130.7	TD @ 12322.0' MD / 6640.2' TVD

Checked By: _____ Approved By: _____ Date: _____

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