Wall Unit 2H
Tyler County WV
Northing: 14326529.98
Easting: 1680263.81
As Drilled

Antero Resources

Precision 525: GL 1201' + KB 19' @ 1220.0usft
Gr: 1201.0

Scientific Drilling

Genie Lightfoot
15:17, June 25 2015

Scientific Drilling
11220 NW 10th Street
Yukon OK 73099

WELL DETAILS Wall Unit 2H
Ground Level: 1201.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14326529.98	1680263.81	39° 27' 7.104 N	80° 51' 31.825 W

PROJECT DETAILS: Tyler County WV

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 17N (84 W to 78 W)
System Datum: Mean Sea Level

SITE DETAILS: Pierpoint Pad:Ingot/Klondike/Wall/Weigle

Site Centre Northing: 14326547.37
Easting: 1680227.52

Positional Uncertainty: 0.0
Convergence: 0.09
Local North: Grid

T G
M

To convert Magnetic North to Grid, Subtract 8.56°
To convert True North to Grid, Subtract 0.09°

Azimuths to Grid North
True North: -0.09°
Magnetic North: -8.56°

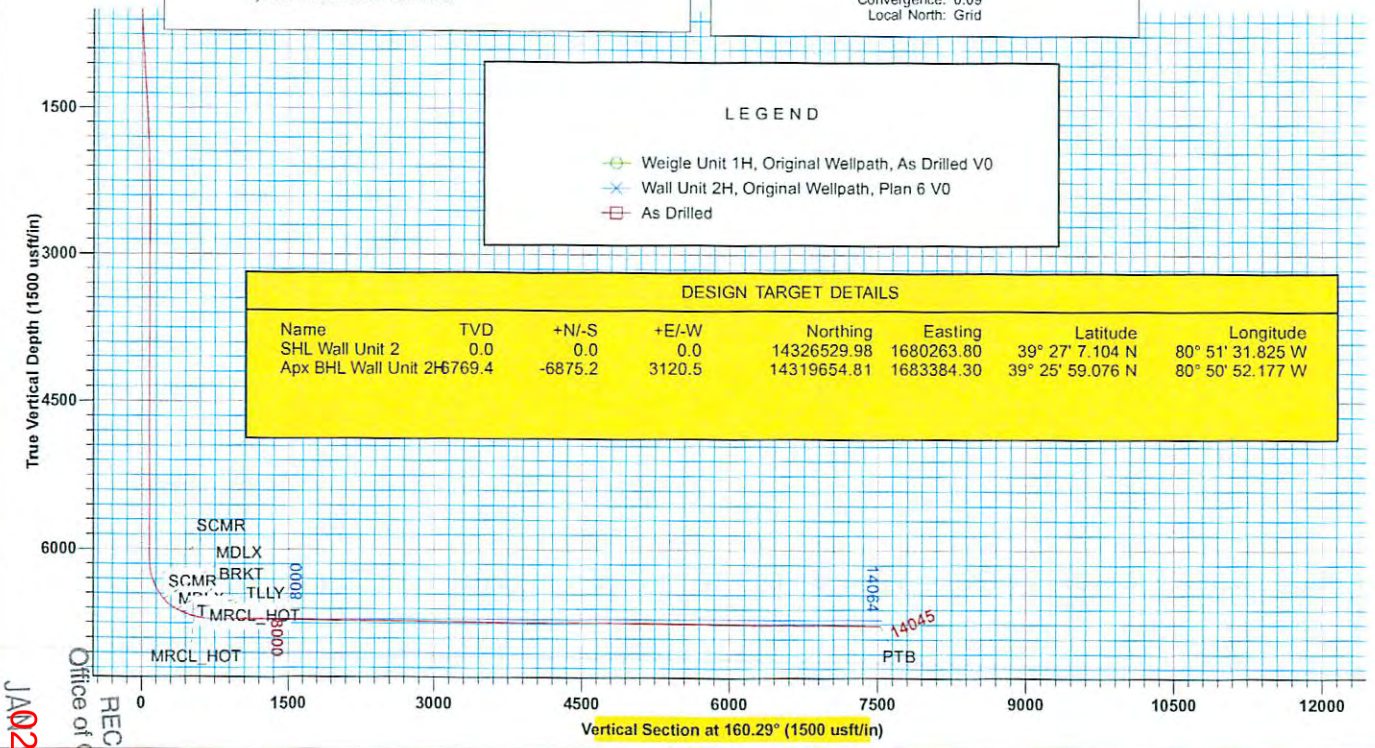
Magnetic Field
Strength: 52220.2snT
Dip Angle: 66.92°
Date: 6/15/2015
Model: BGGM2014

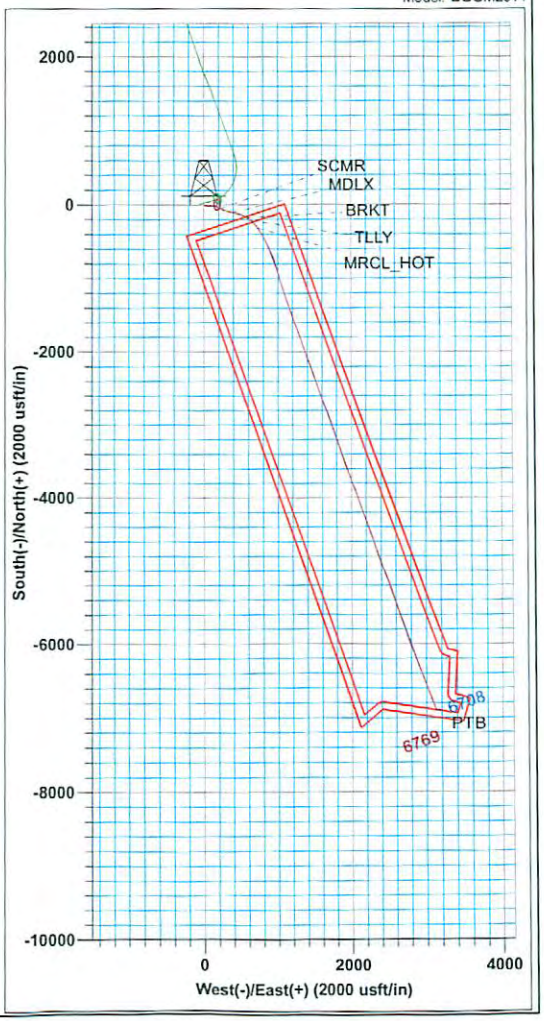
LEGEND

- Weigle Unit 1H, Original Wellpath, As Drilled V0
- Wall Unit 2H, Original Wellpath, Plan 6 V0
- As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Wall Unit 2	0.0	0.0	0.0	14326529.98	1680263.80	39° 27' 7.104 N	80° 51' 31.825 W
Apx BHL Wall Unit 2H	6769.4	-6875.2	3120.5	14319654.81	1683384.30	39° 25' 59.076 N	80° 50' 52.177 W





Antero

Tyler County WV
Pierpoint Pad:Ingot/Klondike/Wall/Weigle
Wall Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

25 June, 2015

Scientific Drilling

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Project Tyler County WV, Tyler Co West Virginia

Map System:	Universal Transverse Mercator (US Survey Fee	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site Pierpoint Pad:Ingot/Klondike/Wall/Weigle

Site Position:		**Northing:**	14,326,547.37 usft	**Latitude:**	39° 27' 7.276 N
From:	Map	**Easting:**	1,680,227.52 usft	**Longitude:**	80° 51' 32.288 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.09 °

Well Wall Unit 2H, Marcellus

Well Position	**+N/-S**	0.0 usft	**Northing:**	14,326,529.98 usft	**Latitude:**	39° 27' 7.104 N
	+E/-W	0.0 usft	**Easting:**	1,680,263.81 usft	**Longitude:**	80° 51' 31.825 W
Position Uncertainty		2.0 usft	**Wellhead Elevation:**	1,220.0 usft	**Ground Level:**	1,201.0 usft

Wellbore Original Wellpath

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	6/15/2015	-8.47	66.92	52,220

Design As Drilled

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	160.29

Survey Program **Date** 6/25/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
106.1	6,071.3	Survey #5 Def Gyro to KOP (Original Well	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
6,071.4	14,045.0	Survey #2 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
106.1	0.26	150.04	106.1	-0.2	0.1	0.2	0.24
132.7	0.31	159.92	132.7	-0.3	0.2	0.4	0.26
157.0	0.27	185.33	157.0	-0.4	0.2	0.5	0.55
183.1	0.33	132.86	183.1	-0.6	0.2	0.6	1.03
206.2	0.23	184.75	206.2	-0.7	0.3	0.7	1.13
232.6	0.26	196.64	232.6	-0.8	0.3	0.8	0.22
256.0	0.25	184.32	256.0	-0.9	0.2	0.9	0.24
281.2	0.26	165.71	281.2	-1.0	0.3	1.0	0.33
307.7	0.26	166.60	307.7	-1.1	0.3	1.1	0.02
331.1	0.26	138.35	331.1	-1.2	0.3	1.2	0.54

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
357.1	0.28	173.23	357.1	-1.3	0.4	1.3	0.63
383.1	0.16	195.49	383.1	-1.4	0.4	1.4	0.56
406.6	0.20	182.64	406.6	-1.5	0.4	1.5	0.24
432.6	0.24	165.54	432.6	-1.6	0.4	1.6	0.29
456.0	0.21	173.80	456.0	-1.6	0.4	1.7	0.19
482.1	0.28	162.31	482.1	-1.8	0.4	1.8	0.33
507.7	0.56	138.29	507.7	-1.9	0.5	2.0	1.27
533.8	0.84	126.21	533.8	-2.1	0.8	2.2	1.21
557.3	1.15	119.40	557.3	-2.3	1.1	2.6	1.41
583.0	1.83	111.73	583.0	-2.6	1.7	3.0	2.75
606.5	2.32	106.27	606.5	-2.9	2.5	3.6	2.25
632.2	2.67	107.35	632.1	-3.2	3.6	4.2	1.38
658.4	3.09	105.21	658.3	-3.6	4.8	5.0	1.65
681.8	3.94	102.44	681.6	-3.9	6.2	5.8	3.71
707.8	4.61	100.81	707.6	-4.3	8.1	6.8	2.61
731.4	5.16	99.26	731.1	-4.7	10.1	7.8	2.40
757.6	6.05	97.65	757.2	-5.0	12.7	9.0	3.45
781.1	6.39	97.85	780.6	-5.4	15.2	10.2	1.45
806.8	6.79	96.97	806.1	-5.7	18.1	11.5	1.61
833.0	7.02	97.09	832.1	-6.1	21.2	12.9	0.88
856.6	7.17	96.63	855.5	-6.5	24.1	14.2	0.68
882.7	7.53	97.42	881.4	-6.9	27.4	15.7	1.43
906.4	7.96	97.02	904.9	-7.3	30.6	17.2	1.83
932.5	8.08	97.93	930.7	-7.8	34.2	18.8	0.67
958.1	8.27	97.59	956.1	-8.3	37.8	20.5	0.76
982.2	8.24	97.48	980.0	-8.7	41.3	22.1	0.14
1,008.0	8.37	97.11	1,005.4	-9.2	44.9	23.8	0.55
1,031.3	8.58	97.93	1,028.5	-9.6	48.4	25.4	1.04
1,056.9	8.58	97.54	1,053.8	-10.1	52.1	27.1	0.23
1,082.6	8.63	97.51	1,079.2	-10.7	55.9	28.9	0.20
1,108.3	8.78	97.62	1,104.6	-11.2	59.8	30.7	0.59
1,131.4	8.87	97.24	1,127.5	-11.6	63.3	32.3	0.46
1,157.2	8.79	97.07	1,152.9	-12.1	67.2	34.1	0.33
1,182.9	8.82	96.00	1,178.4	-12.6	71.2	35.8	0.65
1,206.0	8.67	96.59	1,201.2	-12.9	74.7	37.4	0.76
1,232.1	8.68	96.68	1,227.0	-13.4	78.6	39.1	0.06
1,257.7	8.61	96.50	1,252.3	-13.8	82.4	40.8	0.29
1,283.5	8.52	95.41	1,277.8	-14.2	86.2	42.5	0.72
1,306.6	8.46	95.52	1,300.6	-14.6	89.6	43.9	0.27
1,332.3	8.44	94.63	1,326.1	-14.9	93.4	45.5	0.51
1,357.7	8.32	94.50	1,351.2	-15.2	97.1	47.0	0.48
1,383.0	8.22	93.46	1,376.2	-15.4	100.7	48.5	0.71
1,406.5	8.27	92.71	1,399.5	-15.6	104.0	49.8	0.50
1,432.2	8.30	92.14	1,424.9	-15.8	107.7	51.2	0.34

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
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Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,457.6	8.26	91.87	1,450.0	-15.9	111.4	52.6	0.22
1,483.4	8.37	91.72	1,475.5	-16.0	115.1	53.9	0.43
1,506.7	8.28	90.83	1,498.6	-16.1	118.5	55.1	0.68
1,532.3	8.22	89.78	1,523.9	-16.1	122.2	56.4	0.63
1,558.0	8.29	89.40	1,549.4	-16.1	125.9	57.6	0.34
1,583.3	8.36	89.94	1,574.4	-16.1	129.5	58.8	0.41
1,606.5	8.51	89.49	1,597.4	-16.1	132.9	60.0	0.71
1,632.3	8.35	89.79	1,622.9	-16.0	136.7	61.2	0.64
1,658.0	8.50	89.12	1,648.3	-16.0	140.5	62.4	0.70
1,681.2	8.60	89.10	1,671.3	-15.9	143.9	63.6	0.43
1,707.1	8.63	88.60	1,696.8	-15.9	147.8	64.8	0.31
1,733.3	8.61	88.61	1,722.7	-15.8	151.7	66.0	0.08
1,758.8	7.66	88.62	1,748.0	-15.7	155.3	67.2	3.72
1,781.7	6.72	88.05	1,770.7	-15.6	158.2	68.0	4.13
1,806.6	6.60	88.33	1,795.5	-15.5	161.1	68.9	0.50
1,831.9	6.13	88.25	1,820.6	-15.4	163.9	69.8	1.86
1,857.4	5.70	89.71	1,846.0	-15.4	166.5	70.6	1.79
1,882.7	5.49	89.78	1,871.1	-15.4	169.0	71.5	0.83
1,908.0	5.01	90.34	1,896.3	-15.4	171.3	72.2	1.91
1,931.3	4.71	90.73	1,919.5	-15.4	173.3	72.9	1.30
1,956.2	4.33	91.07	1,944.4	-15.4	175.2	73.6	1.53
1,983.2	4.16	92.42	1,971.3	-15.5	177.2	74.4	0.73
2,008.1	3.82	93.52	1,996.2	-15.6	179.0	75.0	1.40
2,031.0	3.51	93.25	2,019.1	-15.7	180.4	75.6	1.36
2,058.5	3.20	93.84	2,046.5	-15.8	182.0	76.2	1.14
2,081.3	2.94	93.79	2,069.2	-15.8	183.2	76.7	1.14
2,106.7	2.73	95.13	2,094.6	-15.9	184.5	77.2	0.87
2,132.1	2.38	92.93	2,120.0	-16.0	185.6	77.7	1.43
2,157.6	2.24	95.59	2,145.4	-16.1	186.7	78.1	0.69
2,182.9	1.97	97.95	2,170.7	-16.2	187.6	78.5	1.12
2,208.4	1.69	94.17	2,196.2	-16.3	188.4	78.9	1.20
2,231.3	1.60	96.33	2,219.1	-16.3	189.0	79.1	0.48
2,256.8	1.51	97.02	2,244.6	-16.4	189.7	79.5	0.36
2,282.7	1.35	92.26	2,270.5	-16.5	190.4	79.7	0.77
2,308.1	1.09	101.31	2,295.9	-16.5	190.9	80.0	1.27
2,331.1	0.96	91.42	2,318.8	-16.6	191.3	80.1	0.95
2,356.5	0.86	94.64	2,344.3	-16.6	191.7	80.3	0.44
2,381.5	0.69	98.20	2,369.3	-16.6	192.1	80.4	0.71
2,407.0	0.66	97.08	2,394.8	-16.7	192.4	80.6	0.13
2,432.5	0.57	101.15	2,420.3	-16.7	192.6	80.7	0.39
2,456.8	0.51	95.79	2,444.6	-16.8	192.8	80.8	0.32
2,506.6	0.25	110.32	2,494.4	-16.8	193.2	81.0	0.55
2,531.1	0.17	121.57	2,518.9	-16.9	193.3	81.1	0.37
2,558.0	0.21	112.12	2,545.8	-16.9	193.3	81.1	0.19
2,581.8	0.16	117.66	2,569.6	-16.9	193.4	81.2	0.22

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Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,608.4	0.08	88.46	2,596.1	-17.0	193.5	81.2	0.37
2,632.5	0.04	222.71	2,620.2	-17.0	193.5	81.2	0.46
2,656.2	0.10	82.74	2,643.9	-17.0	193.5	81.2	0.56
2,682.9	0.07	315.26	2,670.7	-16.9	193.5	81.2	0.57
2,706.1	0.07	286.55	2,693.9	-16.9	193.5	81.2	0.15
2,733.4	0.14	285.96	2,721.2	-16.9	193.4	81.2	0.26
2,757.0	0.10	285.85	2,744.8	-16.9	193.4	81.1	0.17
2,781.6	0.10	275.29	2,769.3	-16.9	193.3	81.1	0.07
2,808.3	0.15	281.13	2,796.1	-16.9	193.3	81.1	0.19
2,832.6	0.15	299.87	2,820.4	-16.9	193.2	81.0	0.20
2,856.5	0.22	295.72	2,844.3	-16.8	193.1	81.0	0.30
2,882.5	0.17	299.28	2,870.2	-16.8	193.1	80.9	0.20
2,907.1	0.20	279.94	2,894.8	-16.8	193.0	80.9	0.28
2,933.7	0.19	292.16	2,921.5	-16.7	192.9	80.8	0.16
2,957.0	0.25	267.46	2,944.8	-16.7	192.8	80.8	0.48
2,981.2	0.24	278.13	2,969.0	-16.7	192.7	80.7	0.19
3,008.0	0.27	281.39	2,995.8	-16.7	192.6	80.7	0.12
3,032.6	0.37	275.95	3,020.4	-16.7	192.5	80.6	0.42
3,056.4	0.46	279.26	3,044.1	-16.7	192.3	80.5	0.39
3,083.6	0.46	272.48	3,071.4	-16.6	192.1	80.4	0.20
3,107.8	0.45	271.44	3,095.5	-16.6	191.9	80.4	0.05
3,132.1	0.33	265.00	3,119.9	-16.6	191.7	80.3	0.52
3,156.4	0.42	273.18	3,144.1	-16.6	191.6	80.3	0.43
3,183.3	0.40	277.04	3,171.0	-16.6	191.4	80.2	0.13
3,207.0	0.39	266.71	3,194.8	-16.6	191.2	80.1	0.30
3,233.9	0.40	274.74	3,221.7	-16.6	191.0	80.1	0.21
3,258.2	0.41	274.21	3,245.9	-16.6	190.9	80.0	0.04
3,282.4	0.39	272.83	3,270.2	-16.6	190.7	79.9	0.09
3,306.7	0.33	285.23	3,294.5	-16.6	190.5	79.9	0.40
3,331.0	0.40	275.66	3,318.8	-16.5	190.4	79.8	0.38
3,357.6	0.35	281.02	3,345.3	-16.5	190.2	79.7	0.23
3,381.4	0.47	273.24	3,369.2	-16.5	190.0	79.6	0.55
3,407.8	0.41	272.67	3,395.6	-16.5	189.8	79.5	0.23
3,431.7	0.52	266.27	3,419.5	-16.5	189.6	79.5	0.51
3,458.1	0.48	271.50	3,445.9	-16.5	189.4	79.4	0.23
3,482.1	0.45	272.26	3,469.8	-16.5	189.2	79.3	0.13
3,508.4	0.51	265.63	3,496.2	-16.5	189.0	79.3	0.31
3,532.3	0.45	270.28	3,520.0	-16.5	188.8	79.2	0.30
3,556.1	0.51	272.81	3,543.9	-16.5	188.6	79.1	0.27
3,582.6	0.41	270.27	3,570.4	-16.5	188.4	79.1	0.39
3,606.5	0.50	272.74	3,594.2	-16.5	188.2	79.0	0.39
3,632.9	0.44	270.85	3,620.7	-16.5	188.0	78.9	0.23
3,656.8	0.56	267.42	3,644.5	-16.5	187.8	78.8	0.52
3,683.2	0.44	263.15	3,671.0	-16.5	187.5	78.8	0.47

02/12/2016

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,707.1	0.45	266.68	3,694.9	-16.5	187.4	78.7	0.12
3,733.2	0.50	267.26	3,720.9	-16.5	187.1	78.7	0.19
3,757.0	0.53	269.65	3,744.8	-16.5	186.9	78.6	0.15
3,783.6	0.48	272.06	3,771.3	-16.5	186.7	78.5	0.20
3,807.5	0.49	271.01	3,795.2	-16.5	186.5	78.4	0.06
3,831.4	0.60	266.66	3,819.2	-16.5	186.3	78.4	0.49
3,858.5	0.54	272.64	3,846.3	-16.5	186.0	78.3	0.31
3,882.0	0.57	274.33	3,869.7	-16.5	185.8	78.2	0.15
3,906.3	0.53	270.43	3,894.1	-16.5	185.5	78.1	0.22
3,932.9	0.61	273.75	3,920.7	-16.5	185.3	78.0	0.33
3,956.8	0.56	268.73	3,944.6	-16.5	185.0	77.9	0.30
3,983.5	0.54	269.31	3,971.2	-16.5	184.8	77.8	0.08
4,006.5	0.58	266.15	3,994.3	-16.5	184.5	77.8	0.22
4,031.0	0.59	266.46	4,018.7	-16.5	184.3	77.7	0.04
4,056.8	0.58	266.67	4,044.5	-16.5	184.0	77.6	0.04
4,083.4	0.52	263.45	4,071.2	-16.6	183.8	77.6	0.25
4,107.9	0.51	266.78	4,095.6	-16.6	183.6	77.5	0.13
4,133.3	0.49	269.12	4,121.0	-16.6	183.3	77.4	0.11
4,156.4	0.57	271.92	4,144.1	-16.6	183.1	77.4	0.36
4,182.5	0.53	266.23	4,170.2	-16.6	182.9	77.3	0.26
4,206.1	0.53	270.39	4,193.8	-16.6	182.7	77.2	0.16
4,231.7	0.58	259.65	4,219.5	-16.6	182.4	77.2	0.45
4,257.8	0.53	258.39	4,245.6	-16.7	182.2	77.1	0.20
4,281.4	0.49	256.17	4,269.1	-16.7	182.0	77.1	0.19
4,307.6	0.45	253.37	4,295.3	-16.8	181.7	77.1	0.18
4,331.0	0.44	252.04	4,318.7	-16.8	181.6	77.1	0.06
4,356.6	0.46	250.11	4,344.4	-16.9	181.4	77.1	0.10
4,383.5	0.40	249.34	4,371.2	-16.9	181.2	77.1	0.22
4,407.1	0.45	246.97	4,394.9	-17.0	181.0	77.1	0.22
4,433.0	0.36	232.32	4,420.7	-17.1	180.9	77.1	0.53
4,457.9	0.43	261.85	4,445.6	-17.2	180.7	77.1	0.86
4,482.7	0.43	251.82	4,470.5	-17.2	180.5	77.1	0.30
4,508.0	0.43	244.57	4,495.7	-17.3	180.4	77.1	0.22
4,531.6	0.40	251.46	4,519.3	-17.3	180.2	77.1	0.25
4,558.0	0.43	263.35	4,545.7	-17.4	180.0	77.1	0.34
4,582.8	0.44	248.99	4,570.5	-17.4	179.8	77.1	0.44
4,607.3	0.43	247.94	4,595.0	-17.5	179.7	77.1	0.05
4,631.3	0.50	234.82	4,619.0	-17.6	179.5	77.1	0.53
4,657.9	0.41	236.61	4,645.6	-17.7	179.3	77.2	0.34
4,681.9	0.42	244.27	4,669.6	-17.8	179.2	77.2	0.23
4,706.4	0.46	237.76	4,694.1	-17.9	179.0	77.2	0.26
4,733.4	0.44	247.94	4,721.1	-18.0	178.8	77.2	0.30
4,757.9	0.49	237.66	4,745.6	-18.1	178.6	77.3	0.40
4,782.4	0.52	232.63	4,770.1	-18.2	178.5	77.3	0.22

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
4,806.9	0.52	240.30	4,794.6	-18.3	178.3	77.4	0.28
4,831.9	0.54	236.98	4,819.6	-18.4	178.1	77.4	0.15
4,856.4	0.52	236.75	4,844.1	-18.6	177.9	77.5	0.08
4,882.6	0.50	235.04	4,870.3	-18.7	177.7	77.5	0.10
4,906.7	0.54	233.53	4,894.4	-18.8	177.5	77.6	0.18
4,933.0	0.52	230.66	4,920.7	-19.0	177.3	77.7	0.13
4,957.4	0.47	240.42	4,945.1	-19.1	177.2	77.7	0.40
4,981.5	0.49	243.82	4,969.2	-19.2	177.0	77.8	0.14
5,007.6	0.55	236.85	4,995.3	-19.3	176.8	77.8	0.33
5,031.7	0.50	241.27	5,019.4	-19.4	176.6	77.8	0.27
5,056.2	0.59	236.48	5,043.9	-19.5	176.4	77.9	0.41
5,082.4	0.55	241.01	5,070.1	-19.7	176.2	77.9	0.23
5,106.5	0.57	234.99	5,094.2	-19.8	176.0	78.0	0.26
5,133.0	0.46	244.97	5,120.7	-19.9	175.8	78.0	0.53
5,156.9	0.42	240.41	5,144.6	-20.0	175.6	78.1	0.22
5,183.0	0.51	228.06	5,170.7	-20.1	175.4	78.1	0.51
5,206.8	0.54	242.34	5,194.5	-20.3	175.3	78.2	0.56
5,233.0	0.61	236.18	5,220.7	-20.4	175.0	78.2	0.36
5,257.1	0.57	236.71	5,244.8	-20.5	174.8	78.3	0.17
5,281.5	0.60	229.90	5,269.2	-20.7	174.6	78.4	0.31
5,307.7	0.56	233.53	5,295.4	-20.8	174.4	78.4	0.21
5,331.7	0.52	242.71	5,319.4	-21.0	174.2	78.5	0.40
5,358.1	0.56	237.99	5,345.8	-21.1	174.0	78.5	0.23
5,382.6	0.58	243.31	5,370.3	-21.2	173.8	78.6	0.23
5,406.8	0.53	235.40	5,394.5	-21.3	173.6	78.6	0.38
5,432.7	0.54	231.63	5,420.4	-21.5	173.4	78.7	0.14
5,456.9	0.50	238.52	5,444.6	-21.6	173.2	78.7	0.31
5,481.4	0.54	243.68	5,469.0	-21.7	173.0	78.8	0.25
5,507.8	0.58	238.24	5,495.5	-21.8	172.8	78.8	0.25
5,532.0	0.54	247.56	5,519.7	-21.9	172.6	78.9	0.41
5,556.3	0.60	235.16	5,543.9	-22.0	172.4	78.9	0.56
5,583.0	0.54	235.42	5,570.7	-22.2	172.2	79.0	0.22
5,607.2	0.49	233.93	5,594.9	-22.3	172.0	79.0	0.21
5,633.0	0.47	246.73	5,620.7	-22.4	171.8	79.1	0.42
5,656.7	0.47	239.31	5,644.4	-22.5	171.6	79.1	0.26
5,682.6	0.57	238.59	5,670.3	-22.6	171.4	79.1	0.39
5,706.7	0.44	252.30	5,694.4	-22.7	171.2	79.1	0.73
5,732.6	0.46	249.16	5,720.3	-22.8	171.0	79.1	0.12
5,758.0	0.55	240.44	5,745.7	-22.9	170.8	79.2	0.46
5,781.8	0.49	245.62	5,769.4	-23.0	170.6	79.2	0.32
5,808.0	0.45	237.90	5,795.6	-23.1	170.5	79.2	0.29
5,831.6	0.53	243.28	5,819.2	-23.2	170.3	79.3	0.39
5,857.4	0.41	264.13	5,845.1	-23.3	170.1	79.3	0.80
5,881.4	0.51	247.95	5,869.1	-23.3	169.9	79.2	0.68

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,907.2	0.47	237.74	5,894.9	-23.4	169.7	79.3	0.37
5,933.1	0.37	249.92	5,920.8	-23.5	169.5	79.3	0.52
5,956.7	0.53	244.06	5,944.4	-23.6	169.4	79.3	0.70
5,982.9	0.35	224.74	5,970.6	-23.7	169.2	79.3	0.88
6,006.5	0.43	241.51	5,994.2	-23.8	169.1	79.4	0.59
6,032.2	0.45	243.00	6,019.9	-23.9	168.9	79.4	0.09
6,056.8	0.45	265.45	6,044.5	-23.9	168.7	79.4	0.71
6,071.3	0.56	267.23	6,059.0	-23.9	168.6	79.4	0.76
6,112.0	0.89	108.65	6,099.7	-24.0	168.7	79.5	3.51
6,156.0	5.78	116.85	6,143.6	-25.1	171.0	81.3	11.14
6,201.0	10.90	115.06	6,188.1	-28.0	176.9	86.0	11.39
6,246.0	16.71	113.79	6,231.8	-32.4	186.7	93.4	12.93
6,291.0	22.03	113.59	6,274.2	-38.4	200.3	103.7	11.82
6,336.0	27.51	113.80	6,315.0	-45.9	217.6	116.6	12.18
6,356.0	29.90	113.73	6,332.6	-49.8	226.4	123.2	11.93
SCMR							
6,381.0	32.88	113.65	6,353.9	-55.0	238.3	132.2	11.93
6,425.0	38.51	111.41	6,389.6	-64.8	262.0	149.4	13.13
6,470.0	44.10	107.72	6,423.4	-74.7	290.0	168.2	13.55
6,515.0	48.52	106.17	6,454.5	-84.2	321.1	187.6	10.13
6,560.0	51.91	104.89	6,483.3	-93.5	354.4	207.5	7.84
6,604.0	56.64	102.71	6,509.0	-101.9	389.1	227.2	11.48
MDLX							
6,605.0	56.75	102.66	6,509.5	-102.1	389.9	227.6	11.48
6,650.0	62.21	102.23	6,532.4	-110.5	427.8	248.3	12.16
6,695.0	63.23	106.53	6,553.0	-120.4	466.5	270.7	8.79
6,739.0	64.75	112.69	6,572.3	-133.7	503.7	295.7	13.05
6,784.0	66.19	117.74	6,591.0	-151.1	540.7	324.6	10.70
6,829.0	66.88	122.25	6,608.9	-171.8	576.5	356.1	9.32
6,838.0	67.02	123.20	6,612.5	-176.2	583.4	362.7	9.81
BRKT							
6,874.0	67.62	126.97	6,626.4	-195.3	610.6	389.8	9.81
6,911.0	68.92	129.75	6,640.1	-216.7	637.5	419.0	7.83
TLLY							
6,919.0	69.21	130.35	6,642.9	-221.5	643.3	425.4	7.83
6,963.0	71.11	134.27	6,657.9	-249.3	673.8	462.0	9.43
7,008.0	73.59	139.10	6,671.5	-280.5	703.2	501.3	11.62
7,053.0	75.86	142.71	6,683.4	-314.2	730.6	542.2	9.24
7,054.0	75.89	142.79	6,683.6	-315.0	731.2	543.1	8.30
MRCL_HOT							
7,098.0	77.16	146.31	6,693.9	-349.8	756.0	584.3	8.30
7,143.0	79.36	149.83	6,703.0	-387.2	779.3	627.4	9.09
7,158.0	80.81	150.88	6,705.6	-400.1	786.6	641.9	11.87
7,173.0	82.79	150.87	6,707.7	-413.0	793.8	656.6	13.20
7,187.0	84.45	150.85	6,709.3	-425.2	800.6	670.3	11.86

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,232.0	90.07	152.15	6,711.4	-464.7	822.0	714.7	12.82
7,277.0	89.36	154.83	6,711.7	-504.9	842.1	759.4	6.16
7,367.0	89.87	156.55	6,712.3	-586.9	879.2	849.1	1.99
7,456.0	90.67	158.34	6,711.9	-669.1	913.3	938.0	2.20
7,546.0	89.87	160.26	6,711.4	-753.3	945.1	1,027.9	2.31
7,635.0	89.77	161.05	6,711.7	-837.3	974.6	1,116.9	0.89
7,725.0	90.20	163.68	6,711.7	-923.1	1,001.9	1,206.9	2.96
7,815.0	88.93	164.73	6,712.4	-1,009.7	1,026.4	1,296.6	1.83
7,905.0	89.87	163.81	6,713.4	-1,096.3	1,050.8	1,386.4	1.46
7,995.0	90.13	161.01	6,713.4	-1,182.1	1,078.0	1,476.4	3.12
8,084.0	89.36	160.23	6,713.8	-1,266.0	1,107.5	1,565.3	1.23
8,174.0	90.30	159.81	6,714.0	-1,350.6	1,138.2	1,655.3	1.14
8,263.0	89.13	159.96	6,714.5	-1,434.2	1,168.8	1,744.3	1.33
8,353.0	88.99	159.89	6,715.9	-1,518.7	1,199.7	1,834.3	0.17
8,443.0	88.81	160.98	6,717.7	-1,603.5	1,229.9	1,924.3	1.23
8,532.0	88.52	162.12	6,719.7	-1,687.9	1,258.0	2,013.3	1.32
8,622.0	88.79	158.94	6,721.9	-1,772.7	1,288.0	2,103.2	3.55
8,712.0	88.72	159.31	6,723.8	-1,856.8	1,320.1	2,193.2	0.42
8,801.0	89.26	159.32	6,725.4	-1,940.0	1,351.5	2,282.2	0.61
8,891.0	89.70	159.65	6,726.2	-2,024.3	1,383.0	2,372.1	0.61
8,981.0	90.47	159.51	6,726.1	-2,108.6	1,414.4	2,462.1	0.87
9,071.0	89.36	161.71	6,726.2	-2,193.5	1,444.3	2,552.1	2.74
9,160.0	88.93	160.44	6,727.5	-2,277.7	1,473.2	2,641.1	1.51
9,250.0	89.06	162.10	6,729.1	-2,362.9	1,502.1	2,731.1	1.85
9,340.0	89.23	160.97	6,730.4	-2,448.3	1,530.6	2,821.0	1.27
9,430.0	88.72	158.84	6,732.1	-2,532.8	1,561.5	2,911.0	2.43
9,519.0	89.26	159.73	6,733.6	-2,616.0	1,593.0	3,000.0	1.17
9,609.0	90.07	159.06	6,734.2	-2,700.3	1,624.6	3,090.0	1.17
9,699.0	90.91	158.12	6,733.4	-2,784.0	1,657.5	3,179.9	1.40
9,788.0	89.80	160.50	6,732.8	-2,867.3	1,688.9	3,268.9	2.95
9,878.0	90.10	160.98	6,732.9	-2,952.3	1,718.6	3,358.9	0.63
9,968.0	88.59	160.44	6,733.9	-3,037.2	1,748.4	3,448.9	1.78
10,058.0	88.62	161.32	6,736.1	-3,122.2	1,777.8	3,538.9	0.98
10,147.0	89.36	161.65	6,737.7	-3,206.6	1,806.1	3,627.8	0.91
10,237.0	90.00	161.57	6,738.2	-3,292.0	1,834.5	3,717.8	0.72
10,327.0	90.13	160.32	6,738.1	-3,377.1	1,863.9	3,807.8	1.40
10,417.0	89.36	160.11	6,738.5	-3,461.7	1,894.3	3,897.8	0.89
10,506.0	89.80	161.60	6,739.2	-3,545.8	1,923.5	3,986.8	1.75
10,596.0	89.19	159.35	6,739.9	-3,630.6	1,953.6	4,076.8	2.59
10,686.0	88.93	159.98	6,741.4	-3,715.0	1,984.9	4,166.8	0.76
10,775.0	88.79	159.78	6,743.2	-3,798.6	2,015.5	4,255.7	0.27
10,865.0	89.16	160.04	6,744.8	-3,883.1	2,046.4	4,345.7	0.50
10,955.0	89.46	161.14	6,745.9	-3,967.9	2,076.3	4,435.7	1.27
11,044.0	89.60	160.05	6,746.6	-4,051.9	2,105.8	4,524.7	1.23

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,134.0	89.50	159.06	6,747.3	-4,136.2	2,137.3	4,614.7	1.11
11,223.0	89.26	159.20	6,748.3	-4,219.4	2,169.0	4,703.7	0.31
11,313.0	90.00	159.66	6,748.9	-4,303.6	2,200.6	4,793.7	0.97
11,403.0	90.27	159.62	6,748.7	-4,388.0	2,231.9	4,883.7	0.30
11,492.0	88.99	161.15	6,749.2	-4,471.8	2,261.8	4,972.6	2.24
11,582.0	89.30	162.36	6,750.6	-4,557.3	2,290.0	5,062.6	1.39
11,671.0	89.50	162.67	6,751.5	-4,642.2	2,316.7	5,151.5	0.41
11,761.0	89.19	162.84	6,752.5	-4,728.1	2,343.4	5,241.4	0.39
11,851.0	89.66	160.31	6,753.4	-4,813.5	2,371.8	5,331.4	2.86
11,940.0	89.53	160.06	6,754.1	-4,897.2	2,402.0	5,420.4	0.32
12,030.0	89.40	157.85	6,754.9	-4,981.2	2,434.3	5,510.4	2.46
12,120.0	89.43	157.78	6,755.8	-5,064.6	2,468.3	5,600.3	0.08
12,209.0	89.80	160.03	6,756.4	-5,147.6	2,500.3	5,689.3	2.56
12,299.0	89.63	161.92	6,756.9	-5,232.7	2,529.7	5,779.2	2.11
12,389.0	90.17	161.65	6,757.0	-5,318.2	2,557.8	5,869.2	0.67
12,478.0	89.36	162.38	6,757.4	-5,402.8	2,585.3	5,958.2	1.23
12,568.0	89.23	162.40	6,758.5	-5,488.6	2,612.5	6,048.1	0.15
12,658.0	89.33	160.96	6,759.6	-5,574.0	2,640.8	6,138.1	1.60
12,747.0	89.16	161.22	6,760.8	-5,658.2	2,669.6	6,227.0	0.35
12,837.0	89.56	161.04	6,761.8	-5,743.4	2,698.7	6,317.0	0.49
12,927.0	89.70	160.43	6,762.4	-5,828.3	2,728.4	6,407.0	0.70
13,016.0	89.19	160.54	6,763.3	-5,912.2	2,758.2	6,496.0	0.59
13,106.0	89.76	158.80	6,764.1	-5,996.6	2,789.4	6,586.0	2.03
13,196.0	90.13	159.35	6,764.2	-6,080.6	2,821.6	6,676.0	0.74
13,285.0	90.13	159.59	6,764.0	-6,164.0	2,852.8	6,765.0	0.27
13,375.0	89.43	158.61	6,764.3	-6,248.1	2,884.9	6,855.0	1.34
13,465.0	89.60	160.02	6,765.1	-6,332.3	2,916.7	6,944.9	1.58
13,554.0	90.64	160.52	6,764.9	-6,416.0	2,946.7	7,033.9	1.30
13,644.0	89.73	158.50	6,764.6	-6,500.3	2,978.2	7,123.9	2.46
13,733.0	89.09	158.61	6,765.5	-6,583.2	3,010.8	7,212.9	0.73
13,823.0	88.59	158.39	6,767.3	-6,666.9	3,043.7	7,302.8	0.61
13,913.0	89.60	160.58	6,768.8	-6,751.2	3,075.3	7,392.8	2.68
13,983.0	89.77	159.74	6,769.1	-6,817.0	3,099.0	7,462.8	1.22
14,045.0	89.77	159.74	6,769.4	-6,875.2	3,120.5	7,524.8	0.00
PTB							

Company:	Antero	**Local Co-ordinate Reference:**	Well Wall Unit 2H
Project:	Tyler County WV	**TVD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Site:	Pierpoint Pad:Ingot/Klondike/Wall/Weigle	**MD Reference:**	Precision 525: GL 1201' + KB 19' @ 1220.0usft
Well:	Wall Unit 2H	**North Reference:**	Grid
Wellbore:	Original Wellpath	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
6,356.0	6,332.6	-49.8	226.4	SCMR
6,604.0	6,509.0	-101.9	389.1	MDLX
6,838.0	6,612.5	-176.2	583.4	BRKT
6,911.0	6,640.1	-216.7	637.5	TLLY
7,054.0	6,683.6	-315.0	731.2	MRCL_HOT
14,045.0	6,769.4	-6,875.2	3,120.5	PTB

Checked By: _____ Approved By: _____ Date: _____