

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-32 KIWI 2920 PAD
KIWI 2920-04H**

Wellbore #1

Plan: Design #2

Standard Planning Report

15 December, 2022

Project: WATTENBERG FIELD
Site: 2N-64W-32 KIWI 2920 PAD
Well: KIWI 2920-04H
Wellbore: Wellbore #1
Design: Design #2

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
2486.00	2567.44	9 5/8"	9-5/8

SHL	LP/TPZ	BPZ	BHL
1955' FNL	460' FSL	460' FNL	370' FNL
2608' FWL	2090' FWL	2110' FWL	2110' FWL

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
261.10	0.00	0.00	261.10	0.00	0.00	0.00	0.00	0.00	
1147.10	17.72	345.57	1133.04	131.63	-33.87	2.00	345.57	132.01	
6836.51	17.72	345.57	6552.52	1808.66	-465.40	0.00	0.00	1813.90	
7645.93	90.00	359.89	7000.00	2416.90	-501.93	9.00	15.00	2422.52	
10445.93	90.00	359.89	7000.00	5216.89	-507.30	0.00	0.00	5222.39	
10758.93	90.00	6.15	7000.00	5529.30	-490.82	2.00	90.00	5534.59	
11858.93	90.00	6.15	7000.00	6622.97	-372.98	0.00	0.00	6626.83	
12273.93	90.00	357.85	7000.00	7037.35	-358.51	2.00	-90.00	7041.02	
15973.93	90.00	357.85	7000.00	10734.75	-497.31	0.00	0.00	10739.77	
16216.43	90.00	353.00	7000.00	10976.40	-516.65	2.00	-90.00	10981.63	
16816.43	90.00	353.00	7000.00	11571.93	-589.77	0.00	0.00	11577.96	
17127.86	90.00	359.23	7000.00	11882.49	-610.87	2.00	90.00	11888.74	
17362.50	90.00	359.23	7000.00	12117.11	-614.03	0.00	0.00	12123.38	KIWI 2920-04H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
KIWI 2920-04H_SHL	0.00	1279507.63	3258773.14	40.096935	-104.574985
KIWI 2920-04H_LP/TPZ	7000.00	1281919.10	3258246.08	40.103570	-104.576779
KIWI 2920-04H_BPZ	7000.00	1291527.70	3258034.73	40.129951	-104.577178
KIWI 2920-04H_BHL	7000.00	1291617.68	3258032.75	40.130198	-104.577181

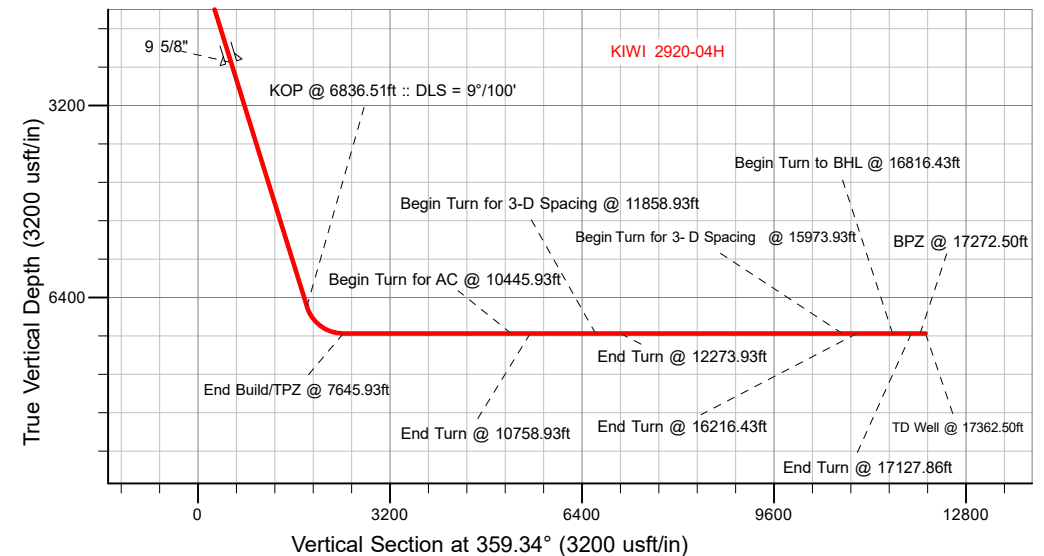
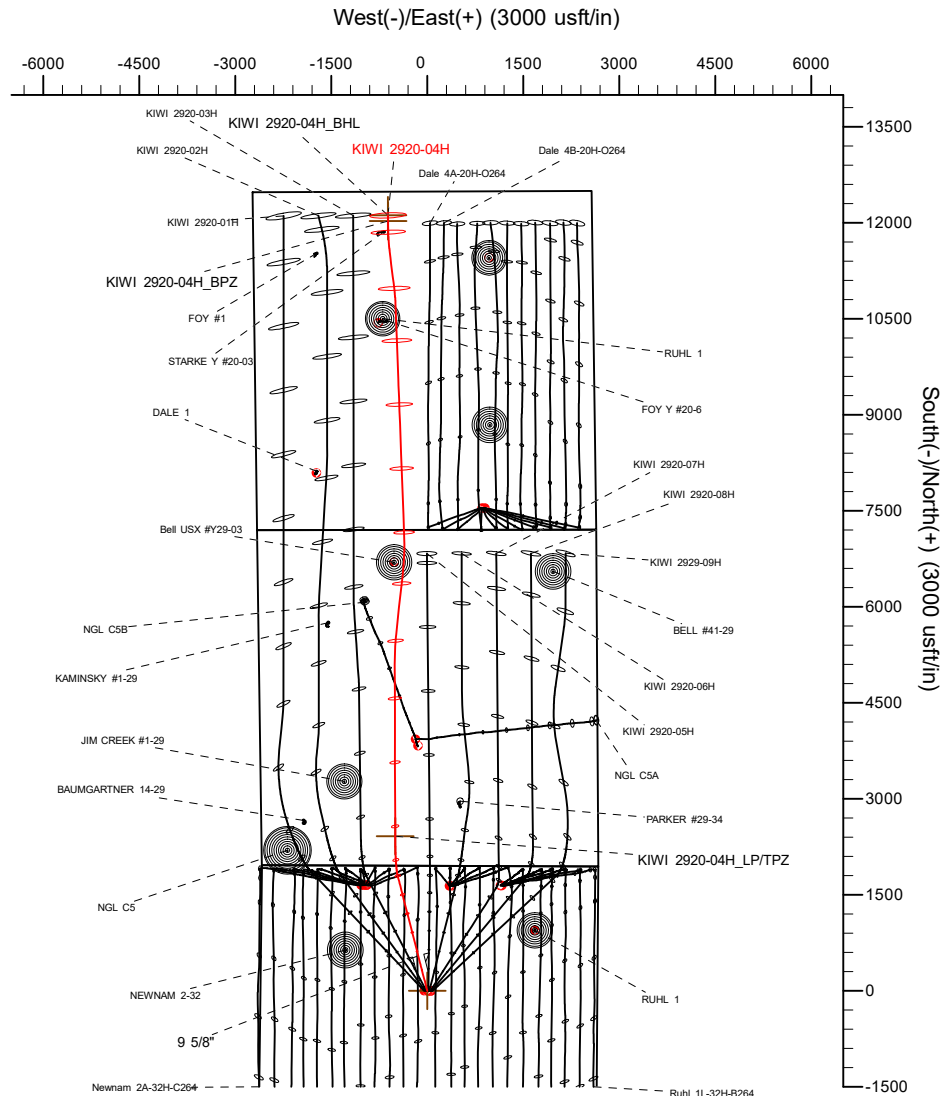
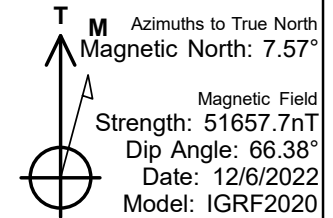
WELL DETAILS: KIWI 2920-04H

GL = 4971'

RKB = 20' @ 4991.00usft (RIG)

Plan: Design #2 (KIWI 2920-04H/Wellbore #1)

Date: 12/16/2022



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well KIWI 2920-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	WATTENBERG FIELD		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		2N-64W-32 KIWI 2920 PAD			
Site Position:		Northing:	1,279,507.68 usft	Latitude:	40.096937
From:	Map	Easting:	3,258,725.14 usft	Longitude:	-104.575157
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	

Well		KIWI 2920-04H				
Well Position	+N/-S	0.00 usft	Northing:	1,279,507.63 usft	Latitude:	40.096935
	+E/-W	0.00 usft	Easting:	3,258,773.14 usft	Longitude:	-104.574986
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,971.00 usft
Grid Convergence:		0.60 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	12/6/2022	7.57	66.38	51,657.72087579

Design	Design #2				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.34	

Plan Survey Tool Program		Date	12/15/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,486.00	Design #2 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination
2	2,486.00	17,362.19	Design #2 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination

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Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
261.10	0.00	0.00	261.10	0.00	0.00	0.00	0.00	0.00	0.00	
1,147.10	17.72	345.57	1,133.04	131.63	-33.87	2.00	2.00	0.00	345.57	
6,836.51	17.72	345.57	6,552.52	1,808.66	-465.40	0.00	0.00	0.00	0.00	
7,645.93	90.00	359.89	7,000.00	2,416.90	-501.93	9.00	8.93	1.77	15.00	
10,445.93	90.00	359.89	7,000.00	5,216.89	-507.30	0.00	0.00	0.00	0.00	
10,758.93	90.00	6.15	7,000.00	5,529.30	-490.82	2.00	0.00	2.00	90.00	
11,858.93	90.00	6.15	7,000.00	6,622.97	-372.98	0.00	0.00	0.00	0.00	
12,273.93	90.00	357.85	7,000.00	7,037.35	-358.51	2.00	0.00	-2.00	-90.00	
15,973.93	90.00	357.85	7,000.00	10,734.75	-497.31	0.00	0.00	0.00	0.00	
16,216.43	90.00	353.00	7,000.00	10,976.41	-516.65	2.00	0.00	-2.00	-90.00	
16,816.43	90.00	353.00	7,000.00	11,571.93	-589.77	0.00	0.00	0.00	0.00	
17,127.86	90.00	359.23	7,000.00	11,882.49	-610.87	2.00	0.00	2.00	90.00	
17,362.50	90.00	359.23	7,000.00	12,117.11	-614.03	0.00	0.00	0.00	0.00	KIWI 2920-04H_BHL

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
261.10	0.00	0.00	261.10	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 261.10ft									
300.00	0.78	345.57	300.00	0.26	-0.07	0.26	2.00	2.00	0.00
400.00	2.78	345.57	399.95	3.26	-0.84	3.27	2.00	2.00	0.00
500.00	4.78	345.57	499.72	9.64	-2.48	9.67	2.00	2.00	0.00
600.00	6.78	345.57	599.21	19.39	-4.99	19.45	2.00	2.00	0.00
700.00	8.78	345.57	698.29	32.50	-8.36	32.59	2.00	2.00	0.00
800.00	10.78	345.57	796.83	48.94	-12.59	49.08	2.00	2.00	0.00
900.00	12.78	345.57	894.72	68.71	-17.68	68.91	2.00	2.00	0.00
1,000.00	14.78	345.57	991.83	91.77	-23.61	92.04	2.00	2.00	0.00
1,100.00	16.78	345.57	1,088.06	118.11	-30.39	118.45	2.00	2.00	0.00
1,147.10	17.72	345.57	1,133.04	131.63	-33.87	132.01	2.00	2.00	0.00
Hold Tangent @ 1147.10ft									
1,200.00	17.72	345.57	1,183.43	147.22	-37.88	147.65	0.00	0.00	0.00
1,300.00	17.72	345.57	1,278.69	176.70	-45.47	177.21	0.00	0.00	0.00
1,400.00	17.72	345.57	1,373.94	206.18	-53.05	206.77	0.00	0.00	0.00
1,500.00	17.72	345.57	1,469.20	235.65	-60.64	236.34	0.00	0.00	0.00
1,600.00	17.72	345.57	1,564.46	265.13	-68.22	265.90	0.00	0.00	0.00
1,700.00	17.72	345.57	1,659.71	294.61	-75.81	295.46	0.00	0.00	0.00
1,800.00	17.72	345.57	1,754.97	324.08	-83.39	325.02	0.00	0.00	0.00
1,900.00	17.72	345.57	1,850.22	353.56	-90.98	354.58	0.00	0.00	0.00
2,000.00	17.72	345.57	1,945.48	383.04	-98.56	384.15	0.00	0.00	0.00
2,100.00	17.72	345.57	2,040.73	412.51	-106.15	413.71	0.00	0.00	0.00
2,200.00	17.72	345.57	2,135.99	441.99	-113.73	443.27	0.00	0.00	0.00
2,300.00	17.72	345.57	2,231.24	471.46	-121.31	472.83	0.00	0.00	0.00
2,400.00	17.72	345.57	2,326.50	500.94	-128.90	502.39	0.00	0.00	0.00
2,500.00	17.72	345.57	2,421.76	530.42	-136.48	531.95	0.00	0.00	0.00
2,567.44	17.72	345.57	2,486.00	550.30	-141.60	551.89	0.00	0.00	0.00
9 5/8"									
2,600.00	17.72	345.57	2,517.01	559.89	-144.07	561.52	0.00	0.00	0.00
2,700.00	17.72	345.57	2,612.27	589.37	-151.65	591.08	0.00	0.00	0.00
2,800.00	17.72	345.57	2,707.52	618.85	-159.24	620.64	0.00	0.00	0.00
2,900.00	17.72	345.57	2,802.78	648.32	-166.82	650.20	0.00	0.00	0.00
3,000.00	17.72	345.57	2,898.03	677.80	-174.41	679.76	0.00	0.00	0.00
3,100.00	17.72	345.57	2,993.29	707.28	-181.99	709.32	0.00	0.00	0.00
3,200.00	17.72	345.57	3,088.54	736.75	-189.58	738.89	0.00	0.00	0.00
3,300.00	17.72	345.57	3,183.80	766.23	-197.16	768.45	0.00	0.00	0.00
3,400.00	17.72	345.57	3,279.06	795.70	-204.75	798.01	0.00	0.00	0.00
3,500.00	17.72	345.57	3,374.31	825.18	-212.33	827.57	0.00	0.00	0.00
3,600.00	17.72	345.57	3,469.57	854.66	-219.92	857.13	0.00	0.00	0.00
3,700.00	17.72	345.57	3,564.82	884.13	-227.50	886.70	0.00	0.00	0.00
3,800.00	17.72	345.57	3,660.08	913.61	-235.09	916.26	0.00	0.00	0.00
3,900.00	17.72	345.57	3,755.33	943.09	-242.67	945.82	0.00	0.00	0.00
4,000.00	17.72	345.57	3,850.59	972.56	-250.25	975.38	0.00	0.00	0.00
4,100.00	17.72	345.57	3,945.84	1,002.04	-257.84	1,004.94	0.00	0.00	0.00
4,200.00	17.72	345.57	4,041.10	1,031.52	-265.42	1,034.50	0.00	0.00	0.00
4,300.00	17.72	345.57	4,136.35	1,060.99	-273.01	1,064.07	0.00	0.00	0.00
4,400.00	17.72	345.57	4,231.61	1,090.47	-280.59	1,093.63	0.00	0.00	0.00
4,500.00	17.72	345.57	4,326.87	1,119.94	-288.18	1,123.19	0.00	0.00	0.00
4,600.00	17.72	345.57	4,422.12	1,149.42	-295.76	1,152.75	0.00	0.00	0.00

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)
4,700.00	17.72	345.57	4,517.38	1,178.90	-303.35	1,182.31	0.00	0.00	0.00
4,800.00	17.72	345.57	4,612.63	1,208.37	-310.93	1,211.88	0.00	0.00	0.00
4,900.00	17.72	345.57	4,707.89	1,237.85	-318.52	1,241.44	0.00	0.00	0.00
5,000.00	17.72	345.57	4,803.14	1,267.33	-326.10	1,271.00	0.00	0.00	0.00
5,100.00	17.72	345.57	4,898.40	1,296.80	-333.69	1,300.56	0.00	0.00	0.00
5,200.00	17.72	345.57	4,993.65	1,326.28	-341.27	1,330.12	0.00	0.00	0.00
5,300.00	17.72	345.57	5,088.91	1,355.76	-348.86	1,359.68	0.00	0.00	0.00
5,400.00	17.72	345.57	5,184.17	1,385.23	-356.44	1,389.25	0.00	0.00	0.00
5,500.00	17.72	345.57	5,279.42	1,414.71	-364.02	1,418.81	0.00	0.00	0.00
5,600.00	17.72	345.57	5,374.68	1,444.18	-371.61	1,448.37	0.00	0.00	0.00
5,700.00	17.72	345.57	5,469.93	1,473.66	-379.19	1,477.93	0.00	0.00	0.00
5,800.00	17.72	345.57	5,565.19	1,503.14	-386.78	1,507.49	0.00	0.00	0.00
5,900.00	17.72	345.57	5,660.44	1,532.61	-394.36	1,537.05	0.00	0.00	0.00
6,000.00	17.72	345.57	5,755.70	1,562.09	-401.95	1,566.62	0.00	0.00	0.00
6,100.00	17.72	345.57	5,850.95	1,591.57	-409.53	1,596.18	0.00	0.00	0.00
6,200.00	17.72	345.57	5,946.21	1,621.04	-417.12	1,625.74	0.00	0.00	0.00
6,300.00	17.72	345.57	6,041.47	1,650.52	-424.70	1,655.30	0.00	0.00	0.00
6,400.00	17.72	345.57	6,136.72	1,680.00	-432.29	1,684.86	0.00	0.00	0.00
6,500.00	17.72	345.57	6,231.98	1,709.47	-439.87	1,714.43	0.00	0.00	0.00
6,600.00	17.72	345.57	6,327.23	1,738.95	-447.46	1,743.99	0.00	0.00	0.00
6,700.00	17.72	345.57	6,422.49	1,768.42	-455.04	1,773.55	0.00	0.00	0.00
6,800.00	17.72	345.57	6,517.74	1,797.90	-462.63	1,803.11	0.00	0.00	0.00
6,836.51	17.72	345.57	6,552.52	1,808.66	-465.40	1,813.90	0.00	0.00	0.00
KOP @ 6836.51ft :: DLS = 9°/100'									
6,850.00	18.90	346.54	6,565.33	1,812.78	-466.42	1,818.03	9.00	8.71	7.19
6,900.00	23.28	349.31	6,611.97	1,830.37	-470.14	1,835.66	9.00	8.78	5.54
6,950.00	27.71	351.24	6,657.09	1,851.58	-473.74	1,856.91	9.00	8.85	3.85
7,000.00	32.15	352.67	6,700.41	1,876.28	-477.21	1,881.65	9.00	8.89	2.86
7,050.00	36.61	353.78	6,741.67	1,904.31	-480.53	1,909.71	9.00	8.91	2.23
7,100.00	41.07	354.69	6,780.60	1,935.50	-483.66	1,940.94	9.00	8.93	1.81
7,150.00	45.54	355.44	6,816.98	1,969.66	-486.60	1,975.13	9.00	8.94	1.51
7,200.00	50.02	356.09	6,850.57	2,006.57	-489.33	2,012.08	9.00	8.95	1.30
7,250.00	54.49	356.66	6,881.17	2,046.02	-491.82	2,051.55	9.00	8.96	1.14
7,300.00	58.97	357.17	6,908.59	2,087.76	-494.07	2,093.31	9.00	8.96	1.02
7,350.00	63.46	357.63	6,932.66	2,131.52	-496.06	2,137.10	9.00	8.96	0.92
7,400.00	67.94	358.05	6,953.23	2,177.05	-497.77	2,182.64	9.00	8.97	0.85
7,450.00	72.42	358.46	6,970.18	2,224.05	-499.20	2,229.65	9.00	8.97	0.80
7,500.00	76.91	358.84	6,983.40	2,272.25	-500.34	2,277.86	9.00	8.97	0.76
7,550.00	81.39	359.20	6,992.81	2,321.33	-501.18	2,326.95	9.00	8.97	0.74
7,600.00	85.88	359.56	6,998.35	2,371.01	-501.71	2,376.63	9.00	8.97	0.72
7,645.93	90.00	359.89	7,000.00	2,416.90	-501.93	2,422.52	9.00	8.97	0.71
End Build/TPZ @ 7645.93ft									
7,700.00	90.00	359.89	7,000.00	2,470.97	-502.03	2,476.59	0.00	0.00	0.00
7,800.00	90.00	359.89	7,000.00	2,570.97	-502.22	2,576.58	0.00	0.00	0.00
7,900.00	90.00	359.89	7,000.00	2,670.97	-502.42	2,676.58	0.00	0.00	0.00
8,000.00	90.00	359.89	7,000.00	2,770.97	-502.61	2,776.57	0.00	0.00	0.00
8,100.00	90.00	359.89	7,000.00	2,870.97	-502.80	2,876.57	0.00	0.00	0.00
8,200.00	90.00	359.89	7,000.00	2,970.97	-502.99	2,976.56	0.00	0.00	0.00
8,300.00	90.00	359.89	7,000.00	3,070.97	-503.18	3,076.56	0.00	0.00	0.00
8,400.00	90.00	359.89	7,000.00	3,170.97	-503.38	3,176.56	0.00	0.00	0.00
8,500.00	90.00	359.89	7,000.00	3,270.97	-503.57	3,276.55	0.00	0.00	0.00
8,600.00	90.00	359.89	7,000.00	3,370.97	-503.76	3,376.55	0.00	0.00	0.00
8,700.00	90.00	359.89	7,000.00	3,470.97	-503.95	3,476.54	0.00	0.00	0.00
8,800.00	90.00	359.89	7,000.00	3,570.97	-504.14	3,576.54	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well KIWI 2920-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)	
8,900.00	90.00	359.89	7,000.00	3,670.97	-504.34	3,676.53	0.00	0.00	0.00	
9,000.00	90.00	359.89	7,000.00	3,770.97	-504.53	3,776.53	0.00	0.00	0.00	
9,100.00	90.00	359.89	7,000.00	3,870.97	-504.72	3,876.52	0.00	0.00	0.00	
9,200.00	90.00	359.89	7,000.00	3,970.97	-504.91	3,976.52	0.00	0.00	0.00	
9,300.00	90.00	359.89	7,000.00	4,070.97	-505.10	4,076.51	0.00	0.00	0.00	
9,400.00	90.00	359.89	7,000.00	4,170.97	-505.30	4,176.51	0.00	0.00	0.00	
9,500.00	90.00	359.89	7,000.00	4,270.97	-505.49	4,276.50	0.00	0.00	0.00	
9,600.00	90.00	359.89	7,000.00	4,370.97	-505.68	4,376.50	0.00	0.00	0.00	
9,700.00	90.00	359.89	7,000.00	4,470.96	-505.87	4,476.50	0.00	0.00	0.00	
9,800.00	90.00	359.89	7,000.00	4,570.96	-506.06	4,576.49	0.00	0.00	0.00	
9,900.00	90.00	359.89	7,000.00	4,670.96	-506.26	4,676.49	0.00	0.00	0.00	
10,000.00	90.00	359.89	7,000.00	4,770.96	-506.45	4,776.48	0.00	0.00	0.00	
10,100.00	90.00	359.89	7,000.00	4,870.96	-506.64	4,876.48	0.00	0.00	0.00	
10,200.00	90.00	359.89	7,000.00	4,970.96	-506.83	4,976.47	0.00	0.00	0.00	
10,300.00	90.00	359.89	7,000.00	5,070.96	-507.02	5,076.47	0.00	0.00	0.00	
10,400.00	90.00	359.89	7,000.00	5,170.96	-507.22	5,176.46	0.00	0.00	0.00	
10,445.93	90.00	359.89	7,000.00	5,216.89	-507.30	5,222.39	0.00	0.00	0.00	
Begin Turn for AC @ 10445.93ft										
10,500.00	90.00	0.97	7,000.00	5,270.96	-506.90	5,276.45	2.00	0.00	2.00	
10,600.00	90.00	2.97	7,000.00	5,370.90	-503.46	5,376.34	2.00	0.00	2.00	
10,700.00	90.00	4.97	7,000.00	5,470.65	-496.53	5,476.01	2.00	0.00	2.00	
10,758.93	90.00	6.15	7,000.00	5,529.30	-490.82	5,534.59	2.00	0.00	2.00	
End Turn @ 10758.93ft										
10,800.00	90.00	6.15	7,000.00	5,570.14	-486.42	5,575.37	0.00	0.00	0.00	
10,900.00	90.00	6.15	7,000.00	5,669.56	-475.71	5,674.67	0.00	0.00	0.00	
11,000.00	90.00	6.15	7,000.00	5,768.99	-464.99	5,773.96	0.00	0.00	0.00	
11,100.00	90.00	6.15	7,000.00	5,868.41	-454.28	5,873.25	0.00	0.00	0.00	
11,200.00	90.00	6.15	7,000.00	5,967.84	-443.57	5,972.55	0.00	0.00	0.00	
11,300.00	90.00	6.15	7,000.00	6,067.26	-432.86	6,071.84	0.00	0.00	0.00	
11,400.00	90.00	6.15	7,000.00	6,166.68	-422.14	6,171.14	0.00	0.00	0.00	
11,500.00	90.00	6.15	7,000.00	6,266.11	-411.43	6,270.43	0.00	0.00	0.00	
11,600.00	90.00	6.15	7,000.00	6,365.53	-400.72	6,369.73	0.00	0.00	0.00	
11,700.00	90.00	6.15	7,000.00	6,464.96	-390.00	6,469.02	0.00	0.00	0.00	
11,800.00	90.00	6.15	7,000.00	6,564.38	-379.29	6,568.32	0.00	0.00	0.00	
11,858.93	90.00	6.15	7,000.00	6,622.97	-372.98	6,626.83	0.00	0.00	0.00	
Begin Turn for 3-D Spacing @ 11858.93ft										
11,900.00	90.00	5.33	7,000.00	6,663.84	-368.87	6,667.64	2.00	0.00	-2.00	
12,000.00	90.00	3.33	7,000.00	6,763.55	-361.32	6,767.26	2.00	0.00	-2.00	
12,100.00	90.00	1.33	7,000.00	6,863.46	-357.26	6,867.12	2.00	0.00	-2.00	
12,200.00	90.00	359.33	7,000.00	6,963.45	-356.69	6,967.10	2.00	0.00	-2.00	
12,273.93	90.00	357.85	7,000.00	7,037.35	-358.51	7,041.02	2.00	0.00	-2.00	
End Turn @ 12273.93ft										
12,300.00	90.00	357.85	7,000.00	7,063.41	-359.48	7,067.08	0.00	0.00	0.00	
12,400.00	90.00	357.85	7,000.00	7,163.34	-363.24	7,167.05	0.00	0.00	0.00	
12,500.00	90.00	357.85	7,000.00	7,263.27	-366.99	7,267.01	0.00	0.00	0.00	
12,600.00	90.00	357.85	7,000.00	7,363.20	-370.74	7,366.98	0.00	0.00	0.00	
12,700.00	90.00	357.85	7,000.00	7,463.13	-374.49	7,466.95	0.00	0.00	0.00	
12,800.00	90.00	357.85	7,000.00	7,563.06	-378.24	7,566.91	0.00	0.00	0.00	
12,900.00	90.00	357.85	7,000.00	7,662.99	-381.99	7,666.88	0.00	0.00	0.00	
13,000.00	90.00	357.85	7,000.00	7,762.92	-385.74	7,766.84	0.00	0.00	0.00	
13,100.00	90.00	357.85	7,000.00	7,862.85	-389.50	7,866.81	0.00	0.00	0.00	
13,200.00	90.00	357.85	7,000.00	7,962.78	-393.25	7,966.78	0.00	0.00	0.00	
13,300.00	90.00	357.85	7,000.00	8,062.71	-397.00	8,066.74	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well KIWI 2920-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned 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)	
13,400.00	90.00	357.85	7,000.00	8,162.63	-400.75	8,166.71	0.00	0.00	0.00	
13,500.00	90.00	357.85	7,000.00	8,262.56	-404.50	8,266.68	0.00	0.00	0.00	
13,600.00	90.00	357.85	7,000.00	8,362.49	-408.25	8,366.64	0.00	0.00	0.00	
13,700.00	90.00	357.85	7,000.00	8,462.42	-412.01	8,466.61	0.00	0.00	0.00	
13,800.00	90.00	357.85	7,000.00	8,562.35	-415.76	8,566.57	0.00	0.00	0.00	
13,900.00	90.00	357.85	7,000.00	8,662.28	-419.51	8,666.54	0.00	0.00	0.00	
14,000.00	90.00	357.85	7,000.00	8,762.21	-423.26	8,766.51	0.00	0.00	0.00	
14,100.00	90.00	357.85	7,000.00	8,862.14	-427.01	8,866.47	0.00	0.00	0.00	
14,200.00	90.00	357.85	7,000.00	8,962.07	-430.76	8,966.44	0.00	0.00	0.00	
14,300.00	90.00	357.85	7,000.00	9,062.00	-434.52	9,066.41	0.00	0.00	0.00	
14,400.00	90.00	357.85	7,000.00	9,161.93	-438.27	9,166.37	0.00	0.00	0.00	
14,500.00	90.00	357.85	7,000.00	9,261.86	-442.02	9,266.34	0.00	0.00	0.00	
14,600.00	90.00	357.85	7,000.00	9,361.79	-445.77	9,366.30	0.00	0.00	0.00	
14,700.00	90.00	357.85	7,000.00	9,461.72	-449.52	9,466.27	0.00	0.00	0.00	
14,800.00	90.00	357.85	7,000.00	9,561.65	-453.27	9,566.24	0.00	0.00	0.00	
14,900.00	90.00	357.85	7,000.00	9,661.58	-457.02	9,666.20	0.00	0.00	0.00	
15,000.00	90.00	357.85	7,000.00	9,761.51	-460.78	9,766.17	0.00	0.00	0.00	
15,100.00	90.00	357.85	7,000.00	9,861.44	-464.53	9,866.13	0.00	0.00	0.00	
15,200.00	90.00	357.85	7,000.00	9,961.37	-468.28	9,966.10	0.00	0.00	0.00	
15,300.00	90.00	357.85	7,000.00	10,061.30	-472.03	10,066.07	0.00	0.00	0.00	
15,400.00	90.00	357.85	7,000.00	10,161.23	-475.78	10,166.03	0.00	0.00	0.00	
15,500.00	90.00	357.85	7,000.00	10,261.16	-479.53	10,266.00	0.00	0.00	0.00	
15,600.00	90.00	357.85	7,000.00	10,361.09	-483.29	10,365.97	0.00	0.00	0.00	
15,700.00	90.00	357.85	7,000.00	10,461.02	-487.04	10,465.93	0.00	0.00	0.00	
15,800.00	90.00	357.85	7,000.00	10,560.95	-490.79	10,565.90	0.00	0.00	0.00	
15,900.00	90.00	357.85	7,000.00	10,660.87	-494.54	10,665.86	0.00	0.00	0.00	
15,973.93	90.00	357.85	7,000.00	10,734.75	-497.31	10,739.77	0.00	0.00	0.00	
Begin Turn for 3-D Spacing @ 15973.93ft										
16,000.00	90.00	357.33	7,000.00	10,760.80	-498.41	10,765.83	2.00	0.00	-2.00	
16,100.00	90.00	355.33	7,000.00	10,860.59	-504.81	10,865.68	2.00	0.00	-2.00	
16,200.00	90.00	353.33	7,000.00	10,960.09	-514.70	10,965.30	2.00	0.00	-2.00	
16,216.43	90.00	353.00	7,000.00	10,976.41	-516.65	10,981.63	2.00	0.00	-2.00	
End Turn @ 16216.43ft										
16,300.00	90.00	353.00	7,000.00	11,059.36	-526.84	11,064.69	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well KIWI 2920-04H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site:	2N-64W-32 KIWI 2920 PAD	North Reference:	True
Well:	KIWI 2920-04H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
2,567.44	2,486.00	9 5/8"	9-5/8	13-1/2	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
261.10	261.10	0.00	0.00	Begin Nudge @ 261.10ft	
1,147.10	1,133.04	131.63	-33.87	Hold Tangent @ 1147.10ft	
6,836.51	6,552.52	1,808.66	-465.40	KOP @ 6836.51ft :: DLS = 9°/100'	
7,645.93	7,000.00	2,416.90	-501.93	End Build/TPZ @ 7645.93ft	
10,445.93	7,000.00	5,216.89	-507.30	Begin Turn for AC @ 10445.93ft	
10,758.93	7,000.00	5,529.30	-490.82	End Turn @ 10758.93ft	
11,858.93	7,000.00	6,622.97	-372.98	Begin Turn for 3-D Spacing @ 11858.93ft	
12,273.93	7,000.00	7,037.35	-358.51	End Turn @ 12273.93ft	
15,973.93	7,000.00	10,734.75	-497.31	Begin Turn for 3-D Spacing @ 15973.93ft	
16,216.43	7,000.00	10,976.41	-516.65	End Turn @ 16216.43ft	
16,816.43	7,000.00	11,571.93	-589.77	Begin Turn to BHL @ 16816.43ft	
17,127.86	7,000.00	11,882.49	-610.87	End Turn @ 17127.86ft	
17,272.50	7,000.00	12,027.12	-612.81	BPZ @ 17272.50ft	
17,362.50	7,000.00	12,117.11	-614.03	TD Well @ 17362.50ft	