

Crestone Peak Resources

DJ BASIN

S25-T1N-R66W (LOCHBUIE LAND)

LOCHBUIE LAND 2J-25H-D166

OH

PLAN #1

Anticollision Summary Report

25 May, 2018

Cathedral Energy Services

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well LOCHBUIE LAND 2J-25H-D166 - Slot LOCHBUIE LAND 2J-25H-D166 SHL
Project:	DJ BASIN	TVD Reference:	KB @ 5099.00usft
Reference Site:	S25-T1N-R66W (LOCHBUIE LAND)	MD Reference:	KB @ 5099.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LOCHBUIE LAND 2J-25H-D166	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Reference	PLAN #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,933.21 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	5/25/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	2,000.00	PLAN #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro
2,001.00	12,138.40	PLAN #1 (OH)	MWD+HDGM	OWSG MWD + HDGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S25-T1N-R66W (LOCHBUIE LAND)						
AZUL 13-11HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-12HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-19HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-1HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-20HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-21HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-22HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-23HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-24HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-25HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-26HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-27HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-28HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-29HZ - KMG WELL - SURVEYS						Out of range
AZUL 13-2HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-3HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-4HZ - KMG WELL - PLAN ONLY						Out of range
AZUL 13-9HZ - KMG WELL - PLAN ONLY						Out of range
BEIERLE 2 - KMG WELL - SURVEYS	2,363.36	2,183.96	1,257.48	1,250.17	172.094	CC
BEIERLE 2 - KMG WELL - SURVEYS	2,400.00	2,214.39	1,257.57	1,250.16	169.797	ES
BEIERLE 2 - KMG WELL - SURVEYS	7,800.00	7,656.16	1,871.77	1,831.19	46.128	SF
CRONIN 2 - RITTER OIL - NO SURVEYS	200.00	210.00	1,677.23	1,676.41	2,045.738	CC, ES
CRONIN 2 - RITTER OIL - NO SURVEYS	1,400.00	795.00	1,906.74	1,901.69	377.743	SF
JOHNSON 1N-65W-30-1S - VERDAD RESOURCES LL						Out of range
JOHNSON 1N-65W-30-2S - VERDAD RESOURCES LL						Out of range
LOCHBUIE LAND 2A-25H-D166 - OH - PLAN #1	200.00	202.00	90.00	89.50	181.236	CC, ES
LOCHBUIE LAND 2A-25H-D166 - OH - PLAN #1	12,138.40	11,956.70	1,869.56	1,569.71	6.235	SF
LOCHBUIE LAND 2B-25H-D166 - OH - PLAN #1	200.00	202.00	80.00	79.50	161.099	CC, ES
LOCHBUIE LAND 2B-25H-D166 - OH - PLAN #1	12,138.40	12,106.36	1,659.64	1,358.61	5.513	SF
LOCHBUIE LAND 2C-25H-D166 - OH - PLAN #1	0.00	1.96	70.00			
LOCHBUIE LAND 2C-25H-D166 - OH - PLAN #1	12,138.40	11,856.78	1,576.63	1,279.09	5.299	SF
LOCHBUIE LAND 2D-25H-D166 - OH - PLAN #1	200.00	201.00	60.00	59.51	121.259	CC, ES
LOCHBUIE LAND 2D-25H-D166 - OH - PLAN #1	12,138.40	11,904.31	1,174.48	876.82	3.946	SF
LOCHBUIE LAND 2E-25H-D166 - OH - PLAN #1	200.00	201.00	50.00	49.51	101.049	CC, ES
LOCHBUIE LAND 2E-25H-D166 - OH - PLAN #1	12,138.40	11,831.26	929.88	639.17	3.199	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

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Reference Site:	S25-T1N-R66W (LOCHBUIE LAND)	MD Reference:	KB @ 5099.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LOCHBUIE LAND 2J-25H-D166	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S25-T1N-R66W (LOCHBUIE LAND)						
LOCHBUIE LAND 2F-25H-D166 - OH - PLAN #1	200.00	201.00	40.00	39.51	80.839	CC, ES
LOCHBUIE LAND 2F-25H-D166 - OH - PLAN #1	12,138.40	12,077.37	829.82	528.86	2.757	SF
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	205.94	207.00	30.00	29.48	58.187	CC
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	300.00	301.86	30.22	29.37	35.681	ES
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	12,138.40	11,748.90	647.16	388.34	2.500	SF
LOCHBUIE LAND 2H-25H-D166 - OH - PLAN #1	207.40	208.45	20.00	19.48	38.412	CC
LOCHBUIE LAND 2H-25H-D166 - OH - PLAN #1	300.00	301.59	20.17	19.33	23.832	ES
LOCHBUIE LAND 2H-25H-D166 - OH - PLAN #1	12,138.40	11,916.23	530.95	245.93	1.863	SF
LOCHBUIE LAND 2I-25H-D166 - OH - PLAN #1	200.00	200.00	10.00	9.51	20.283	CC
LOCHBUIE LAND 2I-25H-D166 - OH - PLAN #1	500.00	500.96	10.52	8.97	6.752	ES
LOCHBUIE LAND 2I-25H-D166 - OH - PLAN #1	12,138.40	11,869.02	339.33	122.72	1.567	SF
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	200.00	200.00	10.00	9.51	20.283	CC
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	600.00	598.65	10.35	8.43	5.389	ES
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	12,138.40	11,982.53	233.62	19.90	1.093	Level 2, SF
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	200.00	200.00	20.00	19.51	40.565	CC
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	600.00	597.28	20.64	18.72	10.757	ES
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	12,138.40	11,959.65	486.32	220.66	1.831	SF
SAM 13-25 - CPR WELL - SURVEYS	7,831.87	7,663.51	1,361.42	1,313.13	28.193	CC
SAM 13-25 - CPR WELL - SURVEYS	7,900.00	7,687.96	1,362.80	1,313.01	27.370	ES
SAM 13-25 - CPR WELL - SURVEYS	8,500.00	7,698.10	1,506.83	1,442.96	23.591	SF
TEMPLIN 1 - VESSELS THOMAS G - SURVEYS	11,562.24	7,484.96	960.07	812.12	6.489	CC
TEMPLIN 1 - VESSELS THOMAS G - SURVEYS	11,600.00	7,484.81	960.81	811.91	6.453	ES
TEMPLIN 1 - VESSELS THOMAS G - SURVEYS	11,700.00	7,484.43	969.90	819.44	6.446	SF
S25-T1N-R66W (SAM)						
SAM 3A-25H-M166 - OH - PLAN #2	12,138.40	11,997.05	839.34	544.64	2.848	CC, ES, SF
SAM 3A-25H-M166 - OH - SURVEYS						Out of range
SAM 3B-25H-M166 - OH - PLAN #2	12,135.06	12,150.08	955.86	655.08	3.178	CC
SAM 3B-25H-M166 - OH - PLAN #2	12,138.40	12,147.94	955.87	655.06	3.178	ES, SF
SAM 3B-25H-M166 - OH - SURVEYS						Out of range
SAM 3C-25H-M166 - OH - PLAN #2	12,138.40	11,900.54	1,092.63	798.85	3.719	CC, ES, SF
SAM 3C-25H-M166 - OH - SURVEYS						Out of range
SAM 3D-25H-M166 - OH - PLAN #2	12,134.70	11,942.33	1,296.98	998.06	4.339	CC, ES, SF
SAM 3E-25H-M166 - OH - PLAN #2	12,133.99	11,848.74	1,599.00	1,300.87	5.363	CC, ES
SAM 3E-25H-M166 - OH - PLAN #2	12,138.40	11,844.31	1,599.02	1,300.89	5.363	SF
SAM 3F-25H-M166 - OH - PLAN #2	12,138.40	11,917.16	1,739.18	1,439.68	5.807	CC, ES, SF
SAM 3F-25H-M166 - OH - SURVEYS						Out of range
SAM 3G-25H-M166 - OH - PLAN #1						Out of range
SAM 3H-25H-M166 - OH - PLAN #2						Out of range
SAM 3I-25H-M166 - OH - PLAN #3						Out of range
SAM 3J-25H-M166 - OH - PLAN #2						Out of range
SAM 3K-25H-M166 - OH - PLAN #2						Out of range
SAM 3L-25H-M166 - OH - PLAN #2						Out of range

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

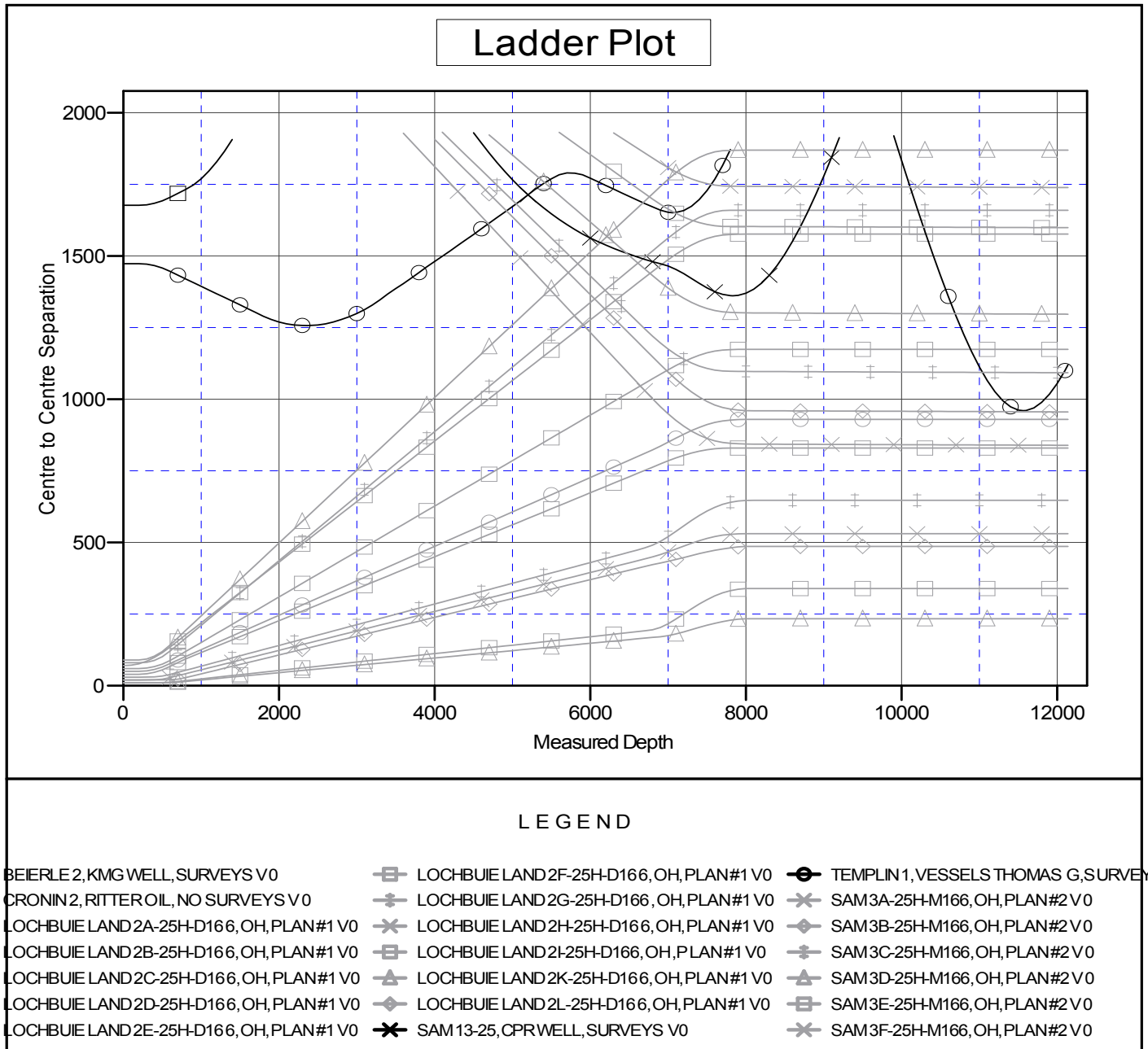
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Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 5099.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: LOCHBUIE LAND 2J-25H-D166 - Slot LOCHBUIE LA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.50°



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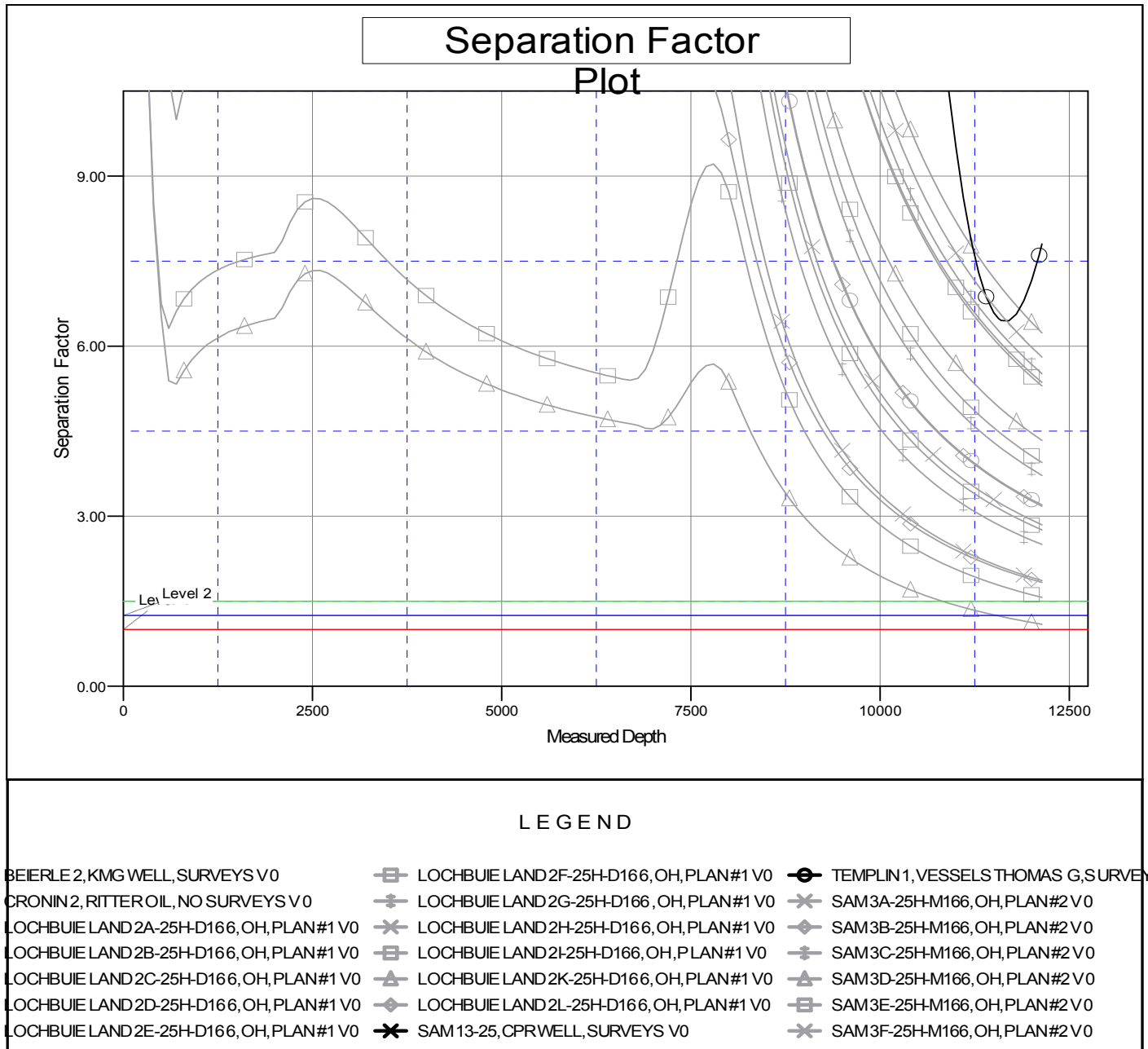
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Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 5099.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: LOCHBUIE LAND 2J-25H-D166 - Slot LOCHBUIE LA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.50°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation