

Crestone Peak Resources

DJ BASIN

S25-T1N-R66W (LOCHBUIE LAND)

LOCHBUIE LAND 2I-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 2I-25H-D166 - Slot LOCHBUIE LAND 2I-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 2I-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	11,869.94	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
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	2,191.94	2,045.78	1,312.58	1,305.73	191.487	CC
BEIERLE 2 - KMG WELL - SURVEYS	2,200.00	2,052.02	1,312.59	1,305.72	191.045	ES
BEIERLE 2 - KMG WELL - SURVEYS	7,200.00	7,213.08	1,915.19	1,880.45	55.130	SF
CRONIN 2 - RITTER OIL - NO SURVEYS	200.00	210.00	1,667.43	1,666.61	2,033.795	CC, ES
CRONIN 2 - RITTER OIL - NO SURVEYS	1,500.00	795.00	1,919.07	1,913.87	369.148	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	80.00	79.50	161.099	CC, ES
LOCHBUIE LAND 2A-25H-D166 - OH - PLAN #1	11,869.94	11,957.62	1,624.99	1,324.39	5.406	SF
LOCHBUIE LAND 2B-25H-D166 - OH - PLAN #1	200.00	202.00	70.00	69.50	140.961	CC, ES
LOCHBUIE LAND 2B-25H-D166 - OH - PLAN #1	11,869.94	12,107.28	1,441.88	1,144.99	4.857	SF
LOCHBUIE LAND 2C-25H-D166 - OH - PLAN #1	0.00	1.96	60.00			
LOCHBUIE LAND 2C-25H-D166 - OH - PLAN #1	11,869.94	11,857.70	1,319.77	1,018.96	4.387	SF
LOCHBUIE LAND 2D-25H-D166 - OH - PLAN #1	200.00	201.00	50.00	49.51	101.049	CC, ES
LOCHBUIE LAND 2D-25H-D166 - OH - PLAN #1	11,869.94	11,905.23	926.37	626.43	3.089	SF
LOCHBUIE LAND 2E-25H-D166 - OH - PLAN #1	200.00	201.00	40.00	39.51	80.839	CC, ES
LOCHBUIE LAND 2E-25H-D166 - OH - PLAN #1	11,869.94	11,832.18	659.70	359.08	2.194	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 2I-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	30.00	29.51	60.629	CC, ES
LOCHBUIE LAND 2F-25H-D166 - OH - PLAN #1	11,869.94	12,078.28	639.12	358.66	2.279	SF
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	207.47	208.52	20.00	19.48	38.394	CC
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	300.00	301.57	20.17	19.32	23.825	ES
LOCHBUIE LAND 2G-25H-D166 - OH - PLAN #1	11,869.94	11,749.82	328.35	40.31	1.140	Level 2, SF
LOCHBUIE LAND 2H-25H-D166 - OH - PLAN #1	209.82	210.86	10.00	9.47	18.897	CC
LOCHBUIE LAND 2H-25H-D166 - OH - PLAN #1	11,869.94	11,917.15	272.96	-19.03	0.935	Level 1, ES, SF
LOCHBUIE LAND 2J-25H-D166 - OH - PLAN #1	200.00	200.00	10.00	9.51	20.283	CC
LOCHBUIE LAND 2J-25H-D166 - OH - PLAN #1	500.00	499.00	10.52	8.96	6.757	ES
LOCHBUIE LAND 2J-25H-D166 - OH - PLAN #1	11,869.94	12,139.32	339.33	122.68	1.566	SF
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	200.00	200.00	20.00	19.51	40.565	CC
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	400.00	398.66	20.28	19.08	16.937	ES
LOCHBUIE LAND 2K-25H-D166 - OH - PLAN #1	11,869.94	11,983.45	402.11	106.06	1.358	Level 3, SF
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	200.00	200.00	30.00	29.51	60.848	CC
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	400.00	397.97	30.34	29.14	25.354	ES
LOCHBUIE LAND 2L-25H-D166 - OH - PLAN #1	11,869.94	11,960.57	659.70	358.86	2.193	SF
SAM 13-25 - CPR WELL - SURVEYS	7,542.90	7,369.23	1,579.52	1,533.00	33.949	CC
SAM 13-25 - CPR WELL - SURVEYS	7,600.00	7,383.44	1,580.30	1,532.61	33.136	ES
SAM 13-25 - CPR WELL - SURVEYS	8,400.00	7,409.07	1,778.04	1,711.67	26.786	SF
TEMPLIN 1 - VESSELS THOMAS G - SURVEYS	11,293.77	7,246.88	715.19	567.91	4.856	CC
TEMPLIN 1 - VESSELS THOMAS G - SURVEYS	11,300.00	7,246.86	715.21	567.77	4.851	ES, SF
S25-T1N-R66W (SAM)						
SAM 3A-25H-M166 - OH - PLAN #2	11,869.94	11,998.21	1,061.70	761.61	3.538	CC, ES, SF
SAM 3A-25H-M166 - OH - SURVEYS						Out of range
SAM 3B-25H-M166 - OH - PLAN #2	11,864.91	12,149.55	1,217.61	922.39	4.124	CC
SAM 3B-25H-M166 - OH - PLAN #2	11,869.94	12,147.94	1,217.63	922.31	4.123	ES, SF
SAM 3B-25H-M166 - OH - SURVEYS						Out of range
SAM 3C-25H-M166 - OH - PLAN #2	11,869.94	11,901.72	1,303.37	1,002.69	4.335	CC, ES, SF
SAM 3C-25H-M166 - OH - SURVEYS						Out of range
SAM 3D-25H-M166 - OH - PLAN #2	11,864.76	11,942.02	1,525.00	1,224.01	5.067	CC
SAM 3D-25H-M166 - OH - PLAN #2	11,869.94	11,938.59	1,525.02	1,223.98	5.066	ES, SF
SAM 3E-25H-M166 - OH - PLAN #2	11,864.04	11,848.41	1,818.46	1,517.33	6.039	CC
SAM 3E-25H-M166 - OH - PLAN #2	11,869.94	11,844.31	1,818.48	1,517.30	6.038	ES, SF
SAM 3F-25H-M166 - OH - PLAN #2						Out of range
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

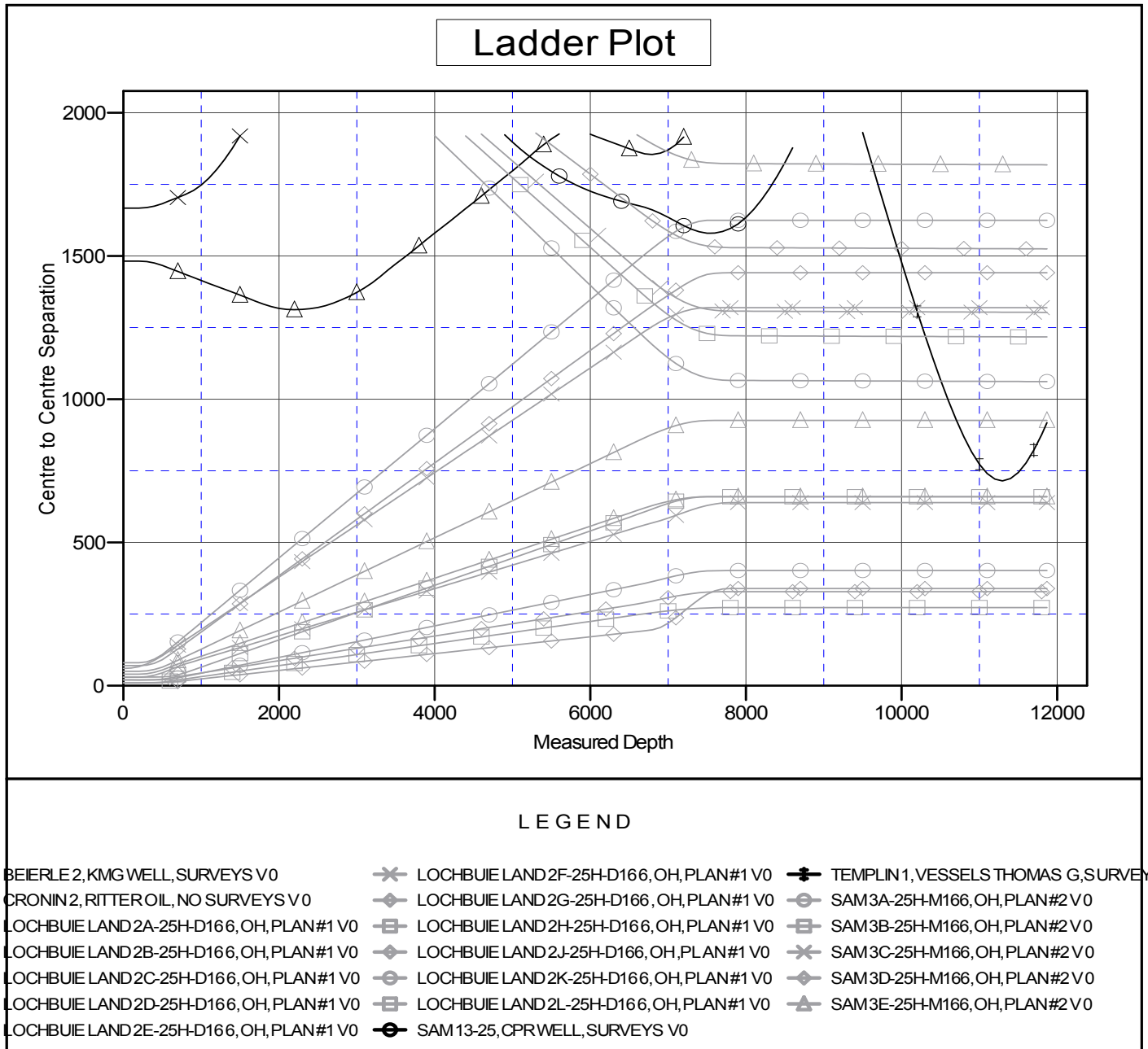
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Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	PLAN #1	Offset TVD Reference:	Offset Datum

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 2I-25H-D166 - Slot LOCHBUIE LAN
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

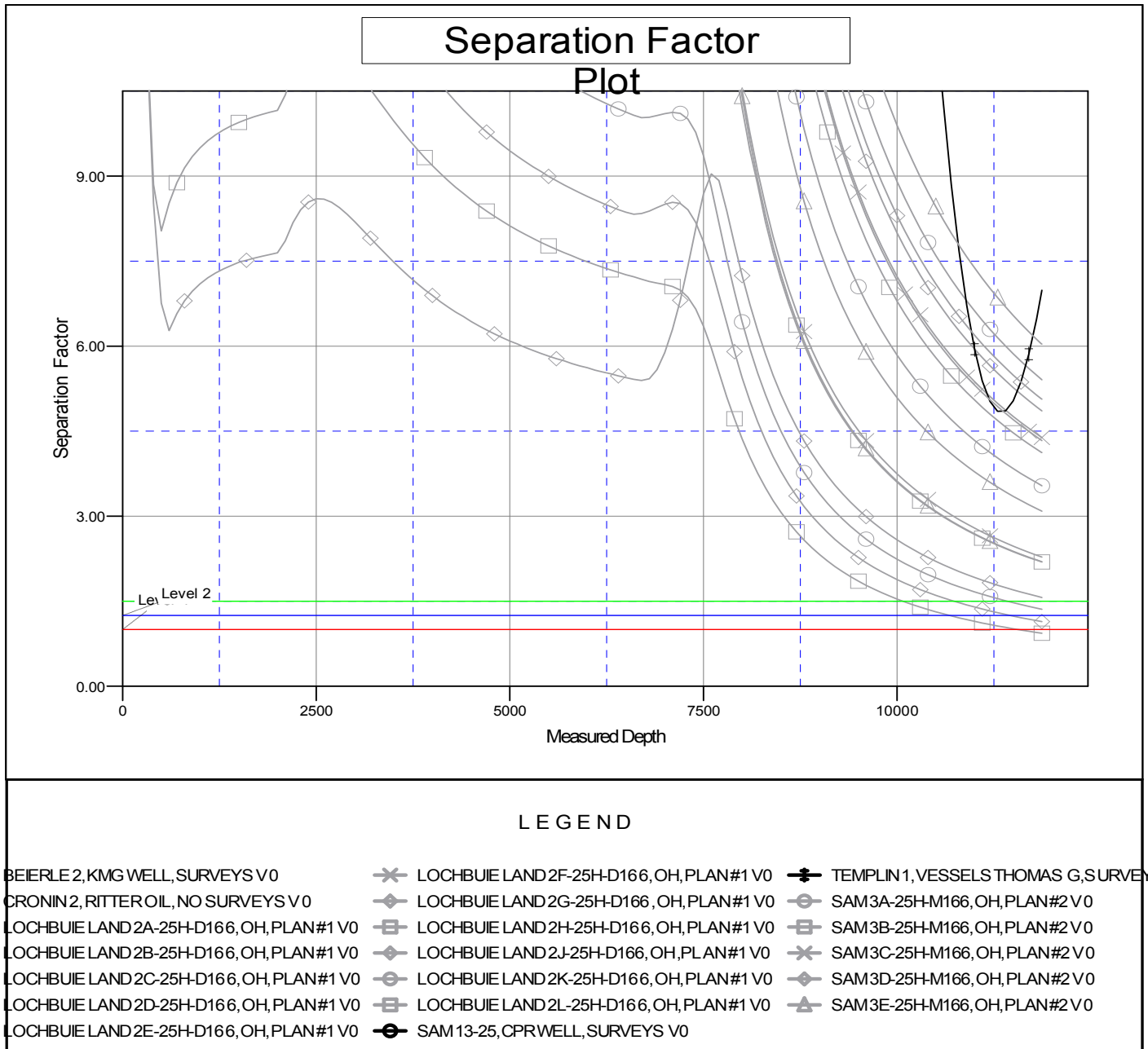
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Reference Depths are relative to KB @ 5099.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: LOCHBUIE LAND 2I-25H-D166 - Slot LOCHBUIE LAN
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