

CONCHO

COG Operating LLC

Lea County, NM (NAD-27 2015)

Flat Head Federal Com #26H

SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B

PP: 985' FNL, 1819' FEL, Sec 14, T17S, R32E, Unit B

BHL: 220' FNL, 1650' FEL, Sec 11, T17S, R32E, Unit B

Design #2

HOBBS OCD

JUL 24 2017

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Anticollision Report

23 February, 2017



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B
Project:	Lea County, NM (NAD-27 2015)	TVD Reference:	KB @ 4107.00usft (Silver Oak 3)
Reference Site:	Flat Head Federal Com #26H	MD Reference:	KB @ 4107.00usft (Silver Oak 3)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	BHL: 220' FNL, 1650' FEL, Sec 11, T17S, R32E, Unit B	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Reference	Design #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum separation factor of 5.00	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program **Date** 2/23/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,489.70	Design #2 (BHL: 220' FNL, 1650' FEL, Sec	MWD	MWD - Standard

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						
Lea County Offset Wells						
Flat Head Fed Com #6H - OH - OH						Out of range

Company: COG Operating LLC

Project: Lea County, NM (NAD-27 2015)

Reference Site: Flat Head Federal Com #26H

Site Error: 0.00 usft

Reference Well: SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B

Well Error: 0.00 usft

Reference Wellbore: BHL: 220' FNL, 1650' FEL, Sec 11, T17S, R32E, Unit B

Reference Design: Design #2

Local Co-ordinate Reference: Well SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B

TVD Reference: KB @ 4107.00usft (Silver Oak 3)

MD Reference: KB @ 4107.00usft (Silver Oak 3)

North Reference: Grid

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 5000.1 Single User Db

Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 4107.00usft (Silver Oak 3)

Offset Depths are relative to Offset Datum

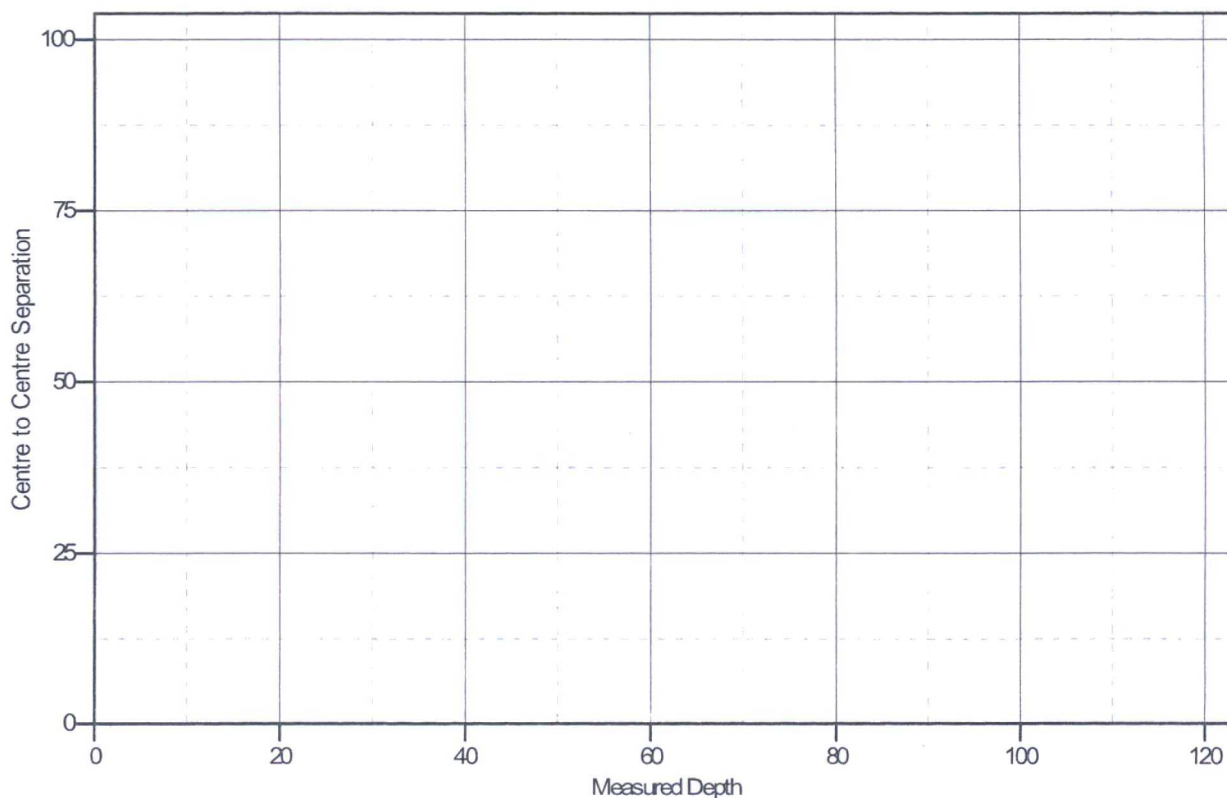
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Un

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.33°

Ladder Plot



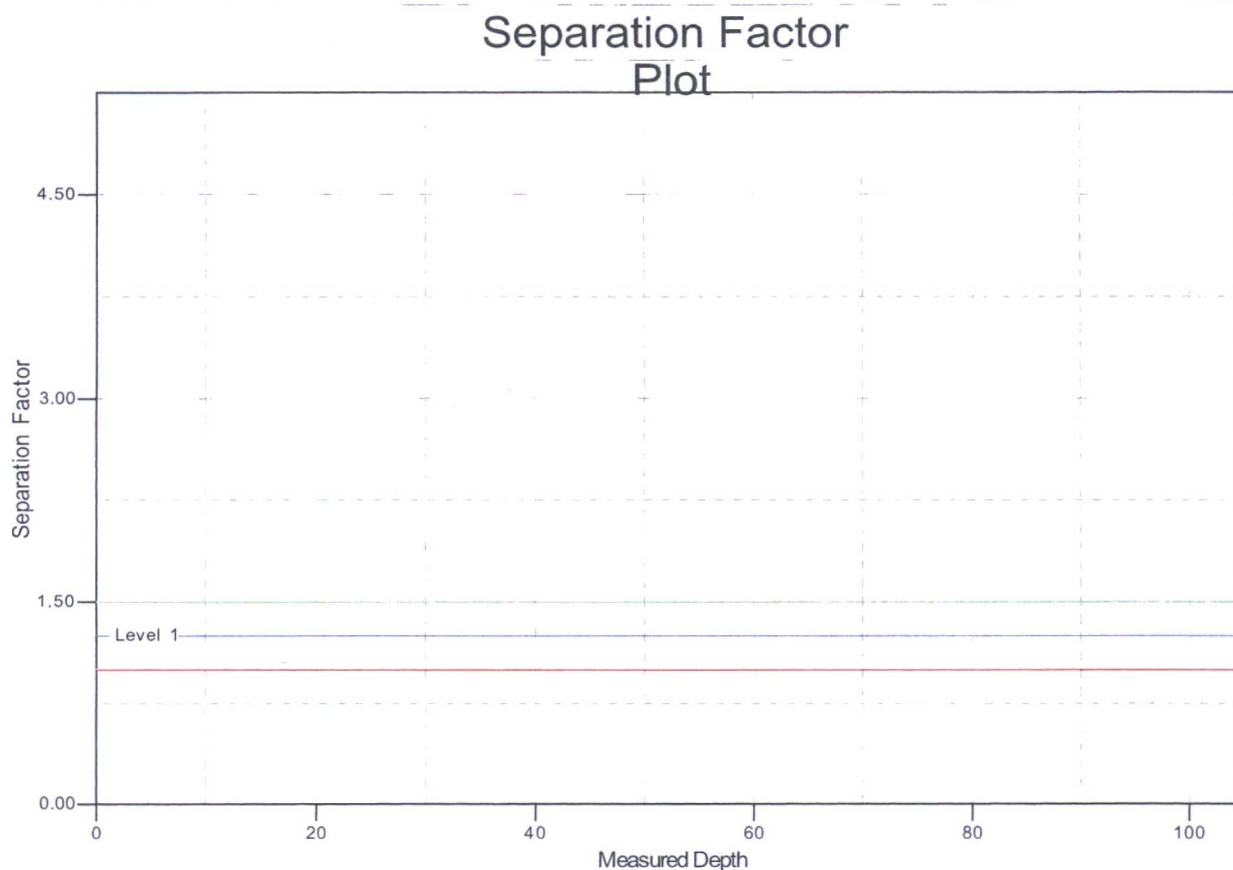
LEGEND

Company: COG Operating LLC
Project: Lea County, NM (NAD-27 2015)
Reference Site: Flat Head Federal Com #26H
Site Error: 0.00 usft
Reference Well: SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B
Well Error: 0.00 usft
Reference Wellbore: BHL: 220' FNL, 1650' FEL, Sec 11, T17S, R32E, Unit B
Reference Design: Design #2

Local Co-ordinate Reference: Well SHL: 1123' FNL, 1823' FEL, Sec 14, T17S, R32E, Unit B
TVD Reference: KB @ 4107.00usft (Silver Oak 3)
MD Reference: KB @ 4107.00usft (Silver Oak 3)
North Reference: Grid
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Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 4107.00usft (Silver Oak 3)
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LEGEND