

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 312591

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241		2. OGRID Number 14744
		3. API Number 30-025-49935
4. Property Code 332717	5. Property Name HEREFORD 29 20 W1PA STATE COM	6. Well No. 001H

7. Surface Location

UL - Lot M	Section 28	Township 19S	Range 35E	Lot Idn M	Feet From 205	N/S Line S	Feet From 840	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot A	Section 20	Township 19S	Range 35E	Lot Idn A	Feet From 100	N/S Line N	Feet From 330	E/W Line E	County Lea
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9. Pool Information

SCHARB;WOLFCAMP, SOUTHEAST	55650
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3729
16. Multiple N	17. Proposed Depth 21424	18. Formation Wolfcamp	19. Contractor	20. Spud Date 1/10/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1850	1290	0
Int1	12.25	9.625	40	3500	795	0
Prod	8.75	7.625	39	10610	830	3300
Liner1	6.125	4.5	13.5	21424	440	10410

Casing/Cement Program: Additional Comments

MOC proposed to drill & test the Wolfcamp formation. H2S rule 118 does not apply because MOC has researched the area & no high concentrations were found. Will have on location & working all H2S safety equipment before Yates formation for safety & insurance purposes. Will stimulate as needed for production.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	2500	Schaffer
Double Ram	5000	5000	Schaffer
Annular	5000	2500	Schaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

OIL CONSERVATION DIVISION

Printed Name:	Electronically filed by Monty Whetstone	Approved By:	Paul F Kautz		
Title:	Vice President Operations	Title:	Geologist		
Email Address:	prodmgr@mewbourne.com	Approved Date:	3/28/2022	Expiration Date:	3/28/2024
Date:	3/22/2022	Phone:	903-561-2900	Conditions of Approval Attached	

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

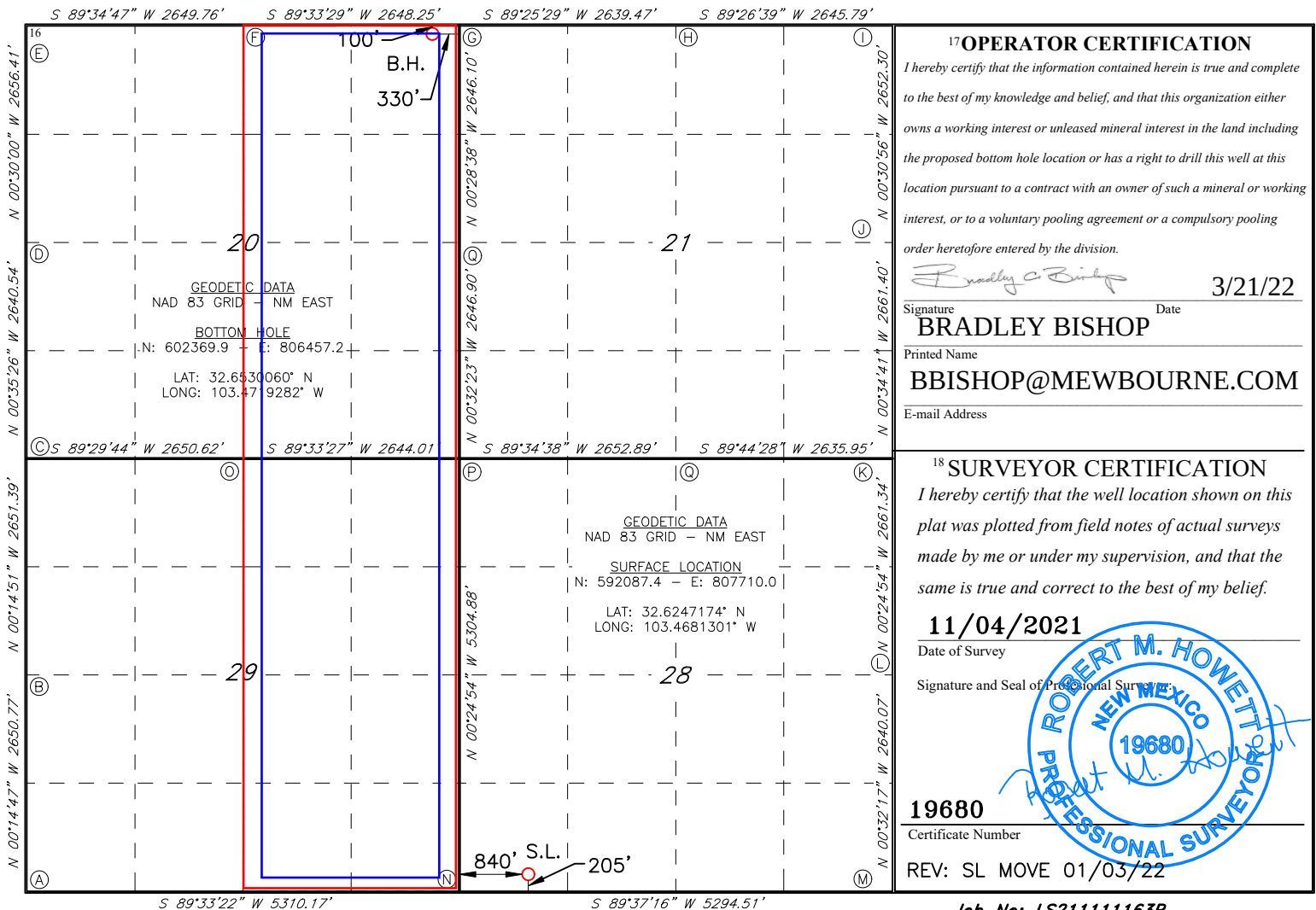
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-49935		² Pool Code 55650		³ Pool Name SCHARB; WOLFCAMP SOUTHEAST					
⁴ Property Code 332717		⁵ Property Name HEREFORD 29/20 W1PA STATE COM						⁶ Well Number 1H	
⁷ OGRID NO. 14744		⁸ Operator Name MEWBOURNE OIL COMPANY						⁹ Elevation 3729'	
¹⁰ Surface Location									
UL or lot no. M	Section 28	Township 19S	Range 35E	Lot Idn	Feet from the 205	North/South line SOUTH	Feet From the 840	East/West line WEST	County LEA
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 20	Township 19S	Range 35E	Lot Idn	Feet from the 100	North/South line NORTH	Feet from the 330	East/West line EAST	County LEA
¹² Dedicated Acres 640		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



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GAS CAPTURE PLAN

Date: 3/28/2022

☒ Original

Operator & OGRID No.: [14744] MEWBOURNE OIL CO

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
HEREFORD 29 20 W1PA STATE COM #001H	30-025-49935	M-28-19S-35E	0205S 0840W	10	None	ONLINE AFTER FRAC

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to LUCID ENERGY DELAWARE, LLC and will be connected to LUCID ENERGY DELAWARE, LLC High Pressure gathering system located in Eddy County, New Mexico. It will require 3400' of pipeline to connect the facility to High Pressure gathering system. MEWBOURNE OIL CO provides (periodically) to LUCID ENERGY DELAWARE, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, MEWBOURNE OIL CO and LUCID ENERGY DELAWARE, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LUCID ENERGY DELAWARE, LLC Processing Plant located in Sec. 25, Twn. 18S, Rng. 25E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on LUCID ENERGY DELAWARE, LLC system at that time. Based on current information, it is MEWBOURNE OIL CO's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Conditions

Permit 312591

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MEWBOURNE OIL CO [14744] P.O. Box 5270 Hobbs, NM 88241	API Number: 30-025-49935
	Well: HEREFORD 29 20 W1PA STATE COM #001H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing -- 3) Liner - Cement must tie back into production casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Mewbourne Oil Co. **OGRID:** 14744 **Date:** 3/2/22

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Hereford 29/20 W1PA State Com #1H		M 28 19S 35E	205' FSL x 870' FWL	1500	3000	3000

IV. Central Delivery Point Name: Hereford 29/20 W1PA State Com #1H [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Hereford 29/20 W1PA State Com #1H		5/2/22	6/2/22	7/2/22	7/17/22	7/17/22

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☐ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

Page 8

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	<i>Bradley Bishop</i>
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	3/2/22
Phone:	575-393-5905
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Mewbourne Oil Company

Natural Gas Management Plan – Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8 :
- A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
 - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
 - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
 - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
 - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
 - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

- VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.



Mewbourne Oil Company

Lea Co., NM (NAD 83)
Charolais Hereford Pad
Hereford 29-20 W1PA State Com 1H

OH

Plan: Plan #1

Standard Planning Report

01 March, 2022





Project: Lea Co., NM (NAD 83)
 Site: Charolais Hereford Pad
 Well: Hereford 29-20 W1PA State Com 1H
 Wellbore: OH
 Design: Plan #1
 Lat: 32.624717
 Long: -103.468130
 GL: 3729.00
 KB: KB=28' @ 3757.00usft (Patterson 575)



WELL DETAILS: Hereford 29-20 W1PA State Com 1H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	592087.40	807710.00	32.624717	-103.468130

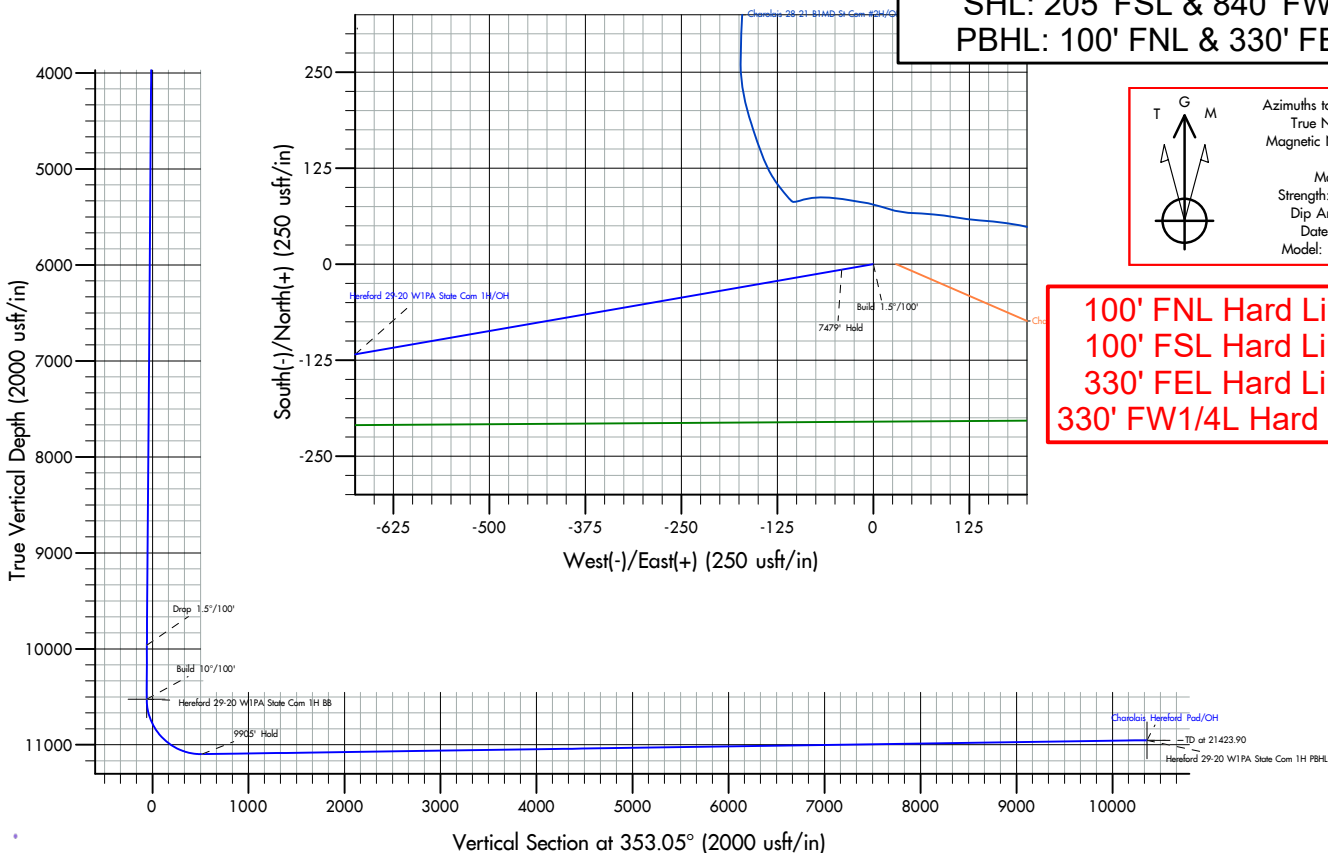
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Hereford 29-20 W1PA State Com 1H BB	10524.10	-203.05	-1168.36	591884.35	806541.64	Point
Hereford 29-20 W1PA State Com 1H PBHL	10952.00	10282.50	-1252.80	602369.90	806457.20	Point

SECTION DETAILS

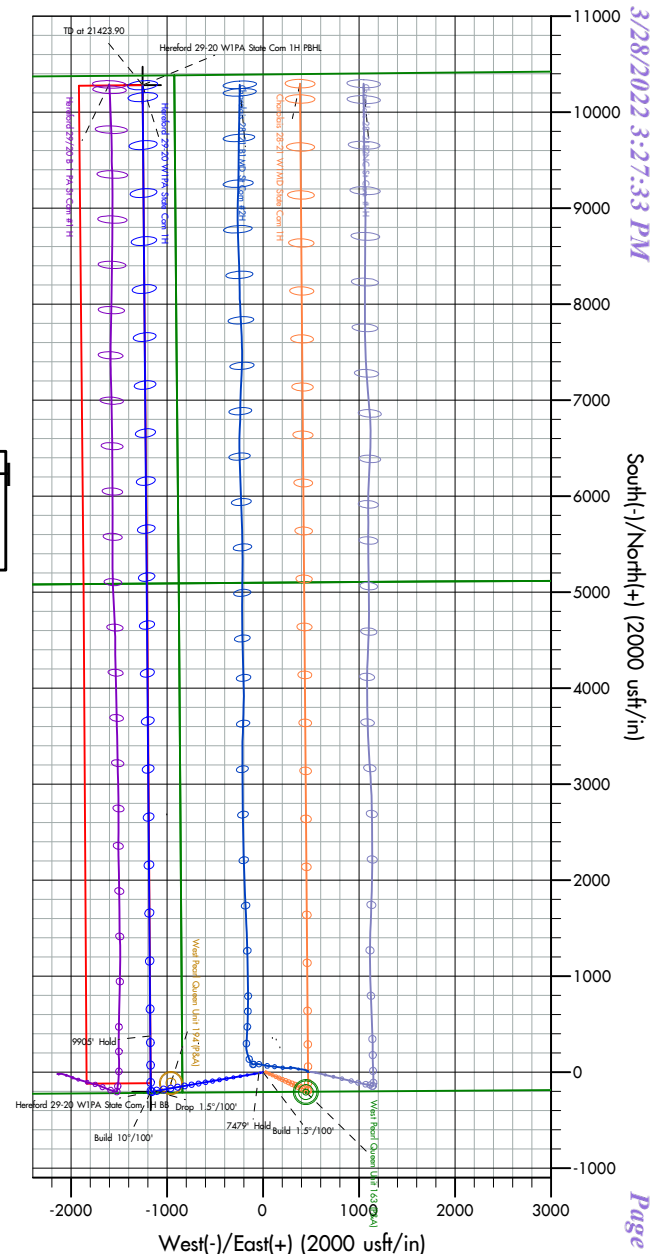
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Build 1.5°/100'
2565.04	8.48	260.14	2562.98	-7.14	-41.10	1.50	260.14	-2.12	7479' Hold
10044.87	8.48	260.14	9961.12	-195.91	-1127.26	0.00	0.00	-58.13	Drop 1.5°/100'
10609.91	0.00	0.00	10524.10	-203.05	-1168.36	1.50	180.00	-60.25	Build 10°/100'
11518.29	90.84	359.54	11097.00	378.28	-1173.04	10.00	359.54	517.37	9905' Hold
21423.90	90.84	359.54	10952.00	10282.50	-1252.80	0.00	0.00	10358.54	TD at 21423.90

Hereford 29-20 W1PA State Com 1H
 SHL: 205' FSL & 840' FWL
 PBHL: 100' FNL & 330' FEL



Azimuths to Grid North
 True North: -0.47°
 Magnetic North: 5.85°
 Magnetic Field
 Strength: 47793.3nT
 Dip Angle: 60.48°
 Date: 3/1/2022
 Model: HDGM2022

100' FNL Hard Line
 100' FSL Hard Line
 330' FEL Hard Line
 330' FW1/4L Hard Line



Plan: Plan #1 (Hereford 29-20 W1PA State Com 1H/OH)

Created By: Dusty Mayer

Date: 16:15, March 01, 2022



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea Co., NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Charolais Hereford Pad		
Site Position:		Northing:	592,087.60 usft
From:	Map	Easting:	807,740.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.624717
		Longitude:	-103.468033

Well	Hereford 29-20 W1PA State Com 1H		
Well Position	+N/-S	0.00 usft	Northing: 592,087.40 usft
	+E/-W	0.00 usft	Easting: 807,710.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
Grid Convergence:	0.47 °	Ground Level:	3,729.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	3/1/2022	6.32	60.48	47,793.30000000

Design	Plan #1			
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	353.05

Plan Survey Tool Program	Date	3/1/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	21,423.90 Plan #1 (OH)	MWD + HDGM	
			MWD + HDGM - Standard	

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,565.04	8.48	260.14	2,562.98	-7.14	-41.10	1.50	1.50	0.00	260.14	
10,044.87	8.48	260.14	9,961.12	-195.91	-1,127.26	0.00	0.00	0.00	0.00	
10,609.91	0.00	0.00	10,524.10	-203.05	-1,168.36	1.50	-1.50	0.00	180.00	Hereford 29-20 W1
11,518.29	90.84	359.54	11,097.00	378.28	-1,173.04	10.00	10.00	-0.05	359.54	
21,423.90	90.84	359.54	10,952.00	10,282.50	-1,252.80	0.00	0.00	0.00	0.00	Hereford 29-20 W1



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,780.00	0.00	0.00	1,780.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.5°/100'									
2,080.01	1.20	260.14	2,080.00	-0.14	-0.83	-0.04	1.50	1.50	0.00
Salt Top									
2,100.00	1.50	260.14	2,099.99	-0.22	-1.29	-0.07	1.50	1.50	0.00
2,200.00	3.00	260.14	2,199.91	-0.90	-5.16	-0.27	1.50	1.50	0.00
2,300.00	4.50	260.14	2,299.69	-2.02	-11.60	-0.60	1.50	1.50	0.00
2,400.00	6.00	260.14	2,399.27	-3.58	-20.62	-1.06	1.50	1.50	0.00
2,500.00	7.50	260.14	2,498.57	-5.60	-32.20	-1.66	1.50	1.50	0.00
2,565.04	8.48	260.14	2,562.98	-7.14	-41.10	-2.12	1.50	1.50	0.00
7479' Hold									
2,600.00	8.48	260.14	2,597.56	-8.03	-46.18	-2.38	0.00	0.00	0.00
2,700.00	8.48	260.14	2,696.47	-10.55	-60.70	-3.13	0.00	0.00	0.00
2,800.00	8.48	260.14	2,795.38	-13.07	-75.22	-3.88	0.00	0.00	0.00
2,900.00	8.48	260.14	2,894.28	-15.60	-89.74	-4.63	0.00	0.00	0.00
3,000.00	8.48	260.14	2,993.19	-18.12	-104.26	-5.38	0.00	0.00	0.00
3,100.00	8.48	260.14	3,092.10	-20.64	-118.78	-6.13	0.00	0.00	0.00
3,200.00	8.48	260.14	3,191.01	-23.17	-133.30	-6.87	0.00	0.00	0.00
3,269.75	8.48	260.14	3,260.00	-24.93	-143.43	-7.40	0.00	0.00	0.00
Salt Base									
3,300.00	8.48	260.14	3,289.91	-25.69	-147.83	-7.62	0.00	0.00	0.00
3,400.00	8.48	260.14	3,388.82	-28.21	-162.35	-8.37	0.00	0.00	0.00
3,471.96	8.48	260.14	3,460.00	-30.03	-172.80	-8.91	0.00	0.00	0.00
Yates									
3,500.00	8.48	260.14	3,487.73	-30.74	-176.87	-9.12	0.00	0.00	0.00
3,600.00	8.48	260.14	3,586.64	-33.26	-191.39	-9.87	0.00	0.00	0.00
3,700.00	8.48	260.14	3,685.55	-35.79	-205.91	-10.62	0.00	0.00	0.00
3,800.00	8.48	260.14	3,784.45	-38.31	-220.43	-11.37	0.00	0.00	0.00
3,900.00	8.48	260.14	3,883.36	-40.83	-234.95	-12.12	0.00	0.00	0.00
3,977.48	8.48	260.14	3,960.00	-42.79	-246.20	-12.70	0.00	0.00	0.00
Seven Rivers									



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
4,000.00	8.48	260.14	3,982.27	-43.36	-249.47	-12.87	0.00	0.00	0.00
4,100.00	8.48	260.14	4,081.18	-45.88	-263.99	-13.61	0.00	0.00	0.00
4,200.00	8.48	260.14	4,180.09	-48.40	-278.52	-14.36	0.00	0.00	0.00
4,300.00	8.48	260.14	4,278.99	-50.93	-293.04	-15.11	0.00	0.00	0.00
4,400.00	8.48	260.14	4,377.90	-53.45	-307.56	-15.86	0.00	0.00	0.00
4,500.00	8.48	260.14	4,476.81	-55.97	-322.08	-16.61	0.00	0.00	0.00
4,600.00	8.48	260.14	4,575.72	-58.50	-336.60	-17.36	0.00	0.00	0.00
4,664.99	8.48	260.14	4,640.00	-60.14	-346.04	-17.85	0.00	0.00	0.00
Queen									
4,700.00	8.48	260.14	4,674.63	-61.02	-351.12	-18.11	0.00	0.00	0.00
4,800.00	8.48	260.14	4,773.53	-63.55	-365.64	-18.86	0.00	0.00	0.00
4,900.00	8.48	260.14	4,872.44	-66.07	-380.16	-19.61	0.00	0.00	0.00
5,000.00	8.48	260.14	4,971.35	-68.59	-394.69	-20.35	0.00	0.00	0.00
5,100.00	8.48	260.14	5,070.26	-71.12	-409.21	-21.10	0.00	0.00	0.00
5,200.00	8.48	260.14	5,169.16	-73.64	-423.73	-21.85	0.00	0.00	0.00
5,300.00	8.48	260.14	5,268.07	-76.16	-438.25	-22.60	0.00	0.00	0.00
5,400.00	8.48	260.14	5,366.98	-78.69	-452.77	-23.35	0.00	0.00	0.00
5,500.00	8.48	260.14	5,465.89	-81.21	-467.29	-24.10	0.00	0.00	0.00
5,600.00	8.48	260.14	5,564.80	-83.73	-481.81	-24.85	0.00	0.00	0.00
5,700.00	8.48	260.14	5,663.70	-86.26	-496.33	-25.60	0.00	0.00	0.00
5,800.00	8.48	260.14	5,762.61	-88.78	-510.85	-26.35	0.00	0.00	0.00
5,900.00	8.48	260.14	5,861.52	-91.31	-525.38	-27.09	0.00	0.00	0.00
5,969.24	8.48	260.14	5,930.00	-93.05	-535.43	-27.61	0.00	0.00	0.00
Delaware (Lamar)									
6,000.00	8.48	260.14	5,960.43	-93.83	-539.90	-27.84	0.00	0.00	0.00
6,100.00	8.48	260.14	6,059.34	-96.35	-554.42	-28.59	0.00	0.00	0.00
6,200.00	8.48	260.14	6,158.24	-98.88	-568.94	-29.34	0.00	0.00	0.00
6,300.00	8.48	260.14	6,257.15	-101.40	-583.46	-30.09	0.00	0.00	0.00
6,400.00	8.48	260.14	6,356.06	-103.92	-597.98	-30.84	0.00	0.00	0.00
6,500.00	8.48	260.14	6,454.97	-106.45	-612.50	-31.59	0.00	0.00	0.00
6,600.00	8.48	260.14	6,553.87	-108.97	-627.02	-32.34	0.00	0.00	0.00
6,700.00	8.48	260.14	6,652.78	-111.49	-641.55	-33.09	0.00	0.00	0.00
6,800.00	8.48	260.14	6,751.69	-114.02	-656.07	-33.83	0.00	0.00	0.00
6,900.00	8.48	260.14	6,850.60	-116.54	-670.59	-34.58	0.00	0.00	0.00
7,000.00	8.48	260.14	6,949.51	-119.07	-685.11	-35.33	0.00	0.00	0.00
7,100.00	8.48	260.14	7,048.41	-121.59	-699.63	-36.08	0.00	0.00	0.00
7,200.00	8.48	260.14	7,147.32	-124.11	-714.15	-36.83	0.00	0.00	0.00
7,300.00	8.48	260.14	7,246.23	-126.64	-728.67	-37.58	0.00	0.00	0.00
7,400.00	8.48	260.14	7,345.14	-129.16	-743.19	-38.33	0.00	0.00	0.00
7,500.00	8.48	260.14	7,444.05	-131.68	-757.71	-39.08	0.00	0.00	0.00
7,600.00	8.48	260.14	7,542.95	-134.21	-772.24	-39.83	0.00	0.00	0.00
7,700.00	8.48	260.14	7,641.86	-136.73	-786.76	-40.57	0.00	0.00	0.00
7,800.00	8.48	260.14	7,740.77	-139.25	-801.28	-41.32	0.00	0.00	0.00
7,900.00	8.48	260.14	7,839.68	-141.78	-815.80	-42.07	0.00	0.00	0.00
8,000.00	8.48	260.14	7,938.58	-144.30	-830.32	-42.82	0.00	0.00	0.00
8,031.76	8.48	260.14	7,970.00	-145.10	-834.93	-43.06	0.00	0.00	0.00
Bone Spring									
8,100.00	8.48	260.14	8,037.49	-146.83	-844.84	-43.57	0.00	0.00	0.00
8,200.00	8.48	260.14	8,136.40	-149.35	-859.36	-44.32	0.00	0.00	0.00
8,300.00	8.48	260.14	8,235.31	-151.87	-873.88	-45.07	0.00	0.00	0.00
8,400.00	8.48	260.14	8,334.22	-154.40	-888.41	-45.82	0.00	0.00	0.00
8,500.00	8.48	260.14	8,433.12	-156.92	-902.93	-46.56	0.00	0.00	0.00
8,600.00	8.48	260.14	8,532.03	-159.44	-917.45	-47.31	0.00	0.00	0.00



Altitude Energy Partners

Planning Report



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Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
8,700.00	8.48	260.14	8,630.94	-161.97	-931.97	-48.06	0.00	0.00	0.00
8,800.00	8.48	260.14	8,729.85	-164.49	-946.49	-48.81	0.00	0.00	0.00
8,900.00	8.48	260.14	8,828.76	-167.01	-961.01	-49.56	0.00	0.00	0.00
9,000.00	8.48	260.14	8,927.66	-169.54	-975.53	-50.31	0.00	0.00	0.00
9,100.00	8.48	260.14	9,026.57	-172.06	-990.05	-51.06	0.00	0.00	0.00
9,200.00	8.48	260.14	9,125.48	-174.59	-1,004.58	-51.81	0.00	0.00	0.00
9,300.00	8.48	260.14	9,224.39	-177.11	-1,019.10	-52.56	0.00	0.00	0.00
9,400.00	8.48	260.14	9,323.29	-179.63	-1,033.62	-53.30	0.00	0.00	0.00
9,500.00	8.48	260.14	9,422.20	-182.16	-1,048.14	-54.05	0.00	0.00	0.00
9,568.55	8.48	260.14	9,490.00	-183.89	-1,058.09	-54.57	0.00	0.00	0.00
1st Bone Spring Sand									
9,600.00	8.48	260.14	9,521.11	-184.68	-1,062.66	-54.80	0.00	0.00	0.00
9,700.00	8.48	260.14	9,620.02	-187.20	-1,077.18	-55.55	0.00	0.00	0.00
9,800.00	8.48	260.14	9,718.93	-189.73	-1,091.70	-56.30	0.00	0.00	0.00
9,900.00	8.48	260.14	9,817.83	-192.25	-1,106.22	-57.05	0.00	0.00	0.00
10,000.00	8.48	260.14	9,916.74	-194.77	-1,120.74	-57.80	0.00	0.00	0.00
10,044.87	8.48	260.14	9,961.12	-195.91	-1,127.26	-58.13	0.00	0.00	0.00
Drop 1.5°/100'									
10,100.00	7.65	260.14	10,015.71	-197.23	-1,134.88	-58.53	1.50	-1.50	0.00
10,104.33	7.58	260.14	10,020.00	-197.33	-1,135.44	-58.56	1.50	-1.50	0.00
2nd Bone Spring Sand									
10,200.00	6.15	260.14	10,114.98	-199.29	-1,146.71	-59.14	1.50	-1.50	0.00
10,300.00	4.65	260.14	10,214.53	-200.90	-1,155.98	-59.62	1.50	-1.50	0.00
10,400.00	3.15	260.14	10,314.30	-202.06	-1,162.68	-59.96	1.50	-1.50	0.00
10,500.00	1.65	260.14	10,414.21	-202.78	-1,166.80	-60.17	1.50	-1.50	0.00
10,609.91	0.00	0.00	10,524.10	-203.05	-1,168.36	-60.25	1.50	-1.50	0.00
Build 10°/100'									
10,650.00	4.01	359.54	10,564.16	-201.65	-1,168.37	-58.86	10.00	10.00	0.00
10,700.00	9.01	359.54	10,613.82	-195.98	-1,168.42	-53.23	10.00	10.00	0.00
10,750.00	14.01	359.54	10,662.80	-186.01	-1,168.50	-43.32	10.00	10.00	0.00
10,800.00	19.01	359.54	10,710.73	-171.81	-1,168.61	-29.21	10.00	10.00	0.00
10,850.00	24.01	359.54	10,757.23	-153.48	-1,168.76	-11.00	10.00	10.00	0.00
10,900.00	29.01	359.54	10,801.96	-131.17	-1,168.94	11.17	10.00	10.00	0.00
10,950.00	34.01	359.54	10,844.57	-105.05	-1,169.15	37.13	10.00	10.00	0.00
11,000.00	39.01	359.54	10,884.75	-75.31	-1,169.39	66.67	10.00	10.00	0.00
11,050.00	44.01	359.54	10,922.18	-42.18	-1,169.66	99.59	10.00	10.00	0.00
11,075.33	46.54	359.54	10,940.00	-24.19	-1,169.80	117.47	10.00	10.00	0.00
3rd Bone Spring Sand									
11,100.00	49.01	359.54	10,956.58	-5.92	-1,169.95	135.62	10.00	10.00	0.00
11,150.00	54.01	359.54	10,987.69	33.20	-1,170.26	174.49	10.00	10.00	0.00
11,200.00	59.01	359.54	11,015.27	74.88	-1,170.60	215.91	10.00	10.00	0.00
11,240.77	63.09	359.54	11,035.00	110.55	-1,170.89	251.35	10.00	10.00	0.00
Wolfcamp									
11,250.00	64.01	359.54	11,039.11	118.81	-1,170.95	259.56	10.00	10.00	0.00
11,300.00	69.01	359.54	11,059.04	164.65	-1,171.32	305.11	10.00	10.00	0.00
11,350.00	74.01	359.54	11,074.89	212.06	-1,171.70	352.21	10.00	10.00	0.00
11,400.00	79.01	359.54	11,086.55	260.66	-1,172.09	400.50	10.00	10.00	0.00
11,450.00	84.01	359.54	11,093.93	310.09	-1,172.49	449.62	10.00	10.00	0.00
11,500.00	89.01	359.54	11,096.97	359.98	-1,172.89	499.20	10.00	10.00	0.00
11,518.29	90.84	359.54	11,097.00	378.28	-1,173.04	517.37	10.00	10.00	0.00
9905' Hold									
11,600.00	90.84	359.54	11,095.80	459.97	-1,173.70	598.55	0.00	0.00	0.00
11,700.00	90.84	359.54	11,094.34	559.96	-1,174.50	697.90	0.00	0.00	0.00



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
11,800.00	90.84	359.54	11,092.87	659.94	-1,175.31	797.24	0.00	0.00	0.00
11,900.00	90.84	359.54	11,091.41	759.93	-1,176.11	896.59	0.00	0.00	0.00
12,000.00	90.84	359.54	11,089.95	859.91	-1,176.92	995.94	0.00	0.00	0.00
12,100.00	90.84	359.54	11,088.48	959.90	-1,177.73	1,095.29	0.00	0.00	0.00
12,200.00	90.84	359.54	11,087.02	1,059.89	-1,178.53	1,194.64	0.00	0.00	0.00
12,300.00	90.84	359.54	11,085.55	1,159.87	-1,179.34	1,293.99	0.00	0.00	0.00
12,400.00	90.84	359.54	11,084.09	1,259.86	-1,180.14	1,393.34	0.00	0.00	0.00
12,500.00	90.84	359.54	11,082.63	1,359.85	-1,180.95	1,492.69	0.00	0.00	0.00
12,600.00	90.84	359.54	11,081.16	1,459.83	-1,181.75	1,592.04	0.00	0.00	0.00
12,700.00	90.84	359.54	11,079.70	1,559.82	-1,182.56	1,691.39	0.00	0.00	0.00
12,800.00	90.84	359.54	11,078.24	1,659.80	-1,183.36	1,790.74	0.00	0.00	0.00
12,900.00	90.84	359.54	11,076.77	1,759.79	-1,184.17	1,890.09	0.00	0.00	0.00
13,000.00	90.84	359.54	11,075.31	1,859.78	-1,184.97	1,989.44	0.00	0.00	0.00
13,100.00	90.84	359.54	11,073.84	1,959.76	-1,185.78	2,088.79	0.00	0.00	0.00
13,200.00	90.84	359.54	11,072.38	2,059.75	-1,186.58	2,188.14	0.00	0.00	0.00
13,300.00	90.84	359.54	11,070.92	2,159.73	-1,187.39	2,287.49	0.00	0.00	0.00
13,400.00	90.84	359.54	11,069.45	2,259.72	-1,188.19	2,386.84	0.00	0.00	0.00
13,500.00	90.84	359.54	11,067.99	2,359.71	-1,189.00	2,486.19	0.00	0.00	0.00
13,600.00	90.84	359.54	11,066.53	2,459.69	-1,189.80	2,585.54	0.00	0.00	0.00
13,700.00	90.84	359.54	11,065.06	2,559.68	-1,190.61	2,684.88	0.00	0.00	0.00
13,800.00	90.84	359.54	11,063.60	2,659.66	-1,191.41	2,784.23	0.00	0.00	0.00
13,900.00	90.84	359.54	11,062.13	2,759.65	-1,192.22	2,883.58	0.00	0.00	0.00
14,000.00	90.84	359.54	11,060.67	2,859.64	-1,193.02	2,982.93	0.00	0.00	0.00
14,100.00	90.84	359.54	11,059.21	2,959.62	-1,193.83	3,082.28	0.00	0.00	0.00
14,200.00	90.84	359.54	11,057.74	3,059.61	-1,194.63	3,181.63	0.00	0.00	0.00
14,300.00	90.84	359.54	11,056.28	3,159.59	-1,195.44	3,280.98	0.00	0.00	0.00
14,400.00	90.84	359.54	11,054.81	3,259.58	-1,196.24	3,380.33	0.00	0.00	0.00
14,500.00	90.84	359.54	11,053.35	3,359.57	-1,197.05	3,479.68	0.00	0.00	0.00
14,600.00	90.84	359.54	11,051.89	3,459.55	-1,197.85	3,579.03	0.00	0.00	0.00
14,700.00	90.84	359.54	11,050.42	3,559.54	-1,198.66	3,678.38	0.00	0.00	0.00
14,800.00	90.84	359.54	11,048.96	3,659.52	-1,199.47	3,777.73	0.00	0.00	0.00
14,900.00	90.84	359.54	11,047.50	3,759.51	-1,200.27	3,877.08	0.00	0.00	0.00
15,000.00	90.84	359.54	11,046.03	3,859.50	-1,201.08	3,976.43	0.00	0.00	0.00
15,100.00	90.84	359.54	11,044.57	3,959.48	-1,201.88	4,075.78	0.00	0.00	0.00
15,200.00	90.84	359.54	11,043.10	4,059.47	-1,202.69	4,175.13	0.00	0.00	0.00
15,300.00	90.84	359.54	11,041.64	4,159.45	-1,203.49	4,274.48	0.00	0.00	0.00
15,400.00	90.84	359.54	11,040.18	4,259.44	-1,204.30	4,373.83	0.00	0.00	0.00
15,500.00	90.84	359.54	11,038.71	4,359.43	-1,205.10	4,473.17	0.00	0.00	0.00
15,600.00	90.84	359.54	11,037.25	4,459.41	-1,205.91	4,572.52	0.00	0.00	0.00
15,700.00	90.84	359.54	11,035.79	4,559.40	-1,206.71	4,671.87	0.00	0.00	0.00
15,800.00	90.84	359.54	11,034.32	4,659.38	-1,207.52	4,771.22	0.00	0.00	0.00
15,900.00	90.84	359.54	11,032.86	4,759.37	-1,208.32	4,870.57	0.00	0.00	0.00
16,000.00	90.84	359.54	11,031.39	4,859.36	-1,209.13	4,969.92	0.00	0.00	0.00
16,100.00	90.84	359.54	11,029.93	4,959.34	-1,209.93	5,069.27	0.00	0.00	0.00
16,200.00	90.84	359.54	11,028.47	5,059.33	-1,210.74	5,168.62	0.00	0.00	0.00
16,300.00	90.84	359.54	11,027.00	5,159.31	-1,211.54	5,267.97	0.00	0.00	0.00
16,400.00	90.84	359.54	11,025.54	5,259.30	-1,212.35	5,367.32	0.00	0.00	0.00
16,500.00	90.84	359.54	11,024.08	5,359.29	-1,213.15	5,466.67	0.00	0.00	0.00
16,600.00	90.84	359.54	11,022.61	5,459.27	-1,213.96	5,566.02	0.00	0.00	0.00
16,700.00	90.84	359.54	11,021.15	5,559.26	-1,214.76	5,665.37	0.00	0.00	0.00
16,800.00	90.84	359.54	11,019.68	5,659.25	-1,215.57	5,764.72	0.00	0.00	0.00
16,900.00	90.84	359.54	11,018.22	5,759.23	-1,216.37	5,864.07	0.00	0.00	0.00
17,000.00	90.84	359.54	11,016.76	5,859.22	-1,217.18	5,963.42	0.00	0.00	0.00
17,100.00	90.84	359.54	11,015.29	5,959.20	-1,217.98	6,062.77	0.00	0.00	0.00



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
17,200.00	90.84	359.54	11,013.83	6,059.19	-1,218.79	6,162.12	0.00	0.00	0.00
17,300.00	90.84	359.54	11,012.37	6,159.18	-1,219.59	6,261.47	0.00	0.00	0.00
17,400.00	90.84	359.54	11,010.90	6,259.16	-1,220.40	6,360.81	0.00	0.00	0.00
17,500.00	90.84	359.54	11,009.44	6,359.15	-1,221.21	6,460.16	0.00	0.00	0.00
17,600.00	90.84	359.54	11,007.97	6,459.13	-1,222.01	6,559.51	0.00	0.00	0.00
17,700.00	90.84	359.54	11,006.51	6,559.12	-1,222.82	6,658.86	0.00	0.00	0.00
17,800.00	90.84	359.54	11,005.05	6,659.11	-1,223.62	6,758.21	0.00	0.00	0.00
17,900.00	90.84	359.54	11,003.58	6,759.09	-1,224.43	6,857.56	0.00	0.00	0.00
18,000.00	90.84	359.54	11,002.12	6,859.08	-1,225.23	6,956.91	0.00	0.00	0.00
18,100.00	90.84	359.54	11,000.65	6,959.06	-1,226.04	7,056.26	0.00	0.00	0.00
18,200.00	90.84	359.54	10,999.19	7,059.05	-1,226.84	7,155.61	0.00	0.00	0.00
18,300.00	90.84	359.54	10,997.73	7,159.04	-1,227.65	7,254.96	0.00	0.00	0.00
18,400.00	90.84	359.54	10,996.26	7,259.02	-1,228.45	7,354.31	0.00	0.00	0.00
18,500.00	90.84	359.54	10,994.80	7,359.01	-1,229.26	7,453.66	0.00	0.00	0.00
18,600.00	90.84	359.54	10,993.34	7,458.99	-1,230.06	7,553.01	0.00	0.00	0.00
18,700.00	90.84	359.54	10,991.87	7,558.98	-1,230.87	7,652.36	0.00	0.00	0.00
18,800.00	90.84	359.54	10,990.41	7,658.97	-1,231.67	7,751.71	0.00	0.00	0.00
18,900.00	90.84	359.54	10,988.94	7,758.95	-1,232.48	7,851.06	0.00	0.00	0.00
19,000.00	90.84	359.54	10,987.48	7,858.94	-1,233.28	7,950.41	0.00	0.00	0.00
19,100.00	90.84	359.54	10,986.02	7,958.92	-1,234.09	8,049.76	0.00	0.00	0.00
19,200.00	90.84	359.54	10,984.55	8,058.91	-1,234.89	8,149.11	0.00	0.00	0.00
19,300.00	90.84	359.54	10,983.09	8,158.90	-1,235.70	8,248.45	0.00	0.00	0.00
19,400.00	90.84	359.54	10,981.63	8,258.88	-1,236.50	8,347.80	0.00	0.00	0.00
19,500.00	90.84	359.54	10,980.16	8,358.87	-1,237.31	8,447.15	0.00	0.00	0.00
19,600.00	90.84	359.54	10,978.70	8,458.85	-1,238.11	8,546.50	0.00	0.00	0.00
19,700.00	90.84	359.54	10,977.23	8,558.84	-1,238.92	8,645.85	0.00	0.00	0.00
19,800.00	90.84	359.54	10,975.77	8,658.83	-1,239.72	8,745.20	0.00	0.00	0.00
19,900.00	90.84	359.54	10,974.31	8,758.81	-1,240.53	8,844.55	0.00	0.00	0.00
20,000.00	90.84	359.54	10,972.84	8,858.80	-1,241.33	8,943.90	0.00	0.00	0.00
20,100.00	90.84	359.54	10,971.38	8,958.78	-1,242.14	9,043.25	0.00	0.00	0.00
20,200.00	90.84	359.54	10,969.92	9,058.77	-1,242.95	9,142.60	0.00	0.00	0.00
20,300.00	90.84	359.54	10,968.45	9,158.76	-1,243.75	9,241.95	0.00	0.00	0.00
20,400.00	90.84	359.54	10,966.99	9,258.74	-1,244.56	9,341.30	0.00	0.00	0.00
20,500.00	90.84	359.54	10,965.52	9,358.73	-1,245.36	9,440.65	0.00	0.00	0.00
20,600.00	90.84	359.54	10,964.06	9,458.71	-1,246.17	9,540.00	0.00	0.00	0.00
20,700.00	90.84	359.54	10,962.60	9,558.70	-1,246.97	9,639.35	0.00	0.00	0.00
20,800.00	90.84	359.54	10,961.13	9,658.69	-1,247.78	9,738.70	0.00	0.00	0.00
20,900.00	90.84	359.54	10,959.67	9,758.67	-1,248.58	9,838.05	0.00	0.00	0.00
21,000.00	90.84	359.54	10,958.21	9,858.66	-1,249.39	9,937.40	0.00	0.00	0.00
21,100.00	90.84	359.54	10,956.74	9,958.65	-1,250.19	10,036.75	0.00	0.00	0.00
21,200.00	90.84	359.54	10,955.28	10,058.63	-1,251.00	10,136.09	0.00	0.00	0.00
21,300.00	90.84	359.54	10,953.81	10,158.62	-1,251.80	10,235.44	0.00	0.00	0.00
21,400.00	90.84	359.54	10,952.35	10,258.60	-1,252.61	10,334.79	0.00	0.00	0.00
21,423.90	90.84	359.54	10,952.00	10,282.50	-1,252.80	10,358.54	0.00	0.00	0.00
TD at 21423.90									



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Company:	Mewbourne Oil Company	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Project:	Lea Co., NM (NAD 83)	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site:	Charolais Hereford Pad	North Reference:	Grid
Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hereford 29-20 W1PA - plan hits target center - Point	0.00	0.00	10,524.10	-203.05	-1,168.36	591,884.35	806,541.64	32.624186	-103.471930
Hereford 29-20 W1PA - plan hits target center - Point	0.00	0.00	10,952.00	10,282.50	-1,252.80	602,369.90	806,457.20	32.653006	-103.471928

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,780.00	1,780.00	Rustler		0.00	
2,080.01	2,080.00	Salt Top		0.00	
3,269.75	3,260.00	Salt Base		0.00	
3,471.96	3,460.00	Yates		0.00	
3,977.48	3,960.00	Seven Rivers		0.00	
4,664.99	4,640.00	Queen		0.00	
5,969.24	5,930.00	Delaware (Lamar)		0.00	
8,031.76	7,970.00	Bone Spring		0.00	
9,568.55	9,490.00	1st Bone Spring Sand		0.00	
10,104.33	10,020.00	2nd Bone Spring Sand		0.00	
11,075.33	10,940.00	3rd Bone Spring Sand		0.00	
11,240.77	11,035.00	Wolfcamp		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.00	2,000.00	0.00	0.00	Build 1.5°/100'
2,565.04	2,562.98	-7.14	-41.10	7479' Hold
10,044.87	9,961.12	-195.91	-1,127.26	Drop 1.5°/100'
10,609.91	10,524.10	-203.05	-1,168.36	Build 10°/100'
11,518.29	11,097.00	378.28	-1,173.04	9905' Hold
21,423.90	10,952.00	10,282.50	-1,252.80	TD at 21423.90



MEWBOURNE
OIL COMPANY

Mewbourne Oil Company

Lea Co., NM (NAD 83)

Charolais Hereford Pad

Hereford 29-20 W1PA State Com 1H

OH

Plan #1

Anticollision Report

01 March, 2022





Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User 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:	Stations
Depth Range:	Unlimited
Results Limited by:	Max. Cent. Dist. of 1,000.00usft or Max. SF of 10
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	3/1/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	21,423.90	Plan #1 (OH)	MWD + HDGM	MWD + HDGM - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Charolais Hereford Offsets						
Charolais 28 21 B1MD St Com #2H - OH - OH	2,393.59	2,432.03	451.33	434.77	27.252	CC
Charolais 28 21 B1MD St Com #2H - OH - OH	2,400.00	2,438.60	451.33	434.72	27.178	ES
Charolais 28 21 B1MD St Com #2H - OH - OH	21,423.90	19,548.46	1,772.88	1,545.34	7.792	SF
Charolais 28 21B2NC St Com #1H - OH - OH	0.00	0.00	499.99			
Charolais 28 21B2NC St Com #1H - OH - OH	500.00	488.40	500.36	497.29	163.294	ES
Charolais 28 21B2NC St Com #1H - OH - OH	21,423.90	20,500.31	2,441.70	2,125.18	7.714	SF
Hereford 29/20 B 1 PA St Com #1 H - OH - OH	9,500.00	9,437.88	471.85	403.99	6.954	SF
Hereford 29/20 B 1 PA St Com #1 H - OH - OH	9,505.96	9,440.92	471.83	403.97	6.954	CC, ES
West Pearl Queen Unit 163 (P&A) - OH - OH	1,287.99	1,250.01	492.31	461.71	16.087	CC
West Pearl Queen Unit 163 (P&A) - OH - OH	2,100.00	2,062.07	493.62	442.97	9.747	ES
West Pearl Queen Unit 163 (P&A) - OH - OH	5,100.00	5,020.00	867.32	719.34	5.861	SF
West Pearl Queen Unit 194 (P&A) - OH - OH	5,200.00	5,100.00	539.02	400.54	3.892	ES, SF
West Pearl Queen Unit 194 (P&A) - OH - OH	5,219.64	5,100.00	538.67	400.69	3.904	CC
Charolais Hereford Pad						
Charolais 28-21 W1MD State Com 1H - OH - Plan #1	2,000.00	1,999.00	30.00	15.87	2.123	CC, ES
Charolais 28-21 W1MD State Com 1H - OH - Plan #1	2,100.00	2,098.99	31.29	16.45	2.109	SF

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH												
Survey Program: 157-MWD												
Rule Assigned:												
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	89.62	3.10	469.90	470.00			
100.00	100.00	90.18	90.18	0.26	0.13	89.62	3.15	469.98	469.99	469.60	0.39	1,199.048
200.00	200.00	189.08	189.08	0.62	0.35	89.59	3.40	470.27	470.28	469.32	0.96	487.731
300.00	300.00	289.87	289.87	0.98	0.71	89.49	4.20	470.59	470.61	468.92	1.68	279.754
400.00	400.00	391.82	391.81	1.33	1.07	89.35	5.37	470.69	470.72	468.31	2.40	195.879
500.00	500.00	495.68	495.66	1.69	1.44	89.18	6.72	470.06	470.14	467.01	3.13	150.256
600.00	600.00	595.29	595.25	2.05	1.79	89.01	8.07	468.92	469.01	465.17	3.84	122.122
700.00	700.00	692.11	692.06	2.41	2.13	88.86	9.31	468.35	468.44	463.90	4.54	103.109
800.00	800.00	791.35	791.29	2.77	2.48	88.75	10.23	468.25	468.36	463.11	5.25	89.283
900.00	900.00	891.34	891.29	3.13	2.82	88.75	10.20	468.18	468.30	462.35	5.95	78.728
1,000.00	1,000.00	992.00	991.94	3.48	3.16	88.84	9.50	468.08	468.18	461.53	6.65	70.420

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:
Survey Program: 157-MWD													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,100.00	1,100.00	1,092.79	1,092.73	3.84	3.51	88.93	8.73	467.81	467.89	460.54	7.35	63.677	
1,200.00	1,200.00	1,191.75	1,191.69	4.20	3.85	88.98	8.31	467.55	467.62	459.57	8.05	58.085	
1,259.60	1,259.60	1,250.66	1,250.60	4.41	4.05	88.96	8.47	467.50	467.58	459.11	8.47	55.206	
1,300.00	1,300.00	1,290.59	1,290.53	4.56	4.19	88.93	8.74	467.51	467.60	458.84	8.75	53.418	
1,400.00	1,400.00	1,390.72	1,390.65	4.92	4.55	88.82	9.61	467.59	467.69	458.22	9.47	49.404	
1,500.00	1,500.00	1,490.84	1,490.77	5.28	4.90	88.72	10.48	467.63	467.74	457.57	10.18	45.952	
1,600.00	1,600.00	1,590.71	1,590.64	5.64	5.25	88.66	10.91	467.68	467.81	456.92	10.88	42.978	
1,700.00	1,700.00	1,691.77	1,691.70	5.99	5.60	88.69	10.67	467.75	467.88	456.28	11.59	40.353	
1,800.00	1,800.00	1,798.34	1,798.26	6.35	5.97	88.62	11.24	466.83	467.02	454.70	12.32	37.901	
1,900.00	1,900.00	1,896.17	1,896.09	6.71	6.31	88.59	11.48	466.11	466.28	453.26	13.02	35.807	
2,000.00	2,000.00	2,008.32	2,008.20	7.07	6.71	88.43	12.74	463.55	464.04	450.27	13.77	33.704	
2,100.00	2,099.99	2,126.96	2,126.58	7.42	7.13	-172.18	15.94	456.58	459.54	445.03	14.51	31.674	
2,200.00	2,199.91	2,232.01	2,231.18	7.76	7.51	-172.80	19.98	447.70	455.13	439.92	15.21	29.929	
2,300.00	2,299.69	2,336.23	2,334.82	8.10	7.89	-173.53	24.37	437.71	452.25	436.34	15.91	28.431	
2,393.59	2,392.89	2,432.03	2,430.07	8.42	8.24	-174.12	27.42	427.93	451.33	434.77	16.56	27.252 CC	
2,400.00	2,399.27	2,438.60	2,436.60	8.45	8.26	-174.15	27.58	427.25	451.33	434.72	16.61	27.178 ES	
2,500.00	2,498.57	2,539.61	2,537.02	8.80	8.63	-174.61	29.24	416.53	452.57	435.26	17.31	26.151	
2,565.04	2,562.98	2,604.02	2,601.07	9.03	8.87	-174.86	29.92	409.75	454.81	437.05	17.76	25.606	
2,600.00	2,597.56	2,638.63	2,635.50	9.15	9.00	-174.99	30.20	406.14	456.35	438.34	18.01	25.343	
2,700.00	2,696.47	2,735.12	2,731.49	9.52	9.35	-175.31	30.70	396.35	461.02	442.31	18.71	24.645	
2,800.00	2,795.38	2,829.00	2,824.99	9.88	9.70	-175.59	31.04	387.92	466.84	447.43	19.40	24.060	
2,900.00	2,894.28	2,924.69	2,920.38	10.25	10.05	-175.86	31.46	380.45	473.84	453.74	20.10	23.571	
3,000.00	2,993.19	3,022.35	3,017.77	10.62	10.41	-176.25	32.99	373.23	481.40	460.59	20.81	23.136	
3,100.00	3,092.10	3,122.64	3,117.75	11.00	10.79	-176.77	35.71	365.97	489.25	467.73	21.52	22.735	
3,200.00	3,191.01	3,225.41	3,220.17	11.38	11.17	-177.30	38.57	357.99	496.62	474.38	22.24	22.330	
3,300.00	3,289.91	3,328.43	3,322.79	11.76	11.55	-177.81	41.25	349.34	503.39	480.43	22.96	21.922	
3,400.00	3,388.82	3,431.63	3,425.55	12.15	11.94	-178.26	43.43	340.03	509.52	485.83	23.69	21.511	
3,500.00	3,487.73	3,530.74	3,524.22	12.53	12.32	-178.64	45.10	330.82	515.33	490.92	24.40	21.117	
3,600.00	3,586.64	3,629.11	3,622.18	12.92	12.69	-178.97	46.45	321.97	521.42	496.30	25.12	20.757	
3,700.00	3,685.55	3,729.62	3,722.29	13.31	13.07	-179.24	47.29	313.10	527.61	501.77	25.84	20.418	
3,800.00	3,784.45	3,830.29	3,822.56	13.70	13.44	-179.40	47.24	304.18	533.63	507.07	26.56	20.091	
3,900.00	3,883.36	3,929.20	3,921.09	14.09	13.82	-179.51	46.72	295.50	539.66	512.38	27.28	19.784	
4,000.00	3,982.27	4,028.09	4,019.61	14.49	14.19	-179.60	46.07	287.02	545.87	517.87	28.00	19.498	
4,100.00	4,081.18	4,126.97	4,118.14	14.88	14.56	-179.67	45.21	278.74	552.24	523.52	28.71	19.233	
4,200.00	4,180.09	4,227.78	4,218.61	15.28	14.94	-179.71	44.12	270.46	558.74	529.30	29.44	18.982	
4,300.00	4,278.99	4,336.01	4,326.36	15.67	15.35	-179.82	43.46	260.42	564.27	534.09	30.17	18.700	
4,400.00	4,377.90	4,437.22	4,427.01	16.07	15.73	-179.99	43.54	249.69	568.60	537.70	30.90	18.400	
4,500.00	4,476.81	4,530.17	4,519.51	16.47	16.09	-179.80	43.83	240.57	573.76	542.15	31.61	18.149	
4,600.00	4,575.72	4,624.39	4,613.37	16.87	16.45	-179.63	44.23	232.40	580.08	547.76	32.33	17.945	
4,700.00	4,674.63	4,720.36	4,709.04	17.27	16.81	-179.45	44.78	224.77	587.14	554.10	33.04	17.771	
4,800.00	4,773.53	4,818.44	4,806.84	17.67	17.18	-179.26	45.54	217.51	594.77	561.01	33.76	17.617	
4,900.00	4,872.44	4,919.28	4,907.39	18.08	17.56	-179.03	46.77	209.88	602.34	567.85	34.49	17.464	
5,000.00	4,971.35	5,020.52	5,008.30	18.48	17.94	-178.76	48.44	201.93	609.72	574.49	35.22	17.310	
5,100.00	5,070.26	5,122.11	5,109.53	18.88	18.32	-178.49	50.11	193.64	616.81	580.85	35.96	17.154	
5,200.00	5,169.16	5,225.00	5,212.04	19.29	18.72	-178.22	51.72	184.87	623.54	586.84	36.70	16.992	
5,300.00	5,268.07	5,328.51	5,315.11	19.69	19.11	-177.96	53.26	175.46	629.70	592.26	37.44	16.820	
5,400.00	5,366.98	5,430.50	5,416.62	20.09	19.50	-177.71	54.58	165.71	635.39	597.21	38.18	16.644	
5,500.00	5,465.89	5,532.28	5,517.91	20.50	19.90	-177.49	55.51	155.74	640.77	601.86	38.91	16.467	
5,600.00	5,564.80	5,628.55	5,613.73	20.91	20.27	-177.30	56.26	146.47	646.29	606.66	39.63	16.306	
5,700.00	5,663.70	5,724.80	5,709.58	21.31	20.63	-177.12	57.11	137.72	652.37	612.01	40.36	16.165	
5,800.00	5,762.61	5,822.18	5,806.59	21.72	21.01	-176.94	58.04	129.29	658.90	617.82	41.08	16.040	
5,900.00	5,861.52	5,919.49	5,903.55	22.13	21.38	-176.77	59.00	121.23	665.80	624.00	41.80	15.927	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design:Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 157-MWD		Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
6,000.00	5,960.43	6,016.32	6,000.08	22.53	21.74	176.60	60.10	113.57	673.11	630.59	42.52	15.829		
6,100.00	6,059.34	6,113.69	6,097.16	22.94	22.11	176.43	61.40	106.25	680.85	637.60	43.25	15.744		
6,200.00	6,158.24	6,216.13	6,199.30	23.35	22.50	176.25	62.64	98.50	688.53	644.54	43.99	15.653		
6,300.00	6,257.15	6,317.12	6,299.98	23.76	22.88	176.11	63.53	90.55	695.83	651.11	44.72	15.559		
6,400.00	6,356.06	6,413.28	6,395.86	24.16	23.24	175.99	64.26	83.25	703.38	657.94	45.44	15.479		
6,500.00	6,454.97	6,512.93	6,495.25	24.57	23.62	175.88	64.98	76.15	711.37	665.20	46.17	15.407		
6,600.00	6,553.87	6,622.60	6,604.56	24.98	24.03	175.74	65.70	67.36	718.50	671.56	46.94	15.307		
6,700.00	6,652.78	6,726.02	6,707.54	25.39	24.43	175.61	66.31	57.87	724.47	676.78	47.68	15.193		
6,800.00	6,751.69	6,823.58	6,804.71	25.80	24.80	175.49	66.75	49.05	730.56	682.15	48.41	15.091		
6,900.00	6,850.60	6,922.64	6,903.38	26.21	25.18	175.37	67.29	40.33	736.90	687.75	49.14	14.995		
7,000.00	6,949.51	7,022.82	7,003.13	26.62	25.57	175.16	68.89	31.22	743.22	693.34	49.88	14.900		
7,100.00	7,048.41	7,121.13	7,100.98	27.03	25.95	174.89	71.41	22.06	749.58	698.97	50.61	14.810		
7,200.00	7,147.32	7,218.46	7,197.88	27.44	26.32	174.62	74.04	13.25	756.26	704.91	51.34	14.729		
7,300.00	7,246.23	7,319.81	7,298.78	27.85	26.71	174.36	76.73	4.22	763.08	710.99	52.09	14.650		
7,400.00	7,345.14	7,422.99	7,401.50	28.26	27.11	174.12	78.97	-5.26	769.50	716.66	52.84	14.563		
7,500.00	7,444.05	7,522.00	7,500.06	28.67	27.49	173.92	80.74	-14.48	775.72	722.15	53.58	14.479		
7,600.00	7,542.95	7,620.28	7,597.92	29.08	27.87	173.74	82.34	-23.40	782.13	727.83	54.31	14.402		
7,700.00	7,641.86	7,717.56	7,694.83	29.49	28.24	173.58	83.71	-31.93	788.80	733.76	55.04	14.332		
7,800.00	7,740.77	7,817.00	7,793.91	29.90	28.62	173.46	84.86	-40.22	795.80	740.03	55.77	14.269		
7,900.00	7,839.68	7,907.16	7,883.81	30.31	28.96	173.37	85.70	-47.11	803.40	746.94	56.47	14.228		
8,000.00	7,938.58	8,006.00	7,982.42	30.73	29.33	173.30	86.46	-53.64	811.96	754.76	57.19	14.196		
8,100.00	8,037.49	8,100.71	8,076.95	31.14	29.68	173.27	86.94	-59.48	820.85	762.95	57.90	14.177		
8,200.00	8,136.40	8,202.56	8,178.60	31.55	30.06	173.25	87.10	-65.95	829.47	770.83	58.64	14.145		
8,300.00	8,235.31	8,300.52	8,276.36	31.96	30.42	173.26	86.97	-72.12	838.08	778.72	59.36	14.118		
8,400.00	8,334.22	8,398.14	8,373.80	32.37	30.79	173.28	86.60	-77.99	846.88	786.80	60.08	14.096		
8,500.00	8,433.12	8,493.77	8,469.28	32.79	31.13	173.34	85.92	-83.28	856.06	795.27	60.79	14.083		
8,600.00	8,532.03	8,589.56	8,564.96	33.20	31.48	173.42	84.87	-88.01	865.69	804.20	61.49	14.079		
8,700.00	8,630.94	8,686.74	8,662.03	33.61	31.83	173.52	83.69	-92.43	875.66	813.46	62.20	14.078		
8,800.00	8,729.85	8,782.89	8,758.08	34.02	32.18	173.62	82.54	-96.54	885.90	823.00	62.90	14.084		
8,900.00	8,828.76	8,874.58	8,849.70	34.43	32.51	173.71	81.74	-99.91	896.81	833.24	63.58	14.106		
9,000.00	8,927.66	8,966.19	8,941.28	34.85	32.83	173.78	81.37	-102.57	908.58	844.33	64.25	14.142		
9,100.00	9,026.57	9,066.72	9,041.78	35.26	33.19	173.83	81.45	-105.01	920.95	855.97	64.98	14.173		
9,200.00	9,125.48	9,248.91	9,218.82	35.67	33.91	171.89	110.19	-128.90	926.49	860.34	66.15	14.007		
9,300.00	9,224.39	9,298.09	9,263.13	36.08	34.11	170.66	128.87	-139.10	932.90	866.15	66.74	13.977		
9,400.00	9,323.29	9,348.76	9,306.12	36.50	34.31	169.08	153.74	-148.96	945.42	878.23	67.19	14.071		
9,500.00	9,422.20	9,396.78	9,344.18	36.91	34.49	167.37	181.45	-158.31	963.73	896.28	67.44	14.289		
9,600.00	9,521.11	9,428.34	9,367.45	37.32	34.60	166.13	201.90	-164.29	988.66	921.38	67.28	14.695		
9,700.00	9,620.02	9,460.00	9,389.41	37.74	34.72	164.83	224.16	-169.27	1,021.09	954.20	66.89	15.265		
9,800.00	9,718.93	9,460.00	9,389.41	38.15	34.72	164.83	224.16	-169.27	1,060.62	994.87	65.74	16.132		
9,900.00	9,817.83	9,481.91	9,403.79	38.56	34.78	163.93	240.51	-171.62	1,106.72	1,041.88	64.84	17.069		
10,000.00	9,916.74	9,507.00	9,419.44	38.98	34.86	162.90	260.09	-172.58	1,159.46	1,095.52	63.94	18.133		
10,044.87	9,961.12	9,507.00	9,419.44	39.16	34.86	162.90	260.09	-172.58	1,184.52	1,121.23	63.30	18.714		
10,100.00	10,015.71	9,507.00	9,419.44	39.39	34.86	163.07	260.09	-172.58	1,216.57	1,154.08	62.49	19.468		
10,200.00	10,114.98	9,507.00	9,419.44	39.78	34.86	163.40	260.09	-172.58	1,277.22	1,216.20	61.02	20.930		
10,300.00	10,214.53	9,555.00	9,446.79	40.16	34.99	161.86	299.50	-171.80	1,339.66	1,279.06	60.60	22.106		
10,400.00	10,314.30	9,555.00	9,446.79	40.53	34.99	162.24	299.50	-171.80	1,403.72	1,344.54	59.18	23.719		
10,500.00	10,414.21	9,569.42	9,454.30	40.87	35.03	162.09	311.81	-171.28	1,469.73	1,411.62	58.11	25.293		
10,609.91	10,524.10	9,580.30	9,459.69	41.23	35.06	62.27	321.24	-170.84	1,543.96	1,487.08	56.88	27.142		
10,650.00	10,564.16	9,580.30	9,459.69	41.36	35.06	59.49	321.24	-170.84	1,571.16	1,514.79	56.37	27.874		
10,700.00	10,613.82	9,602.00	9,469.74	41.51	35.11	55.10	340.44	-169.86	1,604.14	1,548.01	56.13	28.580		
10,750.00	10,662.80	9,602.00	9,469.74	41.66	35.11	51.78	340.44	-169.86	1,635.98	1,580.51	55.46	29.497		
10,800.00	10,710.73	9,602.00	9,469.74	41.80	35.11	48.80	340.44	-169.86	1,666.64	1,611.84	54.79	30.416		

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Offset	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,850.00	10,757.23	9,625.83	9,479.91	41.92	35.17	45.71	361.96	-168.65	1,695.44	1,640.89	54.56	31.077	
10,900.00	10,801.96	9,650.00	9,489.49	42.04	35.24	43.08	384.11	-167.30	1,722.73	1,668.42	54.31	31.718	
10,950.00	10,844.57	9,650.00	9,489.49	42.15	35.24	41.13	384.11	-167.30	1,747.83	1,694.18	53.65	32.579	
11,000.00	10,884.75	9,669.28	9,496.66	42.24	35.29	39.25	401.98	-166.21	1,770.89	1,717.57	53.32	33.211	
11,050.00	10,922.18	9,698.00	9,506.65	42.32	35.38	37.59	428.85	-164.68	1,791.69	1,738.54	53.15	33.711	
11,100.00	10,956.58	9,698.00	9,506.65	42.38	35.38	36.41	428.85	-164.68	1,809.93	1,757.40	52.53	34.455	
11,150.00	10,987.69	9,729.98	9,516.93	42.44	35.48	35.28	459.09	-163.12	1,825.50	1,773.07	52.42	34.822	
11,200.00	11,015.27	9,745.00	9,521.49	42.48	35.53	34.46	473.39	-162.43	1,838.42	1,786.34	52.08	35.300	
11,250.00	11,039.11	9,769.45	9,528.42	42.52	35.62	33.81	496.81	-161.38	1,848.57	1,796.67	51.90	35.621	
11,300.00	11,059.04	9,794.00	9,534.71	42.55	35.71	33.37	520.52	-160.41	1,856.02	1,804.28	51.73	35.876	
11,350.00	11,074.89	9,809.00	9,538.17	42.57	35.77	33.11	535.11	-159.87	1,860.67	1,809.19	51.48	36.145	
11,360.78	11,077.76	9,809.00	9,538.17	42.57	35.77	33.08	535.11	-159.87	1,861.30	1,809.92	51.39	36.222	
11,400.00	11,086.55	9,829.40	9,542.53	42.59	35.85	33.03	555.03	-159.19	1,862.50	1,811.17	51.33	36.283	
11,450.00	11,093.93	9,853.00	9,547.28	42.62	35.95	33.14	578.13	-158.52	1,861.28	1,810.01	51.27	36.305	
11,464.78	11,095.28	9,853.00	9,547.28	42.63	35.95	33.19	578.13	-158.52	1,860.40	1,809.22	51.18	36.353	
11,500.00	11,096.97	9,880.00	9,552.01	42.65	36.07	33.44	604.70	-157.84	1,857.25	1,805.97	51.28	36.216	
11,515.66	11,097.03	9,880.00	9,552.01	42.66	36.07	33.55	604.70	-157.84	1,855.37	1,804.16	51.21	36.234	
11,518.29	11,097.00	9,880.00	9,552.01	42.67	36.07	33.57	604.70	-157.84	1,855.03	1,803.84	51.19	36.236	
11,524.22	11,096.91	9,880.00	9,552.01	42.67	36.07	33.57	604.70	-157.84	1,854.27	1,803.10	51.17	36.240	
11,600.00	11,095.80	9,956.71	9,564.44	42.75	36.43	33.88	680.36	-155.46	1,844.71	1,793.03	51.68	35.697	
11,618.47	11,095.53	9,964.36	9,565.70	42.78	36.47	33.91	687.90	-155.17	1,842.42	1,790.73	51.69	35.645	
11,700.00	11,094.34	9,992.29	9,569.72	42.92	36.62	34.02	715.52	-154.20	1,833.66	1,781.97	51.69	35.476	
11,732.16	11,093.87	10,006.00	9,571.15	42.98	36.69	34.06	729.15	-153.95	1,830.89	1,779.16	51.73	35.394	
11,800.00	11,092.87	10,022.03	9,572.35	43.14	36.78	34.09	745.14	-153.82	1,826.31	1,774.59	51.71	35.316	
11,831.00	11,092.42	10,039.00	9,573.08	43.23	36.87	34.11	762.09	-153.81	1,824.87	1,773.08	51.80	35.231	
11,900.00	11,091.41	10,056.70	9,573.37	43.44	36.97	34.12	779.79	-153.92	1,822.76	1,770.91	51.85	35.152	
11,929.89	11,090.97	10,071.00	9,573.36	43.54	37.05	34.12	794.08	-154.09	1,822.35	1,770.41	51.94	35.089	
12,000.00	11,089.95	10,135.00	9,572.69	43.80	37.45	34.12	858.07	-155.06	1,821.83	1,769.52	52.31	34.828	
12,029.46	11,089.51	10,165.00	9,572.29	43.92	37.63	34.11	888.07	-155.57	1,821.64	1,769.15	52.49	34.702	
12,084.57	11,088.71	10,207.56	9,571.55	44.16	37.92	34.10	930.62	-156.31	1,821.48	1,768.70	52.78	34.514	
12,100.00	11,088.48	10,219.91	9,571.28	44.23	38.00	34.09	942.96	-156.52	1,821.49	1,768.63	52.86	34.461	
12,123.00	11,088.15	10,238.32	9,570.82	44.33	38.13	34.09	961.36	-156.85	1,821.56	1,768.57	52.98	34.379	
12,200.00	11,087.02	10,305.28	9,568.82	44.71	38.61	34.05	1,028.28	-157.99	1,822.13	1,768.67	53.46	34.084	
12,300.00	11,085.55	10,441.42	9,565.32	45.24	39.66	34.00	1,164.35	-160.15	1,822.80	1,768.30	54.50	33.447	
12,329.47	11,085.12	10,529.78	9,565.99	45.40	40.40	34.00	1,252.69	-162.03	1,822.06	1,766.77	55.29	32.953	
12,400.00	11,084.09	10,583.09	9,567.09	45.81	40.87	34.01	1,305.96	-163.61	1,819.21	1,763.42	55.79	32.609	
12,430.73	11,083.64	10,601.67	9,567.20	46.00	41.03	34.00	1,324.53	-164.18	1,818.30	1,762.33	55.97	32.488	
12,500.00	11,082.63	10,671.35	9,566.75	46.43	41.67	33.97	1,394.17	-166.40	1,816.91	1,760.28	56.64	32.080	
12,529.94	11,082.19	10,710.27	9,567.37	46.63	42.03	33.96	1,433.06	-167.83	1,815.55	1,758.52	57.03	31.834	
12,600.00	11,081.16	10,781.50	9,568.17	47.09	42.72	33.94	1,504.24	-170.51	1,812.89	1,755.12	57.77	31.379	
12,630.60	11,080.71	10,800.26	9,568.15	47.30	42.90	33.93	1,522.98	-171.26	1,812.01	1,754.03	57.98	31.254	
12,700.00	11,079.70	10,860.62	9,567.38	47.79	43.51	33.88	1,583.28	-173.72	1,810.60	1,751.98	58.62	30.888	
12,729.86	11,079.26	10,897.21	9,566.95	48.01	43.88	33.84	1,619.84	-175.33	1,809.93	1,750.92	59.01	30.670	
12,800.00	11,078.24	10,969.20	9,566.32	48.52	44.63	33.78	1,691.75	-178.61	1,808.11	1,748.30	59.81	30.231	
12,830.14	11,077.79	10,997.98	9,566.11	48.75	44.94	33.76	1,720.51	-179.83	1,807.36	1,747.22	60.14	30.051	
12,900.00	11,076.77	11,056.59	9,565.51	49.29	45.57	33.71	1,779.06	-182.24	1,805.82	1,744.99	60.83	29.685	
12,929.92	11,076.33	11,080.58	9,565.09	49.53	45.83	33.69	1,803.03	-183.28	1,805.32	1,744.20	61.12	29.536	
13,000.00	11,075.31	11,136.74	9,563.64	50.09	46.45	33.62	1,859.10	-185.80	1,804.53	1,742.74	61.80	29.201	
13,029.56	11,074.88	11,160.39	9,562.87	50.33	46.72	33.59	1,882.72	-186.87	1,804.37	1,742.28	62.09	29.061	
13,066.19	11,074.34	11,189.70	9,561.79	50.64	47.05	33.55	1,911.98	-188.20	1,804.29	1,741.84	62.45	28.892	
13,100.00	11,073.84	11,221.66	9,560.48	50.92	47.42	33.50	1,943.88	-189.65	1,804.33	1,741.50	62.83	28.716	
13,200.00	11,072.38	11,330.74	9,556.61	51.77	48.69	33.36	2,052.79	-194.42	1,804.10	1,739.92	64.18	28.110	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:
													0.00 usft
Survey Program: 157-MWD													Offset Well Error:
													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,229.49	11,071.95	11,359.98	9,555.72	52.03	49.03	33.33	2,081.99	-195.57	1,803.99	1,739.43	64.56	27.943	
13,300.00	11,070.92	11,463.55	9,554.37	52.66	50.27	33.26	2,185.48	-199.17	1,802.75	1,736.84	65.91	27.351	
13,330.01	11,070.48	11,510.40	9,554.53	52.93	50.84	33.24	2,232.30	-200.72	1,801.86	1,735.31	66.55	27.075	
13,400.00	11,069.45	11,550.71	9,554.54	53.56	51.33	33.23	2,272.59	-201.83	1,800.23	1,733.08	67.16	26.806	
13,420.97	11,069.15	11,562.79	9,554.42	53.76	51.48	33.23	2,284.67	-202.13	1,799.97	1,732.63	67.34	26.729	
13,473.15	11,068.38	11,596.03	9,553.79	54.25	51.89	33.21	2,317.90	-202.84	1,799.75	1,731.91	67.85	26.527	
13,500.00	11,067.99	11,616.50	9,553.29	54.50	52.14	33.20	2,338.36	-203.23	1,799.81	1,731.66	68.15	26.410	
13,522.97	11,067.65	11,634.01	9,552.82	54.72	52.36	33.19	2,355.86	-203.52	1,799.94	1,731.53	68.41	26.311	
13,600.00	11,066.53	11,709.59	9,550.47	55.45	53.31	33.16	2,431.39	-204.51	1,800.78	1,731.27	69.52	25.905	
13,700.00	11,065.06	11,841.06	9,549.00	56.43	54.97	33.17	2,562.84	-205.71	1,800.35	1,728.87	71.48	25.187	
13,729.76	11,064.63	11,873.09	9,548.83	56.72	55.38	33.17	2,594.87	-206.13	1,800.04	1,728.07	71.97	25.010	
13,800.00	11,063.60	11,937.94	9,548.35	57.43	56.23	33.17	2,659.71	-207.03	1,799.38	1,726.38	73.00	24.650	
13,829.62	11,063.16	11,965.76	9,548.08	57.73	56.59	33.16	2,687.53	-207.42	1,799.17	1,725.73	73.44	24.498	
13,900.00	11,062.13	12,044.04	9,547.32	58.44	57.62	33.15	2,765.80	-208.76	1,798.53	1,723.86	74.67	24.088	
13,929.66	11,061.70	12,072.94	9,547.05	58.75	58.00	33.14	2,794.69	-209.36	1,798.19	1,723.06	75.13	23.935	
14,000.00	11,060.67	12,135.19	9,546.19	59.48	58.83	33.12	2,856.91	-210.77	1,797.58	1,721.45	76.13	23.611	
14,028.51	11,060.25	12,152.00	9,545.88	59.78	59.06	33.11	2,873.72	-211.18	1,797.45	1,721.03	76.42	23.520	
14,045.92	11,060.00	12,169.70	9,545.49	59.96	59.30	33.10	2,891.41	-211.60	1,797.40	1,720.70	76.70	23.433	
14,100.00	11,059.21	12,205.27	9,544.44	60.53	59.78	33.08	2,926.95	-212.37	1,797.68	1,720.38	77.30	23.256	
14,123.01	11,058.87	12,220.40	9,543.87	60.78	59.99	33.07	2,942.07	-212.68	1,797.97	1,720.41	77.56	23.183	
14,200.00	11,057.74	12,319.85	9,540.49	61.60	61.34	33.02	3,041.45	-213.93	1,799.15	1,720.03	79.12	22.738	
14,300.00	11,056.28	12,427.70	9,539.75	62.68	62.81	33.06	3,149.30	-213.97	1,798.89	1,717.93	80.96	22.218	
14,329.51	11,055.85	12,458.21	9,539.55	63.01	63.23	33.07	3,179.81	-213.97	1,798.82	1,717.33	81.49	22.073	
14,400.00	11,054.81	12,532.83	9,539.19	63.78	64.27	33.10	3,254.42	-213.97	1,798.55	1,715.76	82.79	21.724	
14,425.97	11,054.43	12,549.80	9,539.09	64.07	64.50	33.11	3,271.39	-213.96	1,798.49	1,715.38	83.11	21.640	
14,428.46	11,054.40	12,551.49	9,539.08	64.10	64.53	33.11	3,273.09	-213.95	1,798.49	1,715.35	83.14	21.631	
14,500.00	11,053.35	12,600.05	9,538.38	64.90	65.20	33.13	3,321.64	-213.71	1,798.98	1,714.94	84.05	21.405	
14,600.00	11,051.89	12,721.00	9,538.22	66.02	66.90	33.22	3,442.56	-212.23	1,798.82	1,712.61	86.22	20.864	
14,629.61	11,051.45	12,758.78	9,539.04	66.36	67.43	33.27	3,480.32	-211.52	1,798.24	1,711.32	86.92	20.688	
14,639.14	11,051.31	12,763.08	9,539.07	66.47	67.49	33.27	3,484.62	-211.42	1,798.22	1,711.21	87.01	20.666	
14,700.00	11,050.42	12,816.00	9,538.39	67.16	68.23	33.33	3,537.51	-209.99	1,799.19	1,711.16	88.02	20.440	
14,721.99	11,050.10	12,816.00	9,538.39	67.42	68.23	33.33	3,537.51	-209.99	1,799.42	1,711.35	88.07	20.432	
14,800.00	11,048.96	12,853.79	9,537.19	68.32	68.77	33.36	3,575.26	-208.71	1,801.95	1,713.10	88.85	20.281	
14,900.00	11,047.50	13,105.03	9,540.29	69.48	72.35	33.75	3,826.19	-200.31	1,802.50	1,709.02	93.48	19.282	
14,930.59	11,047.05	13,133.44	9,541.68	69.84	72.76	33.80	3,854.57	-200.06	1,801.16	1,707.10	94.06	19.148	
15,000.00	11,046.03	13,198.00	9,544.57	70.65	73.70	33.88	3,919.06	-199.84	1,798.18	1,702.81	95.37	18.855	
15,030.59	11,045.58	13,198.00	9,544.57	71.02	73.70	33.88	3,919.06	-199.84	1,797.20	1,701.74	95.46	18.827	
15,100.00	11,044.57	13,248.04	9,545.69	71.84	74.43	33.92	3,969.08	-199.97	1,795.45	1,698.97	96.49	18.608	
15,129.76	11,044.13	13,262.52	9,545.65	72.20	74.65	33.93	3,983.56	-200.06	1,795.19	1,698.39	96.80	18.546	
15,200.00	11,043.10	13,352.01	9,544.94	73.03	75.96	33.93	4,073.03	-201.20	1,794.65	1,696.23	98.42	18.235	
15,229.64	11,042.67	13,441.38	9,546.56	73.39	77.29	33.95	4,162.35	-202.99	1,793.53	1,693.58	99.95	17.944	
15,300.00	11,041.64	13,500.89	9,548.25	74.24	78.18	33.96	4,221.79	-204.92	1,790.10	1,688.98	101.12	17.703	
15,331.06	11,041.19	13,513.00	9,548.42	74.62	78.36	33.96	4,233.90	-205.34	1,788.92	1,687.52	101.40	17.642	
15,400.00	11,040.18	13,548.40	9,548.33	75.45	78.89	33.94	4,269.28	-206.54	1,787.30	1,685.15	102.15	17.497	
15,429.75	11,039.74	13,562.26	9,548.05	75.82	79.10	33.93	4,283.13	-206.99	1,787.04	1,684.60	102.44	17.445	
15,444.01	11,039.53	13,568.91	9,547.86	75.99	79.20	33.92	4,289.77	-207.21	1,787.01	1,684.43	102.58	17.421	
15,500.00	11,038.71	13,608.00	9,546.10	76.67	79.78	33.88	4,328.80	-208.41	1,787.58	1,684.28	103.30	17.305	
15,522.41	11,038.39	13,608.00	9,546.10	76.95	79.78	33.88	4,328.80	-208.41	1,787.93	1,684.59	103.34	17.301	
15,600.00	11,037.25	13,680.62	9,541.84	77.91	80.88	33.78	4,401.27	-210.51	1,789.86	1,685.25	104.61	17.110	
15,622.43	11,036.92	13,703.24	9,540.54	78.18	81.22	33.75	4,423.84	-211.14	1,790.42	1,685.41	105.00	17.051	
15,700.00	11,035.79	13,769.81	9,536.38	79.14	82.23	33.66	4,490.25	-213.12	1,792.57	1,686.40	106.17	16.884	
15,723.14	11,035.45	13,789.66	9,535.02	79.43	82.53	33.63	4,510.05	-213.76	1,793.31	1,686.80	106.51	16.837	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:
Survey Program: 157-MWD													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,800.00	11,034.32	13,921.30	9,529.73	80.39	84.52	33.54	4,641.53	-215.63	1,794.70	1,685.88	108.82	16.493	
15,900.00	11,032.86	14,035.39	9,529.40	81.64	86.24	33.59	4,755.62	-215.57	1,794.14	1,683.09	111.05	16.156	
15,929.65	11,032.42	14,061.47	9,529.36	82.01	86.64	33.61	4,781.69	-215.49	1,794.01	1,682.42	111.58	16.078	
16,000.00	11,031.39	14,175.61	9,530.37	82.90	88.36	33.69	4,895.83	-214.98	1,793.26	1,679.48	113.79	15.760	
16,029.98	11,030.96	14,214.41	9,531.52	83.28	88.96	33.73	4,934.61	-214.87	1,792.34	1,677.77	114.57	15.644	
16,100.00	11,029.93	14,274.00	9,533.61	84.17	89.86	33.80	4,994.16	-214.81	1,789.86	1,673.99	115.87	15.447	
16,130.35	11,029.49	14,274.00	9,533.61	84.55	89.86	33.80	4,994.16	-214.81	1,789.30	1,673.33	115.97	15.430	
16,200.00	11,028.47	14,329.99	9,534.55	85.44	90.72	33.85	5,050.14	-214.75	1,788.03	1,670.87	117.17	15.261	
16,208.37	11,028.34	14,333.82	9,534.53	85.54	90.78	33.85	5,053.98	-214.74	1,788.02	1,670.77	117.25	15.249	
16,222.60	11,028.14	14,340.34	9,534.46	85.73	90.88	33.85	5,060.49	-214.72	1,788.05	1,670.65	117.41	15.230	
16,300.00	11,027.00	14,386.56	9,533.19	86.72	91.58	33.85	5,106.69	-214.56	1,789.25	1,670.87	118.38	15.114	
16,323.35	11,026.66	14,414.15	9,532.37	87.02	92.01	33.86	5,134.27	-214.39	1,789.73	1,670.81	118.92	15.049	
16,400.00	11,025.54	14,534.89	9,530.62	88.00	93.86	33.92	5,254.99	-213.16	1,790.62	1,669.33	121.29	14.763	
16,500.00	11,024.08	14,664.98	9,532.38	89.29	95.86	34.02	5,385.06	-212.66	1,788.87	1,664.92	123.94	14.433	
16,530.14	11,023.63	14,689.56	9,532.71	89.68	96.23	34.04	5,409.64	-212.73	1,788.25	1,663.77	124.48	14.366	
16,600.00	11,022.61	14,748.00	9,532.91	90.58	97.14	34.06	5,468.08	-213.23	1,787.18	1,661.47	125.71	14.217	
16,629.72	11,022.18	14,774.10	9,532.78	90.97	97.54	34.06	5,494.17	-213.58	1,786.85	1,660.61	126.24	14.154	
16,700.00	11,021.15	14,842.00	9,532.09	91.88	98.60	34.05	5,562.06	-214.79	1,786.20	1,658.62	127.59	14.000	
16,729.60	11,020.71	14,875.55	9,531.68	92.27	99.12	34.03	5,595.60	-215.52	1,785.92	1,657.69	128.23	13.927	
16,800.00	11,019.68	14,952.23	9,531.07	93.19	100.32	34.01	5,672.25	-217.43	1,784.85	1,655.14	129.71	13.760	
16,829.84	11,019.25	14,974.63	9,530.81	93.58	100.67	34.00	5,694.65	-218.03	1,784.47	1,654.30	130.17	13.709	
16,900.00	11,018.22	15,032.00	9,529.60	94.49	101.56	33.96	5,751.98	-219.60	1,784.07	1,652.77	131.30	13.588	
16,929.42	11,017.79	15,055.60	9,528.94	94.88	101.93	33.95	5,775.56	-220.26	1,784.05	1,652.29	131.76	13.540	
17,000.00	11,016.76	15,128.51	9,526.90	95.81	103.08	33.89	5,848.41	-222.38	1,784.00	1,650.88	133.13	13.401	
17,029.34	11,016.33	15,178.88	9,525.86	96.19	103.87	33.85	5,898.74	-223.92	1,783.78	1,649.76	134.02	13.310	
17,100.00	11,015.29	15,308.33	9,526.02	97.12	105.91	33.79	6,028.09	-228.74	1,781.73	1,645.44	136.29	13.073	
17,130.69	11,014.84	15,353.14	9,526.91	97.53	106.61	33.77	6,072.85	-230.87	1,780.17	1,643.08	137.09	12.985	
17,200.00	11,013.83	15,410.00	9,528.52	98.44	107.51	33.75	6,129.62	-233.69	1,776.19	1,637.92	138.27	12.846	
17,230.97	11,013.38	15,440.75	9,529.31	98.86	108.00	33.74	6,160.32	-235.15	1,774.48	1,635.60	138.88	12.777	
17,300.00	11,012.37	15,476.48	9,529.63	99.77	108.56	33.72	6,196.01	-236.61	1,771.87	1,632.14	139.72	12.681	
17,330.34	11,011.92	15,505.00	9,529.44	100.17	109.02	33.70	6,224.52	-237.58	1,771.22	1,630.94	140.28	12.626	
17,400.00	11,010.90	15,580.02	9,529.02	101.10	110.20	33.66	6,299.49	-240.15	1,769.72	1,628.01	141.71	12.488	
17,430.02	11,010.46	15,598.79	9,529.11	101.50	110.50	33.66	6,318.25	-240.86	1,768.80	1,626.68	142.12	12.446	
17,500.00	11,009.44	15,637.19	9,528.84	102.43	111.11	33.63	6,356.63	-242.14	1,767.53	1,624.56	142.97	12.363	
17,519.58	11,009.15	15,645.63	9,528.64	102.69	111.24	33.63	6,365.06	-242.38	1,767.47	1,624.31	143.16	12.346	
17,522.62	11,009.11	15,646.94	9,528.61	102.73	111.26	33.63	6,366.37	-242.41	1,767.47	1,624.28	143.19	12.344	
17,600.00	11,007.97	15,695.00	9,526.43	103.77	112.02	33.59	6,414.37	-243.38	1,768.65	1,624.50	144.15	12.270	
17,622.05	11,007.65	15,695.00	9,526.43	104.06	112.02	33.59	6,414.37	-243.38	1,769.17	1,625.00	144.17	12.271	
17,700.00	11,006.51	15,761.30	9,522.22	105.11	113.07	33.52	6,480.53	-244.38	1,772.00	1,626.60	145.40	12.187	
17,722.04	11,006.19	15,783.51	9,520.80	105.40	113.42	33.49	6,502.69	-244.75	1,772.80	1,627.00	145.80	12.159	
17,800.00	11,005.05	15,845.17	9,516.96	106.45	114.40	33.44	6,564.23	-245.16	1,775.98	1,629.01	146.97	12.084	
17,900.00	11,003.58	16,040.41	9,515.20	107.79	117.46	33.67	6,759.24	-239.06	1,777.51	1,626.28	151.22	11.754	
17,929.82	11,003.15	16,067.92	9,515.79	108.19	117.89	33.71	6,786.72	-238.14	1,777.29	1,625.41	151.88	11.702	
17,966.15	11,002.61	16,091.74	9,516.17	108.68	118.26	33.75	6,810.53	-237.39	1,777.17	1,624.69	152.48	11.655	
18,000.00	11,002.12	16,112.34	9,516.29	109.14	118.59	33.78	6,831.12	-236.77	1,777.32	1,624.33	152.99	11.618	
18,022.50	11,001.79	16,126.03	9,516.26	109.44	118.80	33.80	6,844.80	-236.36	1,777.55	1,624.24	153.32	11.594	
18,100.00	11,000.65	16,179.18	9,515.38	110.49	119.64	33.85	6,897.92	-234.85	1,779.21	1,624.67	154.54	11.513	
18,123.10	11,000.32	16,209.39	9,514.73	110.80	120.11	33.87	6,928.11	-234.06	1,779.78	1,624.59	155.19	11.468	
18,200.00	10,999.19	16,311.30	9,513.28	111.85	121.72	33.95	7,030.00	-231.93	1,781.00	1,623.60	157.40	11.315	
18,222.90	10,998.86	16,342.11	9,513.06	112.16	122.21	33.98	7,060.80	-231.47	1,781.15	1,623.08	158.07	11.268	
18,300.00	10,997.73	16,391.60	9,512.64	113.20	122.99	34.01	7,110.28	-230.67	1,781.91	1,622.69	159.21	11.192	
18,322.02	10,997.41	16,403.13	9,512.41	113.50	123.17	34.02	7,121.80	-230.38	1,782.40	1,622.92	159.48	11.176	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Offset Well Error:					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
18,400.00	10,996.26	16,452.00	9,510.84	114.56	123.94	34.06	7,170.62	-228.71	1,785.25	1,624.67	160.58	11.117	
18,423.32	10,995.92	16,452.00	9,510.84	114.88	123.94	34.06	7,170.62	-228.71	1,786.38	1,625.81	160.57	11.125	
18,500.00	10,994.80	16,731.86	9,511.67	115.92	128.35	34.53	7,449.78	-216.76	1,790.66	1,623.95	166.71	10.741	
18,600.00	10,993.34	16,808.99	9,515.35	117.29	129.58	34.61	7,526.82	-217.53	1,785.43	1,616.78	168.65	10.587	
18,630.74	10,992.89	16,831.00	9,515.98	117.71	129.94	34.62	7,548.82	-218.01	1,784.10	1,614.91	168.18	10.545	
18,700.00	10,991.87	16,891.77	9,516.95	118.65	130.91	34.62	7,609.55	-219.94	1,781.42	1,610.93	170.49	10.449	
18,730.41	10,991.43	16,917.88	9,517.05	119.07	131.33	34.60	7,635.63	-221.04	1,780.37	1,609.33	171.03	10.409	
18,800.00	10,990.41	16,964.51	9,516.73	120.02	132.08	34.56	7,682.21	-223.16	1,778.46	1,606.42	172.04	10.338	
18,830.01	10,989.97	16,983.85	9,516.40	120.43	132.39	34.54	7,701.54	-223.98	1,777.93	1,605.48	172.45	10.310	
18,900.00	10,988.94	17,036.47	9,514.96	121.39	133.24	34.49	7,754.09	-226.08	1,777.37	1,603.88	173.49	10.245	
18,929.44	10,988.51	17,071.26	9,513.89	121.80	133.80	34.44	7,788.83	-227.56	1,777.19	1,603.08	174.11	10.207	
19,000.00	10,987.48	17,186.80	9,511.14	122.76	135.67	34.29	7,904.18	-233.60	1,776.09	1,600.09	176.00	10.091	
19,030.14	10,987.04	17,204.09	9,511.08	123.18	135.95	34.27	7,921.43	-234.69	1,775.02	1,598.64	176.38	10.063	
19,100.00	10,986.02	17,255.97	9,510.36	124.14	136.79	34.20	7,973.22	-237.60	1,773.21	1,595.81	177.40	9.995	
19,129.94	10,985.58	17,271.39	9,509.94	124.55	137.04	34.18	7,988.62	-238.33	1,772.87	1,595.13	177.73	9.975	
19,150.04	10,985.28	17,281.75	9,509.60	124.83	137.21	34.17	7,998.97	-238.78	1,772.77	1,594.82	177.95	9.962	
19,200.00	10,984.55	17,312.10	9,508.35	125.51	137.70	34.13	8,029.27	-239.91	1,773.01	1,594.46	178.55	9.930	
19,300.00	10,983.09	17,441.40	9,505.59	126.89	139.78	34.07	8,158.50	-242.56	1,772.80	1,591.75	181.05	9.792	
19,329.67	10,982.66	17,471.89	9,505.30	127.30	140.27	34.07	8,188.99	-242.99	1,772.57	1,590.89	181.68	9.757	
19,400.00	10,981.63	17,571.06	9,504.80	128.27	141.87	34.06	8,288.14	-244.90	1,771.62	1,588.00	183.62	9.649	
19,429.96	10,981.19	17,603.91	9,504.88	128.69	142.40	34.05	8,320.98	-245.90	1,770.82	1,586.55	184.27	9.610	
19,500.00	10,980.16	17,657.92	9,504.62	129.66	143.27	34.02	8,374.95	-247.60	1,769.33	1,583.91	185.42	9.542	
19,529.92	10,979.72	17,685.00	9,504.27	130.07	143.71	34.01	8,402.02	-248.45	1,768.89	1,582.94	185.96	9.512	
19,600.00	10,978.70	17,783.57	9,503.61	131.04	145.30	33.95	8,500.52	-251.90	1,767.42	1,579.65	187.76	9.413	
19,630.13	10,978.26	17,805.21	9,503.60	131.46	145.65	33.94	8,522.15	-252.71	1,766.56	1,578.33	188.23	9.385	
19,700.00	10,977.23	17,859.44	9,503.28	132.42	146.53	33.91	8,576.35	-254.58	1,765.03	1,575.65	189.37	9.320	
19,729.85	10,976.80	17,884.23	9,502.99	132.84	146.93	33.89	8,601.12	-255.37	1,764.55	1,574.67	189.88	9.293	
19,800.00	10,975.77	17,950.22	9,502.03	133.81	148.00	33.85	8,667.07	-257.50	1,763.60	1,572.43	191.18	9.225	
19,829.69	10,975.34	17,979.15	9,501.54	134.22	148.47	33.83	8,695.98	-258.45	1,763.25	1,571.51	191.74	9.196	
19,900.00	10,974.31	18,053.41	9,500.62	135.20	149.67	33.79	8,770.20	-260.53	1,762.33	1,569.14	193.19	9.122	
19,929.75	10,973.87	18,080.00	9,500.42	135.61	150.10	33.78	8,796.79	-261.13	1,761.93	1,568.18	193.75	9.094	
20,000.00	10,972.84	18,136.14	9,499.76	136.59	151.01	33.77	8,852.91	-262.18	1,761.34	1,566.40	194.94	9.035	
20,029.50	10,972.41	18,160.00	9,499.38	137.00	151.40	33.77	8,876.77	-262.54	1,761.26	1,565.81	195.44	9.012	
20,051.88	10,972.08	18,180.36	9,499.05	137.31	151.73	33.76	8,897.12	-262.76	1,761.25	1,565.38	195.87	8.992	
20,100.00	10,971.38	18,224.84	9,498.59	137.98	152.44	33.78	8,941.60	-262.75	1,761.30	1,564.45	196.85	8.948	
20,123.19	10,971.04	18,246.27	9,498.49	138.30	152.79	33.79	8,963.03	-262.51	1,761.36	1,564.02	197.34	8.926	
20,200.00	10,969.92	18,320.59	9,498.31	139.37	153.98	33.86	9,037.34	-261.23	1,761.66	1,562.59	199.07	8.849	
20,300.00	10,968.45	18,469.03	9,500.57	140.77	156.37	34.05	9,185.72	-258.52	1,760.61	1,558.12	202.49	8.695	
20,330.11	10,968.01	18,491.64	9,501.21	141.19	156.73	34.08	9,208.32	-258.10	1,759.98	1,556.89	203.09	8.666	
20,400.00	10,966.99	18,541.00	9,502.19	142.16	157.52	34.14	9,257.66	-257.22	1,759.03	1,554.65	204.38	8.607	
20,429.60	10,966.55	18,561.69	9,502.40	142.58	157.86	34.17	9,278.34	-256.84	1,758.87	1,553.97	204.90	8.584	
20,438.23	10,966.43	18,566.97	9,502.43	142.70	157.94	34.17	9,283.62	-256.73	1,758.86	1,553.83	205.04	8.578	
20,500.00	10,965.52	18,604.80	9,502.33	143.56	158.55	34.21	9,321.44	-255.92	1,759.28	1,553.30	205.98	8.541	
20,522.45	10,965.20	18,635.00	9,501.86	143.87	159.03	34.24	9,351.63	-255.17	1,759.77	1,553.09	206.68	8.515	
20,600.00	10,964.06	18,679.35	9,500.83	144.96	159.75	34.27	9,395.96	-254.03	1,761.56	1,553.83	207.73	8.480	
20,700.00	10,962.60	18,860.24	9,499.23	146.36	162.66	34.40	9,576.78	-251.31	1,762.63	1,550.90	211.73	8.325	
20,729.79	10,962.16	18,886.93	9,499.58	146.78	163.09	34.43	9,603.47	-251.24	1,762.13	1,549.76	212.37	8.298	
20,800.00	10,961.13	18,943.71	9,500.09	147.76	164.01	34.47	9,660.25	-251.09	1,761.20	1,547.46	213.74	8.240	
20,829.65	10,960.70	18,964.42	9,500.15	148.17	164.35	34.48	9,680.96	-250.94	1,761.03	1,546.78	214.25	8.220	
20,849.00	10,960.42	18,977.93	9,500.14	148.45	164.57	34.49	9,694.47	-250.81	1,760.99	1,546.42	214.58	8.207	
20,900.00	10,959.67	19,017.00	9,499.94	149.16	165.20	34.52	9,733.53	-250.25	1,761.22	1,545.71	215.52	8.172	
20,922.79	10,959.34	19,032.38	9,499.80	149.48	165.44	34.53	9,748.91	-249.98	1,761.45	1,545.56	215.89	8.159	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21 B1MD St Com #2H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 157-MWD													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Rule Assigned:			Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
21,000.00	10,958.21	19,098.92	9,498.86	150.56	166.52	34.58	9,815.43	-248.82	1,762.53	1,545.09	217.44	8.106	
21,023.02	10,957.87	19,122.00	9,498.43	150.89	166.89	34.59	9,838.50	-248.42	1,762.93	1,544.96	217.97	8.088	
21,100.00	10,956.74	19,207.00	9,497.29	151.97	168.26	34.65	9,923.49	-247.18	1,763.82	1,543.90	219.92	8.020	
21,122.68	10,956.41	19,230.59	9,497.03	152.29	168.64	34.66	9,947.07	-246.86	1,764.03	1,543.57	220.47	8.001	
21,200.00	10,955.28	19,285.97	9,496.03	153.37	169.54	34.70	10,002.43	-245.82	1,765.44	1,543.67	221.76	7.961	
21,222.32	10,954.95	19,302.00	9,495.63	153.69	169.80	34.71	10,018.45	-245.44	1,766.02	1,543.89	222.14	7.950	
21,300.00	10,953.81	19,370.08	9,493.51	154.78	170.90	34.74	10,086.48	-243.95	1,768.40	1,544.73	223.68	7.906	
21,322.12	10,953.49	19,389.48	9,492.78	155.09	171.21	34.75	10,105.86	-243.59	1,769.16	1,545.05	224.11	7.894	
21,400.00	10,952.35	19,455.75	9,489.93	156.18	172.28	34.76	10,172.06	-242.40	1,772.13	1,546.59	225.54	7.857	
21,405.51	10,952.27	19,460.42	9,489.72	156.26	172.36	34.76	10,176.73	-242.31	1,772.35	1,546.72	225.64	7.855	
21,423.90	10,952.00	19,548.46	9,486.98	156.52	173.79	34.77	10,264.71	-241.47	1,772.88	1,545.34	227.54	7.792 SF	



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21B2NC St Com #1H - OH - OH

Survey Program: 167-MWD													Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	89.62	3.30	499.90	499.99					
100.00	100.00	89.79	89.79	0.26	0.14	89.61	3.37	500.01	500.02	499.63	0.39	1,272.055		
200.00	200.00	189.43	189.43	0.62	0.33	89.59	3.56	500.36	500.38	499.43	0.95	529.141		
300.00	300.00	291.52	291.52	0.98	0.68	89.60	3.46	500.42	500.43	498.77	1.66	301.729		
400.00	400.00	392.04	392.03	1.33	1.03	89.52	4.21	500.21	500.23	497.86	2.37	211.440		
432.41	432.41	423.42	423.41	1.45	1.14	89.49	4.44	500.17	500.19	497.60	2.59	192.959		
500.00	500.00	488.40	488.40	1.69	1.37	89.49	4.49	500.33	500.36	497.29	3.06	163.294	ES	
600.00	600.00	585.32	585.31	2.05	1.72	89.50	4.33	501.23	501.28	497.52	3.77	133.094		
700.00	700.00	686.90	686.89	2.41	2.08	89.55	3.96	502.23	502.26	497.77	4.49	111.976		
800.00	800.00	787.13	787.11	2.77	2.43	89.61	3.43	502.95	502.98	497.78	5.20	96.722		
900.00	900.00	885.67	885.64	3.13	2.78	89.65	3.08	503.86	503.90	497.99	5.91	85.266		
1,000.00	1,000.00	984.70	984.67	3.48	3.14	89.67	2.94	505.03	505.08	498.46	6.62	76.278		
1,100.00	1,100.00	1,084.29	1,084.25	3.84	3.50	89.69	2.75	506.32	506.38	499.04	7.34	69.024		
1,200.00	1,200.00	1,184.59	1,184.54	4.20	3.85	89.72	2.50	507.66	507.71	499.66	8.05	63.041		
1,300.00	1,300.00	1,285.47	1,285.42	4.56	4.22	89.74	2.31	508.86	508.90	500.12	8.77	58.005		
1,400.00	1,400.00	1,387.73	1,387.67	4.92	4.58	89.75	2.19	509.80	509.82	500.32	9.50	53.676		
1,500.00	1,500.00	1,490.68	1,490.62	5.28	4.95	89.76	2.15	510.17	510.18	499.95	10.23	49.895		
1,600.00	1,600.00	1,588.56	1,588.50	5.64	5.30	89.75	2.23	510.39	510.40	499.46	10.93	46.684		
1,700.00	1,700.00	1,685.69	1,685.62	5.99	5.65	89.72	2.53	511.13	511.17	499.53	11.64	43.923		
1,800.00	1,800.00	1,786.61	1,786.54	6.35	6.01	89.68	2.85	512.16	512.18	499.83	12.36	41.449		
1,900.00	1,900.00	1,884.21	1,884.14	6.71	6.36	89.69	2.80	513.01	513.06	500.00	13.06	39.273		
2,000.00	2,000.00	1,976.40	1,976.30	7.07	6.69	89.73	2.44	514.94	515.16	501.41	13.75	37.466		
2,100.00	2,099.99	2,061.13	2,060.95	7.42	6.99	-170.36	1.91	518.50	520.66	506.27	14.39	36.185		
2,200.00	2,199.91	2,143.99	2,143.59	7.76	7.30	-170.33	1.38	524.58	531.85	516.85	15.00	35.460		
2,300.00	2,299.69	2,235.13	2,234.26	8.10	7.63	-170.31	0.60	533.69	548.21	532.56	15.65	35.033		
2,400.00	2,399.27	2,332.87	2,331.46	8.45	7.99	-170.22	-1.26	543.79	567.47	551.13	16.34	34.734		
2,500.00	2,498.57	2,429.35	2,427.37	8.80	8.35	-170.08	-4.01	553.87	589.36	572.33	17.02	34.625		
2,565.04	2,562.98	2,491.45	2,489.09	9.03	8.58	-170.00	-5.85	560.47	605.07	587.60	17.46	34.647		
2,600.00	2,597.56	2,524.74	2,522.17	9.15	8.71	-169.99	-6.84	564.06	613.84	596.14	17.70	34.678		
2,700.00	2,696.47	2,622.31	2,619.13	9.52	9.08	-169.95	-9.68	574.62	638.99	620.59	18.39	34.741		
2,800.00	2,795.38	2,721.51	2,717.75	9.88	9.45	-169.96	-12.16	585.06	663.83	644.74	19.10	34.761		
2,900.00	2,894.28	2,822.18	2,817.88	10.25	9.83	-170.00	-14.29	595.22	688.27	668.45	19.81	34.741		
3,000.00	2,993.19	2,923.68	2,918.91	10.62	10.22	-170.05	-16.25	604.84	712.10	691.57	20.53	34.682		
3,100.00	3,092.10	3,009.09	3,003.89	11.00	10.55	-170.09	-17.98	613.16	736.22	715.06	21.16	34.792		
3,200.00	3,191.01	3,090.11	3,084.31	11.38	10.86	-170.07	-20.17	622.72	762.31	740.56	21.76	35.039		
3,300.00	3,289.91	3,180.62	3,173.93	11.76	11.21	-170.02	-23.20	634.97	790.07	767.66	22.41	35.251		
3,400.00	3,388.82	3,281.96	3,274.31	12.15	11.61	-169.93	-26.97	648.37	817.55	794.41	23.15	35.321		
3,500.00	3,487.73	3,394.18	3,385.65	12.53	12.05	-169.85	-31.03	661.88	843.90	819.95	23.95	35.235		
3,600.00	3,586.64	3,508.16	3,499.01	12.92	12.49	-169.84	-34.19	673.28	868.24	843.48	24.76	35.068		
3,700.00	3,685.55	3,621.73	3,612.18	13.31	12.93	-169.89	-36.31	682.53	890.76	865.21	25.56	34.854		
3,800.00	3,784.45	3,720.19	3,710.39	13.70	13.30	-169.97	-37.58	689.43	912.18	885.91	26.27	34.724		
3,900.00	3,883.36	3,814.72	3,804.65	14.09	13.65	-170.04	-38.89	696.33	933.89	906.93	26.96	34.638		
4,000.00	3,982.27	3,902.87	3,892.52	14.49	13.99	-170.10	-40.17	703.28	956.18	928.56	27.62	34.621		
4,100.00	4,081.18	3,989.09	3,978.38	14.88	14.32	-170.16	-41.38	711.05	979.56	951.30	28.26	34.661		
4,200.00	4,180.09	4,077.11	4,065.94	15.28	14.66	-170.21	-42.77	719.93	1,003.98	975.06	28.91	34.723		
4,300.00	4,278.99	4,166.17	4,154.44	15.67	15.01	-170.20	-45.06	729.60	1,029.16	999.59	29.57	34.800		
4,400.00	4,377.90	4,264.56	4,252.14	16.07	15.39	-170.15	-48.43	740.81	1,054.86	1,024.57	30.29	34.820		
4,500.00	4,476.81	4,373.70	4,360.63	16.47	15.82	-170.12	-51.64	752.27	1,079.70	1,048.61	31.08	34.734		
4,600.00	4,575.72	4,482.53	4,468.94	16.87	16.24	-170.13	-54.17	762.49	1,103.44	1,071.57	31.87	34.624		
4,700.00	4,674.63	4,591.57	4,577.58	17.27	16.66	-170.17	-56.27	771.59	1,126.17	1,093.52	32.65	34.491		
4,800.00	4,773.53	4,697.30	4,683.01	17.67	17.06	-170.22	-57.91	779.49	1,148.04	1,114.63	33.41	34.361		
4,900.00	4,872.44	4,781.00	4,766.50	18.08	17.37	-170.27	-58.94	785.20	1,169.41	1,135.36	34.05	34.348		

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21B2NC St Com #1H - OH - OH													Offset Site Error:
Survey Program: 167-MWD													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,971.35	4,872.82	4,858.05	18.48	17.73	-170.32	-60.14	792.23	1,191.51	1,156.79	34.73	34.310	
5,100.00	5,070.26	4,947.95	4,932.81	18.88	18.02	-170.35	-61.43	799.49	1,215.54	1,180.24	35.30	34.432	
5,200.00	5,169.16	5,037.85	5,022.14	19.29	18.37	-170.36	-63.33	809.44	1,240.91	1,204.94	35.97	34.497	
5,300.00	5,268.07	5,134.55	5,118.21	19.69	18.75	-170.35	-65.76	820.22	1,266.37	1,229.68	36.69	34.519	
5,400.00	5,366.98	5,233.38	5,216.39	20.09	19.14	-170.33	-68.56	831.17	1,291.76	1,254.35	37.41	34.525	
5,500.00	5,465.89	5,333.11	5,315.48	20.50	19.54	-170.31	-71.54	842.01	1,316.95	1,278.80	38.15	34.520	
5,600.00	5,564.80	5,432.15	5,413.91	20.91	19.93	-170.28	-74.54	852.57	1,341.94	1,303.06	38.88	34.514	
5,700.00	5,663.70	5,531.10	5,512.26	21.31	20.32	-170.26	-77.41	862.97	1,366.78	1,327.17	39.61	34.504	
5,800.00	5,762.61	5,629.84	5,610.44	21.72	20.71	-170.25	-80.12	873.21	1,391.48	1,351.14	40.34	34.493	
5,900.00	5,861.52	5,728.63	5,708.68	22.13	21.09	-170.24	-82.62	883.32	1,416.05	1,374.98	41.07	34.478	
6,000.00	5,960.43	5,829.07	5,808.58	22.53	21.49	-170.25	-84.97	893.42	1,440.44	1,398.63	41.81	34.452	
6,100.00	6,059.34	5,930.83	5,909.83	22.94	21.88	-170.26	-87.18	903.39	1,464.59	1,422.03	42.56	34.414	
6,200.00	6,158.24	6,043.99	6,022.50	23.35	22.32	-170.29	-89.27	913.65	1,488.03	1,444.65	43.37	34.307	
6,300.00	6,257.15	6,150.21	6,128.36	23.76	22.73	-170.32	-90.91	922.26	1,510.51	1,466.36	44.15	34.217	
6,400.00	6,356.06	6,246.17	6,223.99	24.16	23.10	-170.33	-93.05	929.93	1,532.89	1,488.04	44.86	34.173	
6,500.00	6,454.97	6,347.30	6,324.74	24.57	23.48	-170.31	-96.08	938.04	1,555.31	1,509.71	45.60	34.109	
6,600.00	6,553.87	6,455.60	6,432.71	24.98	23.89	-170.31	-98.80	946.12	1,577.17	1,530.79	46.38	34.005	
6,700.00	6,652.78	6,550.88	6,527.73	25.39	24.25	-170.33	-100.59	952.84	1,598.64	1,551.56	47.09	33.950	
6,800.00	6,751.69	6,639.28	6,615.87	25.80	24.59	-170.36	-101.93	959.52	1,620.60	1,572.85	47.75	33.936	
6,900.00	6,850.60	6,735.10	6,711.37	26.21	24.95	-170.40	-103.13	967.19	1,643.00	1,594.53	48.46	33.901	
7,000.00	6,949.51	6,838.17	6,814.12	26.62	25.34	-170.43	-104.62	975.19	1,665.17	1,615.95	49.22	33.833	
7,100.00	7,048.41	6,942.52	6,918.18	27.03	25.74	-170.46	-106.28	982.93	1,686.99	1,637.01	49.98	33.756	
7,200.00	7,147.32	7,047.64	7,023.03	27.44	26.14	-170.50	-107.73	990.27	1,708.39	1,657.65	50.74	33.670	
7,300.00	7,246.23	7,129.36	7,104.53	27.85	26.45	-170.53	-108.79	996.06	1,729.93	1,678.56	51.37	33.676	
7,400.00	7,345.14	7,206.36	7,181.27	28.26	26.74	-170.55	-109.97	1,002.43	1,752.59	1,700.62	51.97	33.725	
7,500.00	7,444.05	7,291.66	7,266.18	28.67	27.07	-170.56	-111.49	1,010.42	1,776.30	1,723.68	52.61	33.761	
7,600.00	7,542.95	7,392.02	7,366.06	29.08	27.46	-170.57	-113.61	1,019.90	1,800.10	1,746.74	53.35	33.738	
7,700.00	7,641.86	7,494.50	7,468.08	29.49	27.86	-170.57	-116.06	1,029.36	1,823.69	1,769.58	54.11	33.704	
7,800.00	7,740.77	7,599.44	7,572.58	29.90	28.26	-170.57	-118.36	1,038.65	1,846.92	1,792.04	54.88	33.655	
7,900.00	7,839.68	7,705.83	7,678.57	30.31	28.67	-170.59	-120.33	1,047.59	1,869.71	1,814.06	55.65	33.595	
8,000.00	7,938.58	7,813.09	7,785.49	30.73	29.08	-170.62	-121.89	1,056.06	1,892.01	1,835.57	56.43	33.526	
8,100.00	8,037.49	7,929.97	7,902.05	31.14	29.52	-170.66	-123.20	1,064.41	1,913.58	1,856.31	57.27	33.416	
8,200.00	8,136.40	8,040.05	8,011.92	31.55	29.93	-170.70	-124.27	1,071.20	1,934.17	1,876.12	58.05	33.316	
8,300.00	8,235.31	8,129.73	8,101.43	31.96	30.26	-170.73	-125.37	1,076.75	1,954.81	1,896.08	58.73	33.283	
8,400.00	8,334.22	8,227.13	8,198.60	32.37	30.63	-170.75	-126.96	1,083.16	1,975.82	1,916.37	59.45	33.234	
8,500.00	8,433.12	8,360.42	8,331.66	32.79	31.12	-170.77	-129.50	1,090.56	1,995.82	1,935.45	60.36	33.063	
19,000.00	10,987.48	18,092.51	10,138.29	122.76	136.59	69.89	7,876.13	1,061.16	2,443.50	2,197.33	246.17	9.926	
19,029.93	10,987.04	18,112.91	10,138.14	123.18	136.91	69.89	7,896.53	1,061.00	2,443.42	2,196.55	246.88	9.897	
19,034.58	10,986.97	18,116.08	10,138.12	123.24	136.97	69.89	7,899.70	1,060.98	2,443.42	2,196.44	246.98	9.893	
19,100.00	10,986.02	18,163.00	10,137.58	124.14	137.71	69.90	7,946.61	1,060.88	2,443.70	2,195.16	248.54	9.832	
19,122.59	10,985.69	18,182.78	10,137.31	124.45	138.03	69.90	7,966.39	1,060.91	2,443.90	2,194.76	249.14	9.809	
19,200.00	10,984.55	18,258.00	10,136.42	125.51	139.23	69.91	8,041.60	1,061.05	2,444.54	2,193.22	251.32	9.727	
19,222.44	10,984.22	18,281.96	10,136.17	125.82	139.61	69.92	8,065.56	1,061.10	2,444.73	2,192.74	251.99	9.702	
19,300.00	10,983.09	18,354.00	10,135.42	126.89	140.76	69.93	8,137.60	1,061.46	2,445.56	2,191.44	254.12	9.624	
19,322.15	10,982.77	18,371.87	10,135.23	127.20	141.05	69.93	8,155.46	1,061.59	2,445.85	2,191.16	254.68	9.604	
19,400.00	10,981.63	18,448.00	10,134.43	128.27	142.27	69.95	8,231.59	1,062.20	2,446.91	2,190.02	256.89	9.525	
19,422.48	10,981.30	18,472.04	10,134.20	128.58	142.65	69.96	8,255.62	1,062.40	2,447.22	2,189.65	257.57	9.501	
19,500.00	10,980.16	18,557.35	10,133.61	129.66	144.01	69.98	8,340.94	1,062.95	2,448.06	2,188.11	259.95	9.418	
19,522.26	10,979.84	18,577.35	10,133.51	129.96	144.33	69.99	8,360.93	1,063.08	2,448.29	2,187.74	260.55	9.397	
19,600.00	10,978.70	18,648.58	10,133.23	131.04	145.47	70.01	8,432.15	1,063.72	2,449.25	2,186.56	262.69	9.324	
19,622.30	10,978.37	18,671.58	10,133.17	131.35	145.84	70.02	8,455.16	1,063.96	2,449.55	2,186.20	263.35	9.301	
19,700.00	10,977.23	18,751.72	10,133.11	132.42	147.12	70.06	8,535.29	1,064.80	2,450.54	2,184.87	265.66	9.224	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Charolais 28 21B2NC St Com #1H - OH - OH													Offset Site Error:	0.00 usft	
Survey Program: 167-MWD				Offset			Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
19,722.41	10,976.91	18,774.83	10,133.13	132.74	147.49	70.07	8,558.40	1,065.04	2,450.81	2,184.48	266.33	9.202			
19,800.00	10,975.77	18,854.52	10,133.38	133.81	148.77	70.11	8,638.08	1,065.88	2,451.69	2,183.05	268.64	9.126			
19,822.50	10,975.44	18,877.43	10,133.53	134.12	149.14	70.13	8,660.99	1,066.14	2,451.94	2,182.63	269.31	9.105			
19,900.00	10,974.31	18,957.75	10,134.33	135.20	150.42	70.18	8,741.30	1,067.10	2,452.75	2,181.10	271.65	9.029			
19,922.80	10,973.97	18,982.00	10,134.66	135.52	150.81	70.20	8,765.55	1,067.40	2,452.97	2,180.62	272.35	9.007			
20,000.00	10,972.84	19,069.26	10,136.23	136.59	152.21	70.28	8,852.79	1,068.42	2,453.56	2,178.72	274.84	8.927			
20,100.00	10,971.38	19,217.87	10,140.41	137.98	154.60	70.43	9,001.34	1,068.99	2,453.31	2,174.63	278.68	8.803			
20,130.14	10,970.94	19,254.94	10,141.34	138.40	155.20	70.47	9,038.39	1,068.59	2,452.84	2,173.15	279.69	8.770			
20,200.00	10,969.92	19,341.89	10,142.19	139.37	156.60	70.50	9,125.31	1,066.68	2,451.35	2,169.35	282.00	8.693			
20,231.24	10,969.46	19,378.95	10,142.46	139.81	157.20	70.51	9,162.36	1,065.67	2,450.55	2,167.55	283.00	8.659			
20,300.00	10,968.45	19,443.21	10,142.80	140.77	158.24	70.53	9,226.59	1,063.77	2,448.71	2,163.76	284.95	8.594			
20,331.52	10,967.99	19,469.91	10,142.70	141.21	158.67	70.53	9,253.28	1,062.98	2,447.95	2,162.16	285.79	8.565			
20,400.00	10,966.99	19,542.96	10,142.03	142.16	159.85	70.53	9,326.29	1,060.77	2,446.40	2,158.57	287.83	8.499			
20,431.25	10,966.53	19,581.51	10,141.89	142.60	160.47	70.53	9,364.82	1,059.53	2,445.58	2,156.74	288.84	8.467			
20,500.00	10,965.52	19,643.33	10,141.76	143.56	161.47	70.54	9,426.61	1,057.54	2,443.72	2,152.98	290.74	8.405			
20,531.53	10,965.06	19,670.52	10,141.59	144.00	161.91	70.54	9,453.79	1,056.70	2,442.96	2,151.37	291.60	8.378			
20,600.00	10,964.06	19,715.27	10,141.19	144.96	162.63	70.54	9,498.52	1,055.50	2,441.65	2,148.42	293.23	8.327			
20,630.76	10,963.61	19,733.30	10,141.01	145.39	162.92	70.54	9,516.54	1,055.18	2,441.31	2,147.39	293.93	8.306			
20,672.92	10,962.99	19,758.00	10,140.74	145.98	163.32	70.54	9,541.25	1,054.89	2,441.11	2,146.24	294.87	8.279			
20,700.00	10,962.60	19,780.00	10,140.48	146.36	163.68	70.54	9,563.24	1,054.78	2,441.15	2,145.58	295.57	8.259			
20,800.00	10,961.13	19,886.24	10,139.48	147.76	165.40	70.56	9,669.48	1,054.28	2,441.31	2,142.72	298.59	8.176			
20,829.31	10,960.70	19,916.60	10,139.13	148.17	165.89	70.56	9,699.84	1,054.01	2,441.25	2,141.79	299.46	8.152			
20,900.00	10,959.67	19,988.16	10,137.75	149.16	167.04	70.55	9,771.37	1,053.12	2,441.07	2,139.56	301.51	8.096			
20,929.58	10,959.24	20,016.21	10,137.15	149.58	167.50	70.54	9,799.41	1,052.76	2,441.01	2,138.67	302.33	8.074			
21,000.00	10,958.21	20,083.96	10,135.80	150.56	168.60	70.53	9,867.14	1,052.01	2,440.92	2,136.61	304.32	8.021			
21,029.44	10,957.77	20,113.39	10,135.24	150.98	169.07	70.53	9,896.57	1,051.70	2,440.90	2,135.73	305.17	7.999			
21,100.00	10,956.74	20,182.73	10,133.92	151.97	170.20	70.52	9,965.89	1,050.98	2,440.85	2,133.67	307.18	7.946			
21,112.20	10,956.56	20,194.30	10,133.71	152.14	170.38	70.52	9,977.46	1,050.87	2,440.85	2,133.33	307.53	7.937			
21,123.19	10,956.40	20,204.72	10,133.52	152.29	170.55	70.52	9,987.88	1,050.78	2,440.85	2,133.02	307.84	7.929			
21,200.00	10,955.28	20,277.01	10,132.35	153.37	171.72	70.52	10,060.15	1,050.24	2,440.94	2,130.95	309.99	7.874			
21,222.97	10,954.94	20,298.20	10,132.05	153.69	172.07	70.52	10,081.34	1,050.13	2,440.99	2,130.37	310.62	7.858			
21,300.00	10,953.81	20,371.65	10,131.22	154.78	173.26	70.53	10,154.78	1,049.93	2,441.29	2,128.48	312.81	7.804			
21,323.08	10,953.48	20,395.43	10,131.00	155.10	173.64	70.53	10,178.57	1,049.89	2,441.39	2,127.89	313.50	7.788			
21,400.00	10,952.35	20,476.41	10,130.36	156.18	174.95	70.55	10,259.54	1,049.71	2,441.64	2,125.82	315.82	7.731			
21,405.54	10,952.27	20,481.95	10,130.31	156.26	175.04	70.55	10,265.08	1,049.69	2,441.66	2,125.67	315.99	7.727			
21,423.90	10,952.00	20,500.31	10,130.15	156.52	175.34	70.55	10,283.44	1,049.63	2,441.70	2,125.18	316.52	7.714 SF			



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 117-MWD												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,700.00	2,696.47	2,903.84	2,899.20	9.52	10.16	9.43	-33.27	-2,039.27	1,987.59	1,968.14	19.45	102.181	
2,800.00	2,795.38	3,004.66	2,999.54	9.88	10.54	9.44	-35.50	-2,029.59	1,963.63	1,943.47	20.15	97.433	
2,900.00	2,894.28	3,094.61	3,089.04	10.25	10.88	9.42	-37.99	-2,021.06	1,939.80	1,918.97	20.83	93.139	
3,000.00	2,993.19	3,179.00	3,173.02	10.62	11.20	9.39	-41.18	-2,013.35	1,916.33	1,894.85	21.49	89.188	
3,100.00	3,092.10	3,271.58	3,265.16	11.00	11.55	9.33	-45.13	-2,005.32	1,893.30	1,871.13	22.17	85.391	
3,200.00	3,191.01	3,368.00	3,361.18	11.38	11.92	9.27	-49.24	-1,997.51	1,870.83	1,847.96	22.87	81.801	
3,300.00	3,289.91	3,443.12	3,436.03	11.76	12.20	9.23	-52.23	-1,991.89	1,848.91	1,825.40	23.51	78.646	
3,400.00	3,388.82	3,527.27	3,519.94	12.15	12.51	9.20	-55.08	-1,986.20	1,827.74	1,803.57	24.17	75.605	
3,500.00	3,487.73	3,615.07	3,607.55	12.53	12.84	9.19	-57.52	-1,980.86	1,807.24	1,782.39	24.85	72.720	
3,600.00	3,586.64	3,740.19	3,732.39	12.92	13.31	9.18	-60.59	-1,973.10	1,786.71	1,761.07	25.64	69.694	
3,700.00	3,685.55	3,851.72	3,843.50	13.31	13.73	9.16	-63.65	-1,964.04	1,764.15	1,737.77	26.38	66.872	
3,800.00	3,784.45	3,941.75	3,933.22	13.70	14.07	9.14	-66.13	-1,956.90	1,741.84	1,714.77	27.07	64.345	
3,900.00	3,883.36	4,037.48	4,028.63	14.09	14.43	9.13	-68.67	-1,949.62	1,719.84	1,692.06	27.77	61.921	
4,000.00	3,982.27	4,137.08	4,127.91	14.49	14.81	9.13	-70.97	-1,941.98	1,697.77	1,669.28	28.49	59.593	
4,100.00	4,081.18	4,246.64	4,237.09	14.88	15.23	9.13	-73.28	-1,933.21	1,675.38	1,646.15	29.23	57.319	
4,200.00	4,180.09	4,360.24	4,350.21	15.28	15.66	9.12	-76.05	-1,923.06	1,652.07	1,622.10	29.97	55.115	
4,300.00	4,278.99	4,461.67	4,451.14	15.67	16.05	9.11	-78.51	-1,913.37	1,628.17	1,597.48	30.69	53.045	
4,400.00	4,377.90	4,562.37	4,551.34	16.07	16.44	9.11	-80.62	-1,903.48	1,604.00	1,572.59	31.41	51.064	
4,500.00	4,476.81	4,659.12	4,647.58	16.47	16.81	9.10	-82.99	-1,893.90	1,579.75	1,547.62	32.12	49.179	
4,600.00	4,575.72	4,755.99	4,743.92	16.87	17.19	9.07	-86.04	-1,884.30	1,555.51	1,522.68	32.83	47.374	
4,700.00	4,674.63	4,853.19	4,840.60	17.27	17.57	9.03	-89.05	-1,874.67	1,531.27	1,497.72	33.55	45.644	
4,800.00	4,773.53	4,950.33	4,937.22	17.67	17.94	9.01	-91.78	-1,865.04	1,507.02	1,472.76	34.26	43.985	
4,900.00	4,872.44	5,047.34	5,033.71	18.08	18.32	8.98	-94.64	-1,855.42	1,482.77	1,447.79	34.98	42.393	
5,000.00	4,971.35	5,143.25	5,129.10	18.48	18.69	8.93	-97.73	-1,845.92	1,458.53	1,422.84	35.69	40.867	
5,100.00	5,070.26	5,237.32	5,222.67	18.88	19.06	8.89	-100.87	-1,836.75	1,434.45	1,398.05	36.40	39.407	
5,200.00	5,169.16	5,333.15	5,318.00	19.29	19.43	8.83	-104.10	-1,827.58	1,410.55	1,373.43	37.12	38.004	
5,300.00	5,268.07	5,431.97	5,416.32	19.69	19.82	8.79	-107.16	-1,818.08	1,386.60	1,348.76	37.83	36.649	
5,400.00	5,366.98	5,528.46	5,512.32	20.09	20.19	8.76	-109.81	-1,808.73	1,362.56	1,324.01	38.55	35.345	
5,500.00	5,465.89	5,622.14	5,605.54	20.50	20.56	8.74	-112.30	-1,799.83	1,338.72	1,299.45	39.26	34.096	
5,600.00	5,564.80	5,715.90	5,698.86	20.91	20.92	8.71	-114.76	-1,791.16	1,315.12	1,275.14	39.98	32.897	
5,700.00	5,663.70	5,809.72	5,792.28	21.31	21.28	8.69	-117.18	-1,782.73	1,291.77	1,251.08	40.69	31.746	
5,800.00	5,762.61	5,904.18	5,886.34	21.72	21.65	8.67	-119.55	-1,774.49	1,268.67	1,227.27	41.41	30.640	
5,900.00	5,861.52	5,999.45	5,981.24	22.13	22.01	8.66	-121.63	-1,766.35	1,245.75	1,203.63	42.12	29.575	
6,000.00	5,960.43	6,092.50	6,073.95	22.53	22.37	8.67	-123.33	-1,758.60	1,223.03	1,180.20	42.84	28.552	
6,100.00	6,059.34	6,182.81	6,163.97	22.94	22.71	8.68	-124.90	-1,751.55	1,200.82	1,157.28	43.55	27.575	
6,200.00	6,158.24	6,278.20	6,259.10	23.35	23.07	8.70	-126.55	-1,744.61	1,179.12	1,134.86	44.26	26.638	
6,300.00	6,257.15	6,382.62	6,363.20	23.76	23.47	8.71	-128.39	-1,736.65	1,157.10	1,112.11	44.99	25.720	
6,400.00	6,356.06	6,483.17	6,463.40	24.16	23.85	8.72	-130.31	-1,728.49	1,134.58	1,088.87	45.71	24.822	
6,500.00	6,454.97	6,580.77	6,560.63	24.57	24.23	8.69	-132.89	-1,720.48	1,112.00	1,065.57	46.43	23.950	
6,600.00	6,553.87	6,679.13	6,658.60	24.98	24.60	8.62	-136.16	-1,712.36	1,089.37	1,042.22	47.15	23.104	
6,700.00	6,652.78	6,777.89	6,756.96	25.39	24.98	8.54	-139.63	-1,704.07	1,066.64	1,018.76	47.87	22.280	
6,800.00	6,751.69	6,871.92	6,850.59	25.80	25.35	8.45	-143.10	-1,696.21	1,043.93	995.33	48.60	21.482	
6,900.00	6,850.60	6,964.25	6,942.56	26.21	25.70	8.34	-146.72	-1,688.92	1,021.69	972.37	49.32	20.716	
7,000.00	6,949.51	7,065.03	7,042.97	26.62	26.09	8.22	-150.70	-1,681.19	999.66	949.62	50.04	19.976	
7,100.00	7,048.41	7,169.69	7,147.20	27.03	26.49	8.13	-154.16	-1,672.48	977.00	926.23	50.76	19.246	
7,200.00	7,147.32	7,267.29	7,244.39	27.44	26.87	8.07	-156.87	-1,663.95	953.90	902.42	51.48	18.528	
7,300.00	7,246.23	7,363.75	7,340.47	27.85	27.24	8.03	-159.26	-1,655.61	930.89	878.69	52.21	17.831	
7,400.00	7,345.14	7,463.63	7,439.92	28.26	27.62	7.97	-162.02	-1,646.89	907.81	854.88	52.93	17.152	
7,500.00	7,444.05	7,563.68	7,539.48	28.67	28.01	7.82	-165.92	-1,637.80	884.42	830.77	53.65	16.486	
7,600.00	7,542.95	7,659.95	7,635.24	29.08	28.39	7.64	-170.21	-1,628.93	860.93	806.55	54.37	15.833	
7,700.00	7,641.86	7,756.35	7,731.15	29.49	28.77	7.44	-174.51	-1,620.15	837.55	782.44	55.10	15.200	
7,800.00	7,740.77	7,854.17	7,828.48	29.90	29.15	7.26	-178.44	-1,611.26	814.18	758.35	55.83	14.584	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH													Offset Site Error:
Survey Program: 117-MWD													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)					
7,900.00	7,839.68	7,951.51	7,925.37	30.31	29.53	7.14	-181.55	-1,602.38	790.75	734.20	56.55	13.983	
8,000.00	7,938.58	8,045.91	8,019.36	30.73	29.89	7.04	-184.11	-1,593.97	767.51	710.23	57.28	13.399	
8,100.00	8,037.49	8,140.61	8,113.68	31.14	30.26	6.96	-186.43	-1,585.90	744.63	686.62	58.01	12.836	
8,200.00	8,136.40	8,236.17	8,208.90	31.55	30.62	6.90	-188.44	-1,578.05	722.04	663.31	58.74	12.292	
8,300.00	8,235.31	8,333.23	8,305.64	31.96	30.99	6.87	-190.12	-1,570.33	699.68	640.22	59.46	11.767	
8,400.00	8,334.22	8,435.72	8,407.75	32.37	31.39	6.82	-192.09	-1,561.72	676.91	616.74	60.17	11.250	
8,500.00	8,433.12	8,534.01	8,505.61	32.79	31.76	6.72	-194.39	-1,552.83	653.51	592.62	60.89	10.733	
8,600.00	8,532.03	8,625.68	8,596.92	33.20	32.12	6.63	-196.44	-1,545.04	630.66	569.02	61.63	10.232	
8,700.00	8,630.94	8,717.80	8,688.75	33.61	32.47	6.57	-198.29	-1,538.04	608.67	546.29	62.38	9.758	
8,800.00	8,729.85	8,810.44	8,781.18	34.02	32.81	6.54	-199.80	-1,531.82	587.51	524.40	63.12	9.308	
8,900.00	8,828.76	8,902.01	8,872.58	34.43	33.15	6.55	-200.91	-1,526.49	567.23	503.37	63.86	8.883	
9,000.00	8,927.66	8,990.30	8,960.79	34.85	33.47	6.64	-201.29	-1,522.76	548.45	483.86	64.59	8.491	
9,100.00	9,026.57	9,081.04	9,051.50	35.26	33.79	6.86	-200.76	-1,520.59	531.41	466.09	65.32	8.136	
9,200.00	9,125.48	9,191.03	9,160.86	35.67	34.15	8.14	-191.24	-1,518.14	514.24	448.25	65.99	7.792	
9,300.00	9,224.39	9,301.12	9,264.03	36.08	34.45	12.76	-154.00	-1,513.72	495.78	429.10	66.67	7.436	
9,400.00	9,323.29	9,382.05	9,332.70	36.50	34.63	18.17	-111.72	-1,507.63	478.88	411.39	67.49	7.096	
9,500.00	9,422.20	9,437.88	9,376.68	36.91	34.73	22.58	-77.54	-1,504.25	471.85	403.99	67.86	6.954 SF	
9,505.96	9,428.09	9,440.92	9,379.00	36.93	34.74	22.83	-75.57	-1,504.11	471.83	403.97	67.85	6.954 CC, ES	
9,600.00	9,521.11	9,489.82	9,414.98	37.32	34.81	27.02	-42.52	-1,502.42	477.77	410.34	67.44	7.085	
9,700.00	9,620.02	9,539.07	9,449.02	37.74	34.88	31.39	-6.97	-1,501.05	496.74	430.51	66.23	7.500	
9,800.00	9,718.93	9,579.25	9,474.77	38.15	34.93	35.03	23.86	-1,500.10	528.74	464.55	64.19	8.238	
9,900.00	9,817.83	9,608.00	9,491.99	38.56	34.96	37.62	46.87	-1,499.60	572.80	511.35	61.45	9.321	
10,000.00	9,916.74	9,641.62	9,510.78	38.98	35.00	40.61	74.74	-1,499.31	627.02	567.99	59.03	10.622	
10,044.87	9,961.12	9,656.00	9,518.37	39.16	35.01	41.86	86.96	-1,499.30	654.19	596.18	58.01	11.277	
10,100.00	10,015.71	9,656.00	9,518.37	39.39	35.01	42.34	86.96	-1,499.30	689.97	633.84	56.12	12.294	
10,200.00	10,114.98	9,686.65	9,533.49	39.78	35.04	45.99	113.61	-1,499.45	760.35	706.01	54.34	13.992	
10,300.00	10,214.53	9,703.00	9,540.93	40.16	35.05	48.65	128.17	-1,499.63	836.99	784.53	52.45	15.957	
10,400.00	10,314.30	9,723.30	9,549.59	40.53	35.07	51.87	146.53	-1,499.85	918.23	867.11	51.12	17.964	
10,500.00	10,414.21	9,751.00	9,560.41	40.87	35.10	55.86	172.02	-1,500.04	1,003.16	952.82	50.34	19.928	
10,609.91	10,524.10	9,751.00	9,560.41	41.23	35.10	-41.49	172.02	-1,500.04	1,099.33	1,050.44	48.89	22.486	
10,650.00	10,564.16	9,751.00	9,560.41	41.36	35.10	-36.35	172.02	-1,500.04	1,134.67	1,086.25	48.42	23.432	
10,700.00	10,613.82	9,768.29	9,566.56	41.51	35.12	-30.93	188.18	-1,500.11	1,177.29	1,129.03	48.26	24.396	
10,750.00	10,662.80	9,776.83	9,569.41	41.66	35.13	-27.11	196.23	-1,500.14	1,218.45	1,170.62	47.83	25.474	
10,800.00	10,710.73	9,798.00	9,575.94	41.80	35.16	-23.82	216.37	-1,500.16	1,258.02	1,210.35	47.67	26.390	
10,850.00	10,757.23	9,798.00	9,575.94	41.92	35.16	-21.66	216.37	-1,500.16	1,295.27	1,248.25	47.01	27.551	
10,900.00	10,801.96	9,798.00	9,575.94	42.04	35.16	-19.88	216.37	-1,500.16	1,330.64	1,284.26	46.38	28.691	
10,950.00	10,844.57	9,819.10	9,581.74	42.15	35.19	-18.17	236.65	-1,500.19	1,363.52	1,317.36	46.16	29.539	
11,000.00	10,884.75	9,845.00	9,587.95	42.24	35.24	-16.76	261.80	-1,500.32	1,394.27	1,348.25	46.01	30.302	
11,050.00	10,922.18	9,845.00	9,587.95	42.32	35.24	-15.82	261.80	-1,500.32	1,422.03	1,376.61	45.43	31.305	
11,100.00	10,956.58	9,845.00	9,587.95	42.38	35.24	-15.04	261.80	-1,500.32	1,447.50	1,402.60	44.90	32.239	
11,150.00	10,987.69	9,871.83	9,593.29	42.44	35.30	-14.25	288.09	-1,500.46	1,469.83	1,425.04	44.78	32.821	
11,200.00	11,015.27	9,892.00	9,596.59	42.48	35.35	-13.65	307.99	-1,500.52	1,489.50	1,444.92	44.59	33.405	
11,250.00	11,039.11	9,900.16	9,597.74	42.52	35.37	-13.22	316.06	-1,500.53	1,506.17	1,461.88	44.29	34.005	
11,300.00	11,059.04	9,908.00	9,598.75	42.55	35.39	-12.87	323.84	-1,500.55	1,519.94	1,475.88	44.06	34.497	
11,350.00	11,074.89	9,908.00	9,598.75	42.57	35.39	-12.62	323.84	-1,500.55	1,531.06	1,487.21	43.85	34.918	
11,400.00	11,086.55	9,939.01	9,601.60	42.59	35.48	-12.40	354.71	-1,500.54	1,538.37	1,494.47	43.90	35.046	
11,410.15	11,088.40	9,941.62	9,601.76	42.60	35.49	-12.37	357.31	-1,500.53	1,539.56	1,495.68	43.89	35.079	
11,450.00	11,093.93	9,963.00	9,602.53	42.62	35.56	-12.27	378.68	-1,500.45	1,543.21	1,499.28	43.93	35.128	
11,461.02	11,094.97	9,963.00	9,602.53	42.62	35.56	-12.26	378.68	-1,500.45	1,543.76	1,499.84	43.92	35.147	
11,500.00	11,096.97	9,968.97	9,602.63	42.65	35.58	-12.23	384.65	-1,500.42	1,544.67	1,500.71	43.96	35.141	
11,518.29	11,097.00	9,985.21	9,602.87	42.67	35.64	-12.23	400.89	-1,500.37	1,544.38	1,500.36	44.02	35.084	
11,523.63	11,096.92	9,989.94	9,602.94	42.67	35.66	-12.23	405.62	-1,500.36	1,544.22	1,500.18	44.04	35.065	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH													Offset Site Error:
													0.00 usft
Survey Program: 117-MWD													Offset Well Error:
													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,600.00	11,095.80	10,057.00	9,603.76	42.75	35.92	-12.24	472.67	-1,500.53	1,542.12	1,497.80	44.32	34.796	
11,615.78	11,095.57	10,072.61	9,603.91	42.77	35.99	-12.24	488.28	-1,500.59	1,541.74	1,497.35	44.39	34.732	
11,700.00	11,094.34	10,152.00	9,604.18	42.92	36.36	-12.18	567.66	-1,499.37	1,539.84	1,495.10	44.74	34.419	
11,729.77	11,093.90	10,152.00	9,604.18	42.98	36.36	-12.18	567.66	-1,499.37	1,539.50	1,494.66	44.84	34.333	
11,781.02	11,093.15	10,200.71	9,603.59	43.10	36.62	-12.11	616.34	-1,497.93	1,538.99	1,493.91	45.07	34.143	
11,800.00	11,092.87	10,212.14	9,603.31	43.14	36.68	-12.10	627.76	-1,497.62	1,539.04	1,493.87	45.16	34.079	
11,900.00	11,091.41	10,290.00	9,600.32	43.44	37.13	-11.99	705.55	-1,495.69	1,540.58	1,494.91	45.67	33.736	
12,000.00	11,089.95	10,408.89	9,595.95	43.80	37.89	-11.84	824.32	-1,493.10	1,542.17	1,495.95	46.22	33.366	
12,023.50	11,089.60	10,440.75	9,595.17	43.90	38.10	-11.81	856.17	-1,492.52	1,542.27	1,495.91	46.36	33.264	
12,100.00	11,088.48	10,512.38	9,593.38	44.23	38.61	-11.72	927.76	-1,490.89	1,542.57	1,495.73	46.84	32.935	
12,123.09	11,088.14	10,534.69	9,592.76	44.33	38.77	-11.69	950.05	-1,490.25	1,542.69	1,495.70	46.98	32.835	
12,200.00	11,087.02	10,611.54	9,590.62	44.71	39.36	-11.58	1,026.83	-1,487.97	1,543.10	1,495.62	47.49	32.494	
12,300.00	11,085.55	10,727.88	9,588.25	45.24	40.30	-11.46	1,143.13	-1,485.69	1,543.12	1,494.89	48.23	31.996	
12,329.98	11,085.12	10,754.98	9,587.89	45.41	40.53	-11.44	1,170.22	-1,485.56	1,542.99	1,494.54	48.46	31.842	
12,381.82	11,084.36	10,801.84	9,587.22	45.71	40.93	-11.43	1,217.08	-1,485.61	1,542.91	1,494.05	48.86	31.579	
12,400.00	11,084.09	10,818.70	9,586.96	45.81	41.08	-11.43	1,233.94	-1,485.72	1,542.92	1,493.92	49.00	31.486	
12,423.28	11,083.75	10,841.82	9,586.61	45.95	41.29	-11.43	1,257.05	-1,485.99	1,542.94	1,493.74	49.20	31.360	
12,500.00	11,082.63	10,917.95	9,585.70	46.43	41.97	-11.49	1,333.14	-1,488.03	1,543.03	1,493.16	49.87	30.940	
12,523.29	11,082.29	10,940.96	9,585.46	46.58	42.18	-11.51	1,356.14	-1,488.85	1,543.06	1,492.97	50.09	30.808	
12,600.00	11,081.16	11,017.58	9,584.65	47.09	42.90	-11.59	1,432.70	-1,491.69	1,543.20	1,492.39	50.80	30.376	
12,700.00	11,079.70	11,124.75	9,583.44	47.79	43.96	-11.66	1,539.84	-1,494.34	1,543.21	1,491.44	51.78	29.805	
12,729.60	11,079.27	11,159.59	9,583.17	48.01	44.31	-11.68	1,574.67	-1,494.95	1,543.08	1,491.00	52.08	29.629	
12,800.00	11,078.24	11,244.64	9,582.85	48.52	45.19	-11.68	1,659.71	-1,495.55	1,542.31	1,489.50	52.81	29.206	
12,830.00	11,077.80	11,281.40	9,582.78	48.75	45.57	-11.64	1,696.46	-1,494.79	1,541.77	1,488.66	53.11	29.029	
12,900.00	11,076.77	11,336.03	9,582.56	49.29	46.16	-11.60	1,751.08	-1,493.79	1,540.67	1,486.93	53.75	28.665	
12,929.52	11,076.34	11,358.68	9,582.38	49.53	46.41	-11.59	1,773.73	-1,493.85	1,540.44	1,486.41	54.03	28.511	
12,988.41	11,075.48	11,408.57	9,581.86	50.00	46.96	-11.61	1,823.61	-1,494.71	1,540.30	1,485.68	54.62	28.199	
13,000.00	11,075.31	11,419.15	9,581.73	50.09	47.08	-11.62	1,834.18	-1,494.93	1,540.31	1,485.56	54.74	28.137	
13,100.00	11,073.84	11,506.33	9,580.35	50.92	48.06	-11.66	1,921.33	-1,496.86	1,540.71	1,484.92	55.79	27.614	
13,200.00	11,072.38	11,599.05	9,577.95	51.77	49.12	-11.71	2,013.99	-1,499.08	1,542.12	1,485.23	56.89	27.108	
13,300.00	11,070.92	11,721.73	9,575.72	52.66	50.57	-11.76	2,136.63	-1,501.56	1,542.70	1,484.61	58.09	26.558	
13,362.58	11,070.00	11,782.82	9,575.02	53.22	51.31	-11.77	2,197.71	-1,502.26	1,542.55	1,483.75	58.81	26.232	
13,400.00	11,069.45	11,813.46	9,574.62	53.56	51.68	-11.79	2,228.33	-1,503.09	1,542.64	1,483.41	59.23	26.046	
13,423.03	11,069.12	11,832.31	9,574.35	53.78	51.91	-11.81	2,247.16	-1,503.80	1,542.77	1,483.27	59.49	25.931	
13,500.00	11,067.99	11,910.51	9,573.03	54.50	52.88	-11.89	2,325.31	-1,506.61	1,543.38	1,482.94	60.44	25.536	
13,600.00	11,066.53	12,005.55	9,570.85	55.45	54.07	-11.81	2,420.30	-1,505.46	1,543.81	1,482.23	61.58	25.070	
13,700.00	11,065.06	12,172.03	9,567.86	56.43	56.21	-11.65	2,586.66	-1,502.50	1,544.27	1,481.34	62.92	24.542	
13,800.00	11,063.60	12,253.64	9,568.95	57.43	57.28	-11.67	2,668.25	-1,503.11	1,541.52	1,477.41	64.10	24.048	
13,829.67	11,063.16	12,277.76	9,569.11	57.73	57.59	-11.67	2,692.37	-1,503.42	1,540.93	1,476.47	64.46	23.906	
13,900.00	11,062.13	12,333.00	9,569.14	58.44	58.32	-11.69	2,747.61	-1,504.17	1,539.97	1,474.67	65.30	23.583	
13,929.30	11,061.70	12,355.62	9,568.99	58.75	58.62	-11.70	2,770.22	-1,504.49	1,539.78	1,474.12	65.66	23.452	
14,000.00	11,060.67	12,406.03	9,568.19	59.48	59.29	-11.71	2,820.62	-1,505.28	1,539.97	1,473.47	66.50	23.157	
14,100.00	11,059.21	12,595.32	9,568.44	60.53	61.86	-11.79	3,009.84	-1,508.45	1,539.10	1,470.96	68.14	22.586	
14,200.00	11,057.74	12,662.45	9,570.73	61.60	62.78	-11.85	3,076.92	-1,509.85	1,534.83	1,465.47	69.36	22.127	
14,229.83	11,057.31	12,677.68	9,570.90	61.92	62.99	-11.86	3,092.14	-1,510.21	1,534.16	1,464.45	69.71	22.006	
14,290.37	11,056.42	12,711.00	9,570.79	62.58	63.45	-11.89	3,125.45	-1,511.05	1,533.68	1,463.23	70.44	21.773	
14,300.00	11,056.28	12,715.53	9,570.72	62.68	63.51	-11.89	3,129.98	-1,511.17	1,533.70	1,463.14	70.55	21.738	
14,400.00	11,054.81	12,806.00	9,569.13	63.78	64.77	-11.93	3,220.42	-1,513.17	1,534.29	1,462.40	71.89	21.343	
14,500.00	11,053.35	12,890.31	9,566.90	64.90	65.95	-11.96	3,304.68	-1,514.85	1,535.70	1,462.50	73.21	20.978	
14,600.00	11,051.89	13,027.68	9,565.49	66.02	67.89	-12.04	3,441.99	-1,517.95	1,535.24	1,460.51	74.74	20.542	
14,700.00	11,050.42	13,089.00	9,564.21	67.16	68.77	-12.07	3,503.28	-1,519.37	1,536.12	1,460.11	76.01	20.210	
14,800.00	11,048.96	13,224.93	9,562.27	68.32	70.72	-12.14	3,639.16	-1,522.40	1,536.16	1,458.60	77.56	19.806	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH													Offset Site Error:
													0.00 usft
Survey Program: 117-MWD													Offset Well Error:
													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,900.00	11,047.50	13,351.11	9,561.20	69.48	72.54	-12.20	3,765.31	-1,524.99	1,536.02	1,456.93	79.09	19.421	
14,929.94	11,047.06	13,392.56	9,561.71	69.83	73.15	-12.22	3,806.75	-1,525.56	1,535.25	1,455.68	79.56	19.296	
15,000.00	11,046.03	13,463.87	9,562.86	70.65	74.19	-12.27	3,878.03	-1,526.90	1,533.31	1,452.72	80.59	19.026	
15,030.16	11,045.59	13,489.66	9,563.27	71.01	74.57	-12.29	3,903.81	-1,527.49	1,532.50	1,451.48	81.02	18.915	
15,100.00	11,044.57	13,548.10	9,563.90	71.84	75.42	-12.33	3,962.23	-1,528.85	1,531.00	1,448.99	82.01	18.668	
15,129.61	11,044.13	13,573.23	9,564.03	72.19	75.79	-12.35	3,987.36	-1,529.44	1,530.51	1,448.08	82.43	18.567	
15,200.00	11,043.10	13,633.89	9,564.11	73.03	76.69	-12.40	4,048.00	-1,531.01	1,529.69	1,446.24	83.45	18.332	
15,229.38	11,042.67	13,655.00	9,564.06	73.39	77.00	-12.42	4,069.10	-1,531.62	1,529.48	1,445.63	83.85	18.240	
15,258.57	11,042.25	13,679.45	9,563.90	73.74	77.36	-12.44	4,093.53	-1,532.34	1,529.40	1,445.12	84.28	18.148	
15,300.00	11,041.64	13,709.16	9,563.49	74.24	77.80	-12.46	4,123.23	-1,533.23	1,529.56	1,444.70	84.85	18.026	
15,323.72	11,041.29	13,726.18	9,563.15	74.53	78.05	-12.47	4,140.24	-1,533.75	1,529.79	1,444.61	85.18	17.959	
15,400.00	11,040.18	13,827.07	9,561.15	75.45	79.55	-12.53	4,241.07	-1,536.25	1,530.58	1,444.16	86.42	17.711	
15,459.69	11,039.30	13,880.58	9,560.69	76.18	80.35	-12.55	4,294.58	-1,536.99	1,530.31	1,443.03	87.28	17.534	
15,500.00	11,038.71	13,910.96	9,560.19	76.67	80.80	-12.55	4,324.95	-1,537.47	1,530.44	1,442.60	87.84	17.423	
15,600.00	11,037.25	14,064.54	9,558.50	77.91	82.84	-12.58	4,460.51	-1,539.19	1,530.48	1,441.03	89.45	17.111	
15,630.25	11,036.81	14,084.59	9,558.70	78.28	83.41	-12.58	4,498.56	-1,539.50	1,529.89	1,439.97	89.92	17.014	
15,700.00	11,035.79	14,160.31	9,559.63	79.14	84.55	-12.61	4,574.26	-1,540.41	1,528.11	1,437.11	90.99	16.794	
15,730.10	11,035.34	14,188.56	9,560.03	79.52	84.98	-12.63	4,602.50	-1,540.99	1,527.35	1,435.90	91.45	16.702	
15,800.00	11,034.32	14,245.03	9,560.73	80.39	85.83	-12.69	4,658.94	-1,542.62	1,525.84	1,433.35	92.49	16.497	
15,829.60	11,033.89	14,265.61	9,560.83	80.76	86.15	-12.71	4,679.51	-1,543.35	1,525.46	1,432.54	92.93	16.416	
15,878.74	11,033.17	14,299.75	9,560.75	81.37	86.66	-12.76	4,713.63	-1,544.74	1,525.22	1,431.57	93.65	16.287	
15,900.00	11,032.86	14,315.00	9,560.62	81.64	86.89	-12.78	4,728.86	-1,545.42	1,525.27	1,431.30	93.96	16.233	
16,000.00	11,031.39	14,387.39	9,559.38	82.90	88.00	-12.90	4,801.12	-1,549.49	1,526.58	1,431.11	95.47	15.990	
16,100.00	11,029.93	14,548.85	9,557.63	84.17	90.47	-13.18	4,962.30	-1,558.29	1,527.55	1,430.10	97.45	15.676	
16,200.00	11,028.47	14,672.14	9,560.18	85.44	92.36	-13.31	5,085.52	-1,561.68	1,524.47	1,425.32	99.15	15.376	
16,230.40	11,028.02	14,702.43	9,560.91	85.83	92.82	-13.34	5,115.79	-1,562.52	1,523.45	1,423.81	99.64	15.289	
16,300.00	11,027.00	14,769.28	9,562.55	86.72	93.85	-13.42	5,182.58	-1,564.71	1,521.20	1,420.43	100.78	15.095	
16,330.05	11,026.56	14,799.54	9,563.28	87.10	94.32	-13.47	5,212.81	-1,565.83	1,520.27	1,418.99	101.28	15.011	
16,400.00	11,025.54	14,875.20	9,565.06	88.00	95.49	-13.54	5,288.44	-1,567.63	1,517.93	1,415.50	102.43	14.819	
16,430.18	11,025.10	14,900.02	9,565.58	88.39	95.87	-13.54	5,313.25	-1,567.87	1,516.90	1,414.01	102.89	14.743	
16,500.00	11,024.08	14,953.54	9,566.16	89.29	96.70	-13.54	5,366.76	-1,567.94	1,515.06	1,411.14	103.92	14.579	
16,529.67	11,023.64	14,976.00	9,566.19	89.67	97.04	-13.53	5,389.22	-1,567.79	1,514.50	1,410.16	104.35	14.514	
16,600.00	11,022.61	15,030.30	9,565.77	90.58	97.88	-13.50	5,443.52	-1,567.20	1,513.72	1,408.38	105.34	14.369	
16,629.24	11,022.18	15,052.76	9,565.40	90.96	98.23	-13.48	5,465.97	-1,566.90	1,513.62	1,407.87	105.76	14.313	
16,637.20	11,022.07	15,058.87	9,565.29	91.07	98.33	-13.48	5,472.08	-1,566.82	1,513.62	1,407.75	105.87	14.297	
16,700.00	11,021.15	15,108.57	9,564.04	91.88	99.10	-13.43	5,521.76	-1,566.02	1,513.90	1,407.16	106.74	14.183	
16,723.02	11,020.81	15,126.97	9,563.47	92.18	99.38	-13.41	5,540.14	-1,565.69	1,514.13	1,407.07	107.06	14.143	
16,800.00	11,019.68	15,208.51	9,560.59	93.19	100.65	-13.32	5,621.62	-1,564.23	1,515.23	1,407.07	108.16	14.009	
16,900.00	11,018.22	15,368.50	9,560.25	94.49	103.14	-13.33	5,781.57	-1,565.41	1,513.92	1,404.01	109.91	13.774	
16,930.89	11,017.77	15,393.32	9,560.68	94.90	103.53	-13.34	5,806.39	-1,565.84	1,513.03	1,402.64	110.39	13.706	
17,000.00	11,016.76	15,448.00	9,561.18	95.81	104.38	-13.36	5,861.06	-1,566.43	1,511.48	1,400.04	111.45	13.562	
17,029.58	11,016.32	15,472.09	9,561.21	96.20	104.76	-13.36	5,885.15	-1,566.58	1,511.02	1,399.12	111.89	13.504	
17,100.00	11,015.29	15,527.41	9,560.87	97.12	105.63	-13.36	5,940.47	-1,566.93	1,510.40	1,397.46	112.94	13.373	
17,129.21	11,014.87	15,552.35	9,560.54	97.51	106.02	-13.36	5,965.41	-1,567.09	1,510.35	1,396.96	113.39	13.320	
17,177.25	11,014.16	15,599.07	9,559.89	98.14	106.75	-13.36	6,012.12	-1,567.51	1,510.33	1,396.19	114.13	13.233	
17,200.00	11,013.83	15,621.20	9,559.58	98.44	107.10	-13.37	6,034.24	-1,567.77	1,510.33	1,395.84	114.49	13.192	
17,300.00	11,012.37	15,700.78	9,558.02	99.77	108.35	-13.38	6,113.80	-1,568.81	1,510.96	1,394.96	115.99	13.026	
17,400.00	11,010.90	15,870.34	9,555.73	101.10	111.01	-13.33	6,283.32	-1,568.83	1,511.09	1,393.37	117.72	12.837	
17,500.00	11,009.44	15,969.90	9,558.31	102.43	112.58	-13.36	6,382.85	-1,569.51	1,507.12	1,387.80	119.32	12.631	
17,530.23	11,009.00	15,990.27	9,558.60	102.83	112.90	-13.36	6,403.21	-1,569.64	1,506.26	1,386.47	119.78	12.575	
17,600.00	11,007.97	16,065.92	9,559.22	103.77	114.10	-13.38	6,478.86	-1,570.16	1,504.72	1,383.81	120.91	12.445	
17,629.84	11,007.54	16,113.02	9,560.33	104.17	114.84	-13.41	6,525.94	-1,570.99	1,503.67	1,382.22	121.45	12.381	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH													Offset Site Error:
													0.00 usft
Survey Program: 117-MWD													Offset Well Error:
													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,700.00	11,006.51	16,149.55	9,560.91	105.11	115.42	-13.43	6,562.45	-1,571.51	1,501.65	1,379.14	122.51	12.257	
17,729.78	11,006.07	16,165.90	9,560.89	105.50	115.68	-13.43	6,578.81	-1,571.60	1,501.24	1,378.30	122.94	12.211	
17,761.05	11,005.62	16,183.08	9,560.69	105.92	115.95	-13.42	6,595.98	-1,571.59	1,501.09	1,377.71	123.39	12.166	
17,800.00	11,005.05	16,205.00	9,560.15	106.45	116.29	-13.41	6,617.90	-1,571.44	1,501.32	1,377.40	123.92	12.115	
17,823.79	11,004.70	16,234.98	9,559.30	106.77	116.77	-13.39	6,647.87	-1,571.20	1,501.55	1,377.25	124.30	12.080	
17,900.00	11,003.58	16,320.80	9,557.79	107.79	118.13	-13.36	6,733.67	-1,571.27	1,501.62	1,376.11	125.51	11.964	
18,000.00	11,002.12	16,400.90	9,555.92	109.14	119.40	-13.36	6,813.74	-1,571.89	1,502.44	1,375.43	127.01	11.829	
18,100.00	11,000.65	16,554.42	9,554.92	110.49	121.84	-13.44	6,967.20	-1,575.19	1,501.90	1,373.02	128.88	11.653	
18,200.00	10,999.19	16,678.00	9,558.09	111.85	123.81	-13.59	7,090.67	-1,578.84	1,498.38	1,367.67	130.71	11.464	
18,230.50	10,998.74	16,694.36	9,558.43	112.26	124.07	-13.60	7,107.02	-1,579.30	1,497.43	1,366.24	131.19	11.414	
18,300.00	10,997.73	16,745.69	9,559.08	113.20	124.89	-13.65	7,158.33	-1,580.76	1,495.92	1,363.59	132.33	11.305	
18,329.42	10,997.30	16,773.00	9,559.17	113.60	125.32	-13.68	7,185.63	-1,581.55	1,495.55	1,362.72	132.83	11.259	
18,400.00	10,996.26	16,825.57	9,558.99	114.56	126.16	-13.73	7,238.18	-1,583.14	1,495.10	1,361.13	133.97	11.160	
18,419.70	10,995.98	16,842.00	9,558.86	114.83	126.42	-13.74	7,254.60	-1,583.65	1,495.08	1,360.79	134.30	11.133	
18,423.13	10,995.92	16,844.87	9,558.84	114.88	126.47	-13.75	7,257.46	-1,583.74	1,495.08	1,360.73	134.35	11.128	
18,500.00	10,994.80	16,918.65	9,557.90	115.92	127.65	-13.80	7,331.21	-1,585.73	1,495.28	1,359.63	135.65	11.023	
18,600.00	10,993.34	17,064.06	9,557.17	117.29	129.97	-13.83	7,476.60	-1,587.26	1,494.59	1,357.18	137.41	10.877	
18,630.37	10,992.89	17,078.64	9,557.22	117.70	130.20	-13.83	7,491.18	-1,587.35	1,493.96	1,356.09	137.87	10.836	
18,678.43	10,992.19	17,109.76	9,557.04	118.36	130.70	-13.82	7,522.30	-1,587.19	1,493.40	1,354.82	138.58	10.776	
18,700.00	10,991.87	17,123.72	9,556.80	118.65	130.92	-13.80	7,536.26	-1,586.93	1,493.32	1,354.44	138.88	10.752	
18,800.00	10,990.41	17,244.41	9,554.17	120.02	132.85	-13.63	7,656.86	-1,583.61	1,493.31	1,352.99	140.32	10.642	
18,829.76	10,989.97	17,270.21	9,554.00	120.43	133.26	-13.61	7,682.66	-1,583.20	1,492.91	1,352.15	140.76	10.606	
18,900.00	10,988.94	17,331.55	9,553.29	121.39	134.24	-13.55	7,743.99	-1,582.10	1,492.27	1,350.49	141.78	10.525	
18,929.34	10,988.52	17,369.31	9,552.79	121.79	134.84	-13.52	7,781.73	-1,581.35	1,492.04	1,349.82	142.22	10.491	
19,000.00	10,987.48	17,464.03	9,552.80	122.76	136.36	-13.43	7,876.44	-1,579.48	1,490.55	1,347.26	143.29	10.402	
19,030.29	10,987.04	17,500.21	9,553.22	123.18	136.94	-13.41	7,912.61	-1,579.11	1,489.65	1,345.88	143.77	10.362	
19,100.00	10,986.02	17,587.35	9,555.13	124.14	138.33	-13.42	7,999.72	-1,579.16	1,487.05	1,342.14	144.91	10.262	
19,130.48	10,985.57	17,626.22	9,556.39	124.56	138.96	-13.43	8,038.57	-1,579.37	1,485.64	1,340.21	145.42	10.216	
19,200.00	10,984.55	17,659.14	9,557.03	125.51	139.49	-13.43	8,071.49	-1,579.35	1,483.14	1,336.63	146.51	10.123	
19,229.82	10,984.12	17,674.36	9,557.05	125.93	139.73	-13.42	8,086.71	-1,579.22	1,482.55	1,335.60	146.95	10.089	
19,262.17	10,983.64	17,690.87	9,556.88	126.37	139.99	-13.41	8,103.22	-1,579.00	1,482.25	1,334.84	147.41	10.055	
19,300.00	10,983.09	17,716.00	9,556.24	126.89	140.40	-13.38	8,128.33	-1,578.49	1,482.35	1,334.42	147.93	10.021	
19,400.00	10,981.63	17,785.53	9,553.32	128.27	141.51	-13.27	8,197.77	-1,576.64	1,484.10	1,334.85	149.25	9.944	
19,500.00	10,980.16	17,931.37	9,547.91	129.66	143.85	-13.06	8,343.46	-1,572.81	1,485.71	1,334.98	150.73	9.857	
19,600.00	10,978.70	18,089.14	9,548.89	131.04	146.39	-12.95	8,501.19	-1,570.63	1,483.18	1,330.89	152.29	9.739	
19,630.86	10,978.25	18,120.12	9,549.74	131.47	146.88	-12.94	8,532.16	-1,570.32	1,481.79	1,329.02	152.77	9.699	
19,700.00	10,977.23	18,187.00	9,551.46	132.42	147.96	-12.92	8,599.01	-1,569.45	1,478.75	1,324.91	153.84	9.612	
19,730.32	10,976.79	18,213.07	9,552.06	132.85	148.38	-12.90	8,625.07	-1,569.06	1,477.48	1,323.17	154.31	9.575	
19,800.00	10,975.77	18,272.88	9,553.15	133.81	149.34	-12.87	8,684.87	-1,568.21	1,474.90	1,319.52	155.38	9.492	
19,830.01	10,975.33	18,307.78	9,553.71	134.23	149.90	-12.85	8,719.76	-1,567.78	1,473.87	1,318.03	155.84	9.458	
19,900.00	10,974.31	18,405.25	9,556.58	135.20	151.47	-12.84	8,817.18	-1,567.41	1,470.70	1,313.75	156.96	9.370	
19,930.75	10,973.86	18,453.73	9,558.94	135.63	152.26	-12.87	8,865.60	-1,567.80	1,468.81	1,311.34	157.47	9.328	
20,000.00	10,972.84	18,506.76	9,561.84	136.59	153.11	-12.91	8,918.55	-1,568.52	1,464.28	1,305.61	158.67	9.228	
20,030.83	10,972.39	18,525.71	9,562.59	137.02	153.42	-12.92	8,937.48	-1,568.71	1,462.65	1,303.45	159.20	9.188	
20,100.00	10,971.38	18,565.00	9,563.64	137.98	154.05	-12.94	8,976.76	-1,568.99	1,459.91	1,299.59	160.32	9.106	
20,129.75	10,970.94	18,596.02	9,564.12	138.40	154.55	-12.94	9,007.77	-1,569.05	1,459.00	1,298.19	160.81	9.073	
20,200.00	10,969.92	18,660.00	9,564.72	139.37	155.59	-12.92	9,071.75	-1,568.70	1,457.14	1,295.23	161.91	9.000	
20,229.89	10,969.48	18,682.33	9,564.79	139.79	155.95	-12.91	9,094.07	-1,568.47	1,456.49	1,294.13	162.36	8.971	
20,300.00	10,968.45	18,738.62	9,564.61	140.77	156.85	-12.87	9,150.36	-1,567.92	1,455.43	1,292.02	163.41	8.907	
20,329.34	10,968.02	18,763.39	9,564.36	141.18	157.25	-12.86	9,175.13	-1,567.70	1,455.18	1,291.33	163.85	8.881	
20,400.00	10,966.99	18,827.62	9,563.59	142.16	158.29	-12.83	9,239.35	-1,567.52	1,454.83	1,289.90	164.94	8.821	
20,429.24	10,966.56	18,863.02	9,563.16	142.57	158.87	-12.83	9,274.76	-1,567.71	1,454.76	1,289.33	165.42	8.794	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - Hereford 29/20 B 1 PA St Com #1 H - OH - OH

Survey Program:		117-MWD							Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
20,500.00	10,965.52	18,940.00	9,563.97	143.56	160.11	-12.90	9,351.69	-1,569.81	1,453.25	1,286.54	166.71	8.717			
20,529.97	10,965.09	18,972.67	9,564.52	143.98	160.64	-12.95	9,384.33	-1,571.12	1,452.52	1,285.24	167.28	8.683			
20,569.68	10,964.50	18,993.42	9,564.49	144.53	160.98	-12.98	9,405.06	-1,571.85	1,452.26	1,284.35	167.91	8.649			
20,600.00	10,964.06	19,009.26	9,564.26	144.96	161.24	-12.99	9,420.89	-1,572.36	1,452.41	1,284.04	168.37	8.626			
20,700.00	10,962.60	19,088.70	9,561.53	146.36	162.53	-13.02	9,500.27	-1,574.20	1,454.56	1,284.61	169.95	8.559			
20,800.00	10,961.13	19,183.31	9,557.80	147.76	164.06	-13.01	9,594.79	-1,575.16	1,457.03	1,285.51	171.52	8.495			
20,900.00	10,959.67	19,310.13	9,554.27	149.16	166.12	-13.05	9,721.53	-1,577.59	1,458.48	1,285.13	173.35	8.413			
21,000.00	10,958.21	19,386.22	9,552.89	150.56	167.36	-13.09	9,797.58	-1,579.38	1,459.42	1,284.49	174.93	8.343			
21,100.00	10,956.74	19,540.84	9,551.79	151.97	169.87	-13.30	9,951.97	-1,585.72	1,459.07	1,281.93	177.15	8.237			
21,200.00	10,955.28	19,597.64	9,551.19	153.37	170.80	-13.37	10,008.71	-1,588.10	1,459.43	1,280.68	178.75	8.164			
21,300.00	10,953.81	19,719.63	9,548.49	154.78	172.79	-13.48	10,130.60	-1,592.23	1,460.82	1,280.13	180.69	8.085			
21,400.00	10,952.35	19,842.00	9,549.27	156.18	174.78	-13.71	10,252.80	-1,598.62	1,459.69	1,276.87	182.82	7.984			
21,418.91	10,952.07	19,860.90	9,549.40	156.45	175.09	-13.75	10,271.68	-1,599.48	1,459.46	1,276.27	183.19	7.967			
21,420.12	10,952.06	19,862.10	9,549.41	156.47	175.11	-13.75	10,272.88	-1,599.54	1,459.45	1,276.23	183.22	7.966			
21,423.90	10,952.00	19,865.88	9,549.44	156.52	175.17	-13.75	10,276.65	-1,599.71	1,459.40	1,276.11	183.29	7.962			



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - West Pearl Queen Unit 163 (P&A) - OH - OH

Survey Program: 380-INC-ONLY													Offset Site Error: 0.00 usft			
Reference				Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
0.00	0.00	0.00	0.00	0.00	0.00	114.70	-205.85	447.46	494.00							
100.00	100.00	62.00	62.00	0.26	1.82	114.70	-205.85	447.46	492.54	490.46	2.08	236.763				
200.00	200.00	162.00	162.00	0.62	4.76	114.70	-205.85	447.46	492.54	487.16	5.38	91.593				
300.00	300.00	262.00	262.00	0.98	7.70	114.70	-205.85	447.46	492.54	483.86	8.67	56.779				
400.00	400.00	362.00	362.00	1.33	10.64	114.70	-205.85	447.46	492.54	480.57	11.97	41.141				
500.00	500.00	462.00	462.00	1.69	12.37	114.70	-205.85	447.46	492.54	478.48	14.06	35.025				
600.00	600.00	562.01	562.00	2.05	13.85	114.70	-205.85	447.46	492.54	476.64	15.90	30.979				
700.00	700.00	662.01	662.00	2.41	15.41	114.70	-205.85	447.46	492.54	474.72	17.82	27.644				
727.28	727.28	689.19	689.18	2.51	15.83	114.68	-205.58	447.46	492.42	474.09	18.34	26.851				
800.00	800.00	761.40	761.38	2.77	16.96	114.69	-205.71	447.46	492.48	472.75	19.73	24.967				
900.00	900.00	862.02	862.00	3.13	18.58	114.70	-205.85	447.46	492.54	470.83	21.70	22.694				
937.99	937.99	900.01	899.99	3.26	19.20	114.69	-205.74	447.46	492.49	470.03	22.46	21.924				
1,000.00	1,000.00	961.74	961.72	3.48	20.21	114.70	-205.78	447.46	492.51	468.81	23.70	20.782				
1,100.00	1,100.00	1,062.02	1,062.00	3.84	22.14	114.70	-205.85	447.46	492.54	466.55	25.99	18.954				
1,200.00	1,200.00	1,162.02	1,162.00	4.20	24.24	114.70	-205.85	447.46	492.54	464.10	28.44	17.318				
1,287.99	1,287.99	1,250.01	1,249.99	4.52	26.09	114.65	-205.30	447.46	492.31	461.71	30.60	16.087	CC			
1,300.00	1,300.00	1,261.98	1,261.95	4.56	26.34	114.65	-205.30	447.46	492.31	461.41	30.90	15.934				
1,400.00	1,400.00	1,361.63	1,361.60	4.92	28.43	114.66	-205.41	447.46	492.36	459.01	33.34	14.766				
1,500.00	1,500.00	1,461.27	1,461.25	5.28	30.52	114.69	-205.69	447.46	492.47	456.68	35.79	13.759				
1,600.00	1,600.00	1,562.05	1,562.00	5.64	32.59	114.70	-205.85	447.46	492.54	454.31	38.23	12.885				
1,700.00	1,700.00	1,662.05	1,662.00	5.99	34.63	114.70	-205.85	447.46	492.54	451.92	40.62	12.125				
1,732.37	1,732.37	1,694.17	1,694.11	6.11	35.28	114.65	-205.33	447.46	492.32	450.93	41.39	11.894				
1,800.00	1,800.00	1,761.26	1,761.20	6.35	36.65	114.67	-205.50	447.46	492.39	449.40	43.00	11.451				
1,900.00	1,900.00	1,862.08	1,862.00	6.71	38.77	114.70	-205.85	447.46	492.54	447.06	45.48	10.830				
2,000.00	2,000.00	1,962.08	1,962.00	7.07	41.00	114.70	-205.85	447.46	492.54	444.47	48.07	10.247				
2,100.00	2,099.99	2,062.07	2,061.99	7.42	43.23	-145.51	-205.85	447.46	493.62	442.97	50.64	9.747	ES			
2,200.00	2,199.91	2,161.53	2,161.45	7.76	45.44	-145.82	-205.13	447.46	496.56	443.36	53.20	9.334				
2,300.00	2,299.69	2,260.80	2,260.71	8.10	47.65	-146.15	-205.49	447.46	502.13	446.38	55.75	9.007				
2,400.00	2,399.27	2,361.43	2,361.27	8.45	50.00	-146.63	-205.85	447.46	509.91	451.47	58.44	8.725				
2,500.00	2,498.57	2,460.73	2,460.57	8.80	52.48	-147.26	-205.85	447.46	519.78	458.51	61.27	8.484				
2,565.04	2,562.98	2,525.14	2,524.98	9.03	54.09	-147.73	-205.85	447.46	527.42	464.32	63.10	8.358				
2,600.00	2,597.56	2,559.72	2,559.56	9.15	54.96	-148.02	-205.85	447.46	531.80	467.71	64.09	8.298				
2,700.00	2,696.47	2,657.93	2,657.75	9.52	57.42	-148.95	-204.64	447.46	543.96	477.07	66.89	8.132				
2,800.00	2,795.38	2,756.06	2,755.87	9.88	59.87	-149.67	-205.22	447.46	556.88	487.18	69.70	7.990				
2,900.00	2,894.28	2,856.58	2,856.28	10.25	62.37	-150.37	-205.85	447.46	569.89	497.34	72.55	7.855				
3,000.00	2,993.19	2,955.49	2,955.19	10.62	64.82	-151.08	-205.85	447.46	582.78	507.43	75.36	7.734				
3,100.00	3,092.10	3,052.86	3,052.54	11.00	67.23	-151.81	-205.33	447.46	595.60	517.48	78.12	7.624				
3,200.00	3,191.01	3,153.44	3,153.01	11.38	69.82	-152.42	-205.85	447.46	608.82	527.75	81.06	7.510				
3,300.00	3,289.91	3,252.35	3,251.91	11.76	72.45	-153.05	-205.85	447.46	621.95	537.89	84.06	7.399				
3,400.00	3,388.82	3,349.74	3,349.26	12.15	75.05	-153.73	-204.79	447.46	634.86	547.85	87.01	7.297				
3,500.00	3,487.73	3,450.36	3,449.73	12.53	77.79	-154.23	-205.85	447.46	648.42	558.31	90.11	7.196				
3,600.00	3,586.64	3,549.27	3,548.64	12.92	80.72	-154.78	-205.85	447.46	661.75	568.36	93.39	7.086				
3,700.00	3,685.55	3,645.87	3,645.20	13.31	83.57	-155.33	-205.49	447.46	675.05	578.44	96.61	6.987				
3,800.00	3,784.45	3,747.29	3,746.45	13.70	86.79	-155.82	-205.85	447.46	688.58	588.40	100.19	6.873				
3,900.00	3,883.36	3,845.68	3,844.79	14.09	89.96	-156.46	-204.02	447.46	701.65	597.93	103.72	6.765				
4,000.00	3,982.27	3,942.36	3,941.43	14.49	93.09	-156.84	-205.06	447.46	715.45	608.25	107.20	6.674				
4,100.00	4,081.18	4,044.34	4,043.18	14.88	96.43	-157.25	-205.85	447.46	729.22	618.30	110.91	6.575				
4,200.00	4,180.09	4,142.58	4,141.37	15.28	99.68	-157.79	-204.44	447.46	742.55	628.03	114.53	6.484				
4,300.00	4,278.99	4,239.24	4,237.99	15.67	102.88	-158.11	-205.63	447.46	756.49	638.41	118.08	6.406				
4,400.00	4,377.90	4,341.22	4,339.74	16.07	106.36	-158.59	-204.80	447.46	770.04	648.10	121.94	6.315				
4,500.00	4,476.81	4,440.46	4,438.81	16.47	109.77	-158.91	-205.85	447.46	784.00	658.28	125.71	6.236				
4,600.00	4,575.72	4,538.81	4,537.12	16.87	113.18	-159.37	-204.72	447.46	797.58	668.09	129.49	6.160				

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - West Pearl Queen Unit 163 (P&A) - OH - OH

Survey Program: Reference		380-INC-ONLY						Rule Assigned:				Offset Well Error:		0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,700.00	4,674.63	4,638.50	4,636.63	17.27	116.64	-159.66	-205.85	447.46	811.61	678.29	133.31	6.088		
4,800.00	4,773.53	4,737.53	4,735.53	17.67	120.10	-160.01	-205.85	447.46	825.46	688.32	137.14	6.019		
4,900.00	4,872.44	4,834.58	4,832.55	18.08	123.51	-160.39	-205.28	447.46	839.25	698.35	140.90	5.956		
5,000.00	4,971.35	4,935.51	4,933.35	18.48	126.99	-160.69	-205.85	447.46	853.26	708.50	144.76	5.894		
5,100.00	5,070.26	5,020.00	5,017.68	18.88	129.89	-160.96	-205.85	447.46	867.32	719.34	147.98	5.861	SF	
5,200.00	5,169.16	5,020.00	5,017.68	19.29	129.89	-160.96	-205.85	447.46	888.44	741.39	147.05	6.042		
5,300.00	5,268.07	5,020.00	5,017.68	19.69	129.89	-160.96	-205.85	447.46	920.00	775.43	144.58	6.363		
5,400.00	5,366.98	5,020.00	5,017.68	20.09	129.89	-160.96	-205.85	447.46	960.98	820.05	140.94	6.818		
5,500.00	5,465.89	5,020.00	5,017.68	20.50	129.89	-160.96	-205.85	447.46	1,010.23	873.70	136.53	7.399		
5,600.00	5,564.80	5,020.00	5,017.68	20.91	129.89	-160.96	-205.85	447.46	1,066.61	934.90	131.71	8.098		
5,700.00	5,663.70	5,020.00	5,017.68	21.31	129.89	-160.96	-205.85	447.46	1,129.04	1,002.30	126.74	8.908		
5,800.00	5,762.61	5,020.00	5,017.68	21.72	129.89	-160.96	-205.85	447.46	1,196.59	1,074.76	121.83	9.822		
5,900.00	5,861.52	5,020.00	5,017.68	22.13	129.89	-160.96	-205.85	447.46	1,268.43	1,151.34	117.09	10.833		
6,000.00	5,960.43	5,020.00	5,017.68	22.53	129.89	-160.96	-205.85	447.46	1,343.87	1,231.26	112.61	11.934		
6,100.00	6,059.34	5,020.00	5,017.68	22.94	129.89	-160.96	-205.85	447.46	1,422.35	1,313.93	108.41	13.120		
6,200.00	6,158.24	5,020.00	5,017.68	23.35	129.89	-160.96	-205.85	447.46	1,503.38	1,398.86	104.52	14.383		
6,300.00	6,257.15	5,020.00	5,017.68	23.76	129.89	-160.96	-205.85	447.46	1,586.58	1,485.65	100.93	15.719		
6,400.00	6,356.06	5,020.00	5,017.68	24.16	129.89	-160.96	-205.85	447.46	1,671.62	1,573.99	97.64	17.121		
6,500.00	6,454.97	5,020.00	5,017.68	24.57	129.89	-160.96	-205.85	447.46	1,758.24	1,663.63	94.61	18.585		
6,600.00	6,553.87	5,020.00	5,017.68	24.98	129.89	-160.96	-205.85	447.46	1,846.21	1,754.38	91.83	20.104		
6,700.00	6,652.78	5,020.00	5,017.68	25.39	129.89	-160.96	-205.85	447.46	1,935.35	1,846.06	89.29	21.675		

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - West Pearl Queen Unit 194 (P&A) - OH - OH													Offset Site Error:
Survey Program: 410-INC-ONLY													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-96.66	-111.80	-958.09	964.65				
100.00	100.00	89.00	89.00	0.26	2.70	-96.66	-111.80	-958.09	964.59	961.63	2.96	325.883	
200.00	200.00	189.00	189.00	0.62	5.74	-96.66	-111.80	-958.09	964.59	958.24	6.35	151.810	
300.00	300.00	289.00	289.00	0.98	8.77	-96.66	-111.80	-958.09	964.59	954.84	9.75	98.953	
400.00	400.00	389.00	389.00	1.33	11.81	-96.66	-111.80	-958.09	964.59	951.45	13.14	73.398	
500.00	500.00	489.00	489.00	1.69	14.13	-96.66	-111.80	-958.09	964.59	948.77	15.82	60.964	
600.00	600.00	589.00	589.00	2.05	16.26	-96.66	-111.80	-958.09	964.59	946.28	18.31	52.673	
656.94	656.94	645.94	645.93	2.25	17.48	-96.64	-111.55	-958.09	964.56	944.83	19.73	48.886	
700.00	700.00	688.96	688.95	2.41	18.39	-96.64	-111.55	-958.09	964.56	943.76	20.80	46.368	
800.00	800.00	788.85	788.85	2.77	20.52	-96.65	-111.64	-958.09	964.57	941.28	23.29	41.414	
900.00	900.00	889.01	889.00	3.13	22.66	-96.66	-111.80	-958.09	964.59	938.81	25.78	37.413	
1,000.00	1,000.00	989.01	989.00	3.48	24.75	-96.66	-111.80	-958.09	964.59	936.35	28.24	34.160	
1,100.00	1,100.00	1,089.01	1,089.00	3.84	26.85	-96.66	-111.80	-958.09	964.59	933.90	30.69	31.427	
1,144.01	1,144.01	1,133.02	1,133.00	4.00	27.77	-96.62	-111.25	-958.09	964.53	932.75	31.77	30.356	
1,200.00	1,200.00	1,188.91	1,188.89	4.20	28.94	-96.63	-111.28	-958.09	964.53	931.38	33.15	29.099	
1,300.00	1,300.00	1,288.72	1,288.70	4.56	31.04	-96.64	-111.46	-958.09	964.55	928.95	35.60	27.096	
1,400.00	1,400.00	1,389.02	1,389.00	4.92	33.13	-96.66	-111.80	-958.09	964.59	926.54	38.05	25.349	
1,500.00	1,500.00	1,489.02	1,489.00	5.28	35.04	-96.66	-111.80	-958.09	964.59	924.27	40.32	23.926	
1,600.00	1,600.00	1,589.02	1,589.00	5.64	36.95	-96.66	-111.80	-958.09	964.59	922.01	42.58	22.653	
1,639.80	1,639.80	1,628.81	1,628.78	5.78	37.70	-96.64	-111.55	-958.09	964.56	921.08	43.48	22.183	
1,700.00	1,700.00	1,688.94	1,688.92	5.99	38.85	-96.64	-111.58	-958.09	964.56	919.72	44.84	21.510	
1,800.00	1,800.00	1,788.84	1,788.81	6.35	40.75	-96.65	-111.70	-958.09	964.58	917.47	47.11	20.477	
1,900.00	1,900.00	1,889.03	1,889.00	6.71	42.71	-96.66	-111.80	-958.09	964.59	915.17	49.42	19.519	
2,000.00	2,000.00	1,989.03	1,989.00	7.07	44.70	-96.66	-111.80	-958.09	964.59	912.82	51.77	18.631	
2,100.00	2,099.99	2,089.02	2,088.99	7.42	46.70	3.21	-111.80	-958.09	963.28	909.16	54.12	17.799	
2,200.00	2,199.91	2,188.76	2,188.72	7.76	48.70	3.25	-111.34	-958.09	959.31	902.86	56.45	16.994	
2,300.00	2,299.69	2,288.36	2,288.32	8.10	50.69	3.26	-111.60	-958.09	952.81	894.03	58.78	16.209	
2,400.00	2,399.27	2,388.35	2,388.27	8.45	52.76	3.29	-111.80	-958.09	943.70	882.50	61.20	15.420	
2,500.00	2,498.57	2,487.65	2,487.57	8.80	54.91	3.34	-111.80	-958.09	931.97	868.28	63.69	14.634	
2,565.04	2,562.98	2,552.06	2,551.98	9.03	56.30	3.38	-111.80	-958.09	922.94	857.64	65.30	14.134	
2,600.00	2,597.56	2,586.64	2,586.56	9.15	57.04	3.40	-111.80	-958.09	917.80	851.63	66.17	13.871	
2,700.00	2,696.47	2,685.24	2,685.15	9.52	59.17	3.52	-110.85	-958.09	902.98	834.34	68.64	13.155	
2,800.00	2,795.38	2,783.84	2,783.74	9.88	61.30	3.55	-111.34	-958.09	888.32	817.21	71.12	12.491	
2,900.00	2,894.28	2,883.46	2,883.28	10.25	63.63	3.58	-111.80	-958.09	873.66	799.88	73.78	11.841	
3,000.00	2,893.19	2,882.37	2,882.19	10.62	66.19	3.64	-111.80	-958.09	858.95	782.26	76.69	11.200	
3,100.00	3,092.10	3,081.23	3,081.04	11.00	68.75	3.78	-110.57	-958.09	844.11	764.51	79.60	10.604	
3,200.00	3,191.01	3,179.75	3,179.56	11.38	71.30	3.83	-110.85	-958.09	829.43	746.93	82.50	10.053	
3,300.00	3,289.91	3,278.31	3,278.10	11.76	73.85	3.85	-111.60	-958.09	814.81	729.40	85.41	9.540	
3,400.00	3,388.82	3,378.33	3,377.82	12.15	76.70	3.90	-111.80	-958.09	800.12	711.50	88.62	9.029	
3,500.00	3,487.73	3,476.44	3,475.88	12.53	79.57	4.08	-110.44	-958.09	785.28	693.44	91.84	8.551	
3,600.00	3,586.64	3,576.43	3,575.64	12.92	82.45	4.05	-111.80	-958.09	770.71	675.64	95.08	8.106	
3,700.00	3,685.55	3,675.34	3,674.55	13.31	85.22	4.13	-111.80	-958.09	756.01	657.82	98.20	7.699	
3,800.00	3,784.45	3,774.25	3,773.45	13.70	87.98	4.22	-111.80	-958.09	741.31	640.00	101.32	7.317	
3,900.00	3,883.36	3,872.81	3,871.94	14.09	90.73	4.50	-109.25	-958.09	726.37	621.94	104.43	6.956	
4,000.00	3,982.27	3,971.31	3,970.40	14.49	93.48	4.51	-110.25	-958.09	711.77	604.23	107.54	6.619	
4,100.00	4,081.18	4,071.33	4,070.18	14.88	96.23	4.48	-111.80	-958.09	697.22	586.57	110.65	6.301	
4,200.00	4,180.09	4,170.23	4,169.09	15.28	98.70	4.58	-111.80	-958.09	682.52	569.05	113.47	6.015	
4,300.00	4,278.99	4,269.14	4,267.99	15.67	101.16	4.68	-111.80	-958.09	667.83	551.54	116.29	5.743	
4,400.00	4,377.90	4,367.96	4,366.77	16.07	103.62	4.97	-109.72	-958.09	652.96	533.84	119.12	5.482	
4,500.00	4,476.81	4,466.63	4,465.44	16.47	106.08	5.04	-110.17	-958.09	638.31	516.38	121.94	5.235	
4,600.00	4,575.72	4,565.36	4,564.14	16.87	108.54	5.07	-111.15	-958.09	623.72	498.96	124.76	4.999	
4,700.00	4,674.63	4,664.94	4,663.63	17.27	110.90	5.13	-111.80	-958.09	609.09	481.60	127.48	4.778	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Offsets - West Pearl Queen Unit 194 (P&A) - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 410-INC-ONLY													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Rule Assigned:		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.00	4,773.53	4,763.84	4,762.53	17.67	113.15	5.26	-111.80	-958.09	594.41	464.32	130.09	4.569	
4,900.00	4,872.44	4,862.75	4,861.44	18.08	115.39	5.39	-111.80	-958.09	579.73	447.04	132.69	4.369	
5,000.00	4,971.35	4,961.66	4,960.35	18.48	117.63	5.53	-111.80	-958.09	565.06	429.76	135.30	4.176	
5,100.00	5,070.26	5,060.57	5,059.26	18.88	119.87	5.68	-111.80	-958.09	550.39	412.48	137.91	3.991	
5,200.00	5,169.16	5,100.00	5,098.59	19.29	120.77	5.74	-111.80	-958.09	539.02	400.54	138.48	3.892 ES, SF	
5,219.64	5,188.58	5,100.00	5,098.59	19.36	120.77	5.74	-111.80	-958.09	538.67	400.69	137.98	3.904 CC	
5,300.00	5,268.07	5,100.00	5,098.59	19.69	120.77	5.74	-111.80	-958.09	544.63	410.52	134.10	4.061	
5,400.00	5,366.98	5,100.00	5,098.59	20.09	120.77	5.74	-111.80	-958.09	568.06	442.14	125.92	4.511	
5,500.00	5,465.89	5,100.00	5,098.59	20.50	120.77	5.74	-111.80	-958.09	607.26	491.75	115.51	5.257	
5,600.00	5,564.80	5,100.00	5,098.59	20.91	120.77	5.74	-111.80	-958.09	659.42	554.98	104.45	6.314	
5,700.00	5,663.70	5,100.00	5,098.59	21.31	120.77	5.74	-111.80	-958.09	721.74	627.89	93.85	7.690	
5,800.00	5,762.61	5,100.00	5,098.59	21.72	120.77	5.74	-111.80	-958.09	791.82	707.54	84.28	9.395	
5,900.00	5,861.52	5,100.00	5,098.59	22.13	120.77	5.74	-111.80	-958.09	867.79	791.88	75.91	11.432	
6,000.00	5,960.43	5,100.00	5,098.59	22.53	120.77	5.74	-111.80	-958.09	948.22	879.50	68.72	13.799	
6,100.00	6,059.34	5,100.00	5,098.59	22.94	120.77	5.74	-111.80	-958.09	1,032.08	969.50	62.59	16.490	
6,200.00	6,158.24	5,100.00	5,098.59	23.35	120.77	5.74	-111.80	-958.09	1,118.60	1,061.22	57.38	19.493	
6,300.00	6,257.15	5,100.00	5,098.59	23.76	120.77	5.74	-111.80	-958.09	1,207.20	1,154.23	52.97	22.791	
6,400.00	6,356.06	5,100.00	5,098.59	24.16	120.77	5.74	-111.80	-958.09	1,297.46	1,248.24	49.22	26.359	
6,500.00	6,454.97	5,100.00	5,098.59	24.57	120.77	5.74	-111.80	-958.09	1,389.06	1,343.02	46.04	30.171	
6,600.00	6,553.87	5,100.00	5,098.59	24.98	120.77	5.74	-111.80	-958.09	1,481.74	1,438.41	43.34	34.192	
6,700.00	6,652.78	5,100.00	5,098.59	25.39	120.77	5.74	-111.80	-958.09	1,575.32	1,534.28	41.04	38.385	
6,800.00	6,751.69	5,100.00	5,098.59	25.80	120.77	5.74	-111.80	-958.09	1,669.64	1,630.55	39.09	42.710	
6,900.00	6,850.60	5,100.00	5,098.59	26.21	120.77	5.74	-111.80	-958.09	1,764.59	1,727.14	37.45	47.125	
7,000.00	6,949.51	5,100.00	5,098.59	26.62	120.77	5.74	-111.80	-958.09	1,860.07	1,824.01	36.06	51.588	
7,100.00	7,048.41	5,100.00	5,098.59	27.03	120.77	5.74	-111.80	-958.09	1,956.00	1,921.10	34.89	56.060	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design:Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: Reference		0-MWD + HDGM Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	89.62	0.20	30.00	30.02					
100.00	100.00	99.00	99.00	0.26	0.26	89.62	0.20	30.00	30.00	29.49	0.51	58.410		
200.00	200.00	199.00	199.00	0.62	0.61	89.62	0.20	30.00	30.00	28.77	1.23	24.400		
300.00	300.00	299.00	299.00	0.98	0.97	89.62	0.20	30.00	30.00	28.05	1.95	15.413		
400.00	400.00	399.00	399.00	1.33	1.33	89.62	0.20	30.00	30.00	27.34	2.66	11.264		
500.00	500.00	499.00	499.00	1.69	1.69	89.62	0.20	30.00	30.00	26.62	3.38	8.875		
600.00	600.00	599.00	599.00	2.05	2.05	89.62	0.20	30.00	30.00	25.90	4.10	7.322		
700.00	700.00	699.00	699.00	2.41	2.41	89.62	0.20	30.00	30.00	25.19	4.81	6.232		
800.00	800.00	799.00	799.00	2.77	2.76	89.62	0.20	30.00	30.00	24.47	5.53	5.424		
900.00	900.00	899.00	899.00	3.13	3.12	89.62	0.20	30.00	30.00	23.75	6.25	4.802		
1,000.00	1,000.00	999.00	999.00	3.48	3.48	89.62	0.20	30.00	30.00	23.04	6.97	4.307		
1,100.00	1,100.00	1,099.00	1,099.00	3.84	3.84	89.62	0.20	30.00	30.00	22.32	7.68	3.905		
1,200.00	1,200.00	1,199.00	1,199.00	4.20	4.20	89.62	0.20	30.00	30.00	21.60	8.40	3.572		
1,300.00	1,300.00	1,299.00	1,299.00	4.56	4.56	89.62	0.20	30.00	30.00	20.88	9.12	3.291		
1,400.00	1,400.00	1,399.00	1,399.00	4.92	4.91	89.62	0.20	30.00	30.00	20.17	9.83	3.051		
1,500.00	1,500.00	1,499.00	1,499.00	5.28	5.27	89.62	0.20	30.00	30.00	19.45	10.55	2.844		
1,600.00	1,600.00	1,599.00	1,599.00	5.64	5.63	89.62	0.20	30.00	30.00	18.73	11.27	2.663		
1,700.00	1,700.00	1,699.00	1,699.00	5.99	5.99	89.62	0.20	30.00	30.00	18.02	11.98	2.503		
1,800.00	1,800.00	1,799.00	1,799.00	6.35	6.35	89.62	0.20	30.00	30.00	17.30	12.70	2.362		
1,900.00	1,900.00	1,899.00	1,899.00	6.71	6.71	89.62	0.20	30.00	30.00	16.58	13.42	2.236		
2,000.00	2,000.00	1,999.00	1,999.00	7.07	7.07	89.62	0.20	30.00	30.00	15.87	14.13	2.123 CC, ES		
2,100.00	2,099.99	2,098.99	2,098.99	7.42	7.42	-170.91	0.20	30.00	31.29	16.45	14.84	2.109 SF		
2,200.00	2,199.91	2,198.91	2,198.91	7.76	7.78	-171.92	0.20	30.00	35.17	19.64	15.54	2.264		
2,300.00	2,299.69	2,298.69	2,298.69	8.10	8.14	-173.17	0.20	30.00	41.66	25.42	16.24	2.566		
2,400.00	2,399.27	2,398.27	2,398.27	8.45	8.50	-174.38	0.20	30.00	50.76	33.82	16.93	2.997		
2,500.00	2,498.57	2,497.57	2,497.57	8.80	8.85	-175.43	0.20	30.00	62.47	44.83	17.63	3.543		
2,565.04	2,562.98	2,561.98	2,561.98	9.03	9.08	-175.99	0.20	30.00	71.48	53.39	18.09	3.952		
2,600.00	2,597.56	2,596.56	2,596.56	9.15	9.21	-176.26	0.20	30.00	76.62	58.29	18.33	4.180		
2,700.00	2,696.47	2,695.47	2,695.47	9.52	9.56	-176.87	0.20	30.00	91.33	72.30	19.03	4.800		
2,800.00	2,795.38	2,794.38	2,794.38	9.88	9.92	-177.30	0.20	30.00	106.05	86.33	19.73	5.376		
2,900.00	2,894.28	2,893.28	2,893.28	10.25	10.27	-177.63	0.20	30.00	120.78	100.35	20.43	5.912		
3,000.00	2,993.19	2,992.19	2,992.19	10.62	10.63	-177.89	0.20	30.00	135.51	114.37	21.13	6.413		
3,100.00	3,092.10	3,091.10	3,091.10	11.00	10.98	-178.10	0.20	30.00	150.24	128.40	21.84	6.880		
3,200.00	3,191.01	3,190.01	3,190.01	11.38	11.33	-178.27	0.20	30.00	164.97	142.43	22.54	7.319		
3,300.00	3,289.91	3,288.91	3,288.91	11.76	11.69	-178.41	0.20	30.00	179.70	156.45	23.25	7.730		
3,400.00	3,388.82	3,387.82	3,387.82	12.15	12.04	-178.53	0.20	30.00	194.43	170.48	23.96	8.116		
3,500.00	3,487.73	3,486.73	3,486.73	12.53	12.40	-178.63	0.20	30.00	209.17	184.50	24.66	8.481		
3,600.00	3,586.64	3,585.64	3,585.64	12.92	12.75	-178.72	0.20	30.00	223.90	198.53	25.37	8.824		
3,700.00	3,685.55	3,684.55	3,684.55	13.31	13.11	-178.80	0.20	30.00	238.64	212.55	26.08	9.149		
3,800.00	3,784.45	3,779.01	3,779.00	13.70	13.44	-178.77	-0.13	30.75	254.10	227.35	26.75	9.498		
3,900.00	3,883.36	3,872.03	3,871.97	14.09	13.75	-178.48	-1.34	33.55	271.59	244.19	27.40	9.913		
4,000.00	3,982.27	3,964.29	3,964.08	14.49	14.06	-178.00	-3.44	38.38	291.12	263.09	28.02	10.389		
4,100.00	4,081.18	4,060.96	4,060.49	14.88	14.39	-177.40	-6.26	44.86	312.00	283.31	28.69	10.873		
4,200.00	4,180.09	4,158.70	4,157.97	15.28	14.72	-176.87	-9.12	51.44	332.95	303.57	29.38	11.333		
4,300.00	4,278.99	4,256.44	4,255.44	15.67	15.05	-176.40	-11.98	58.02	353.93	323.86	30.07	11.772		
4,400.00	4,377.90	4,354.17	4,352.91	16.07	15.39	-175.98	-14.84	64.60	374.92	344.16	30.75	12.191		
4,500.00	4,476.81	4,451.91	4,450.39	16.47	15.72	-175.61	-17.71	71.17	395.93	364.48	31.45	12.591		
4,600.00	4,575.72	4,549.65	4,547.86	16.87	16.06	-175.28	-20.57	77.75	416.95	384.82	32.14	12.974		
4,700.00	4,674.63	4,647.39	4,645.34	17.27	16.40	-174.97	-23.43	84.33	437.99	405.16	32.83	13.341		
4,800.00	4,773.53	4,745.12	4,742.81	17.67	16.74	-174.70	-26.29	90.91	459.04	425.51	33.53	13.692		
4,900.00	4,872.44	4,842.86	4,840.28	18.08	17.08	-174.45	-29.15	97.49	480.09	445.87	34.22	14.029		
5,000.00	4,971.35	4,940.60	4,937.76	18.48	17.42	-174.22	-32.01	104.07	501.16	466.24	34.92	14.351		

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:
Survey Program: 0-MWD + HDGM													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,070.26	5,038.34	5,035.23	18.88	17.76	-174.01	-34.87	110.65	522.23	486.61	35.62	14.661	
5,200.00	5,169.16	5,136.07	5,132.70	19.29	18.11	-173.81	-37.73	117.23	543.31	506.99	36.32	14.959	
5,300.00	5,268.07	5,233.81	5,230.18	19.69	18.45	-173.63	-40.60	123.81	564.39	527.37	37.02	15.246	
5,400.00	5,366.98	5,331.55	5,327.65	20.09	18.80	-173.46	-43.46	130.39	585.48	547.76	37.72	15.521	
5,500.00	5,465.89	5,429.29	5,425.13	20.50	19.14	-173.31	-46.32	136.97	606.57	568.15	38.42	15.786	
5,600.00	5,564.80	5,527.02	5,522.60	20.91	19.49	-173.16	-49.18	143.55	627.67	588.54	39.13	16.041	
5,700.00	5,663.70	5,624.76	5,620.07	21.31	19.83	-173.03	-52.04	150.13	648.77	608.93	39.83	16.287	
5,800.00	5,762.61	5,722.50	5,717.55	21.72	20.18	-172.90	-54.90	156.71	669.87	629.33	40.54	16.524	
5,900.00	5,861.52	5,820.24	5,815.02	22.13	20.53	-172.78	-57.76	163.29	690.98	649.73	41.24	16.753	
6,000.00	5,960.43	5,917.97	5,912.49	22.53	20.88	-172.67	-60.62	169.86	712.09	670.13	41.95	16.974	
6,100.00	6,059.34	6,015.71	6,009.97	22.94	21.23	-172.56	-63.48	176.44	733.20	690.54	42.66	17.187	
6,200.00	6,158.24	6,113.45	6,107.44	23.35	21.58	-172.46	-66.35	183.02	754.31	710.94	43.37	17.393	
6,300.00	6,257.15	6,211.19	6,204.92	23.76	21.93	-172.37	-69.21	189.60	775.43	731.35	44.08	17.593	
6,400.00	6,356.06	6,308.92	6,302.39	24.16	22.28	-172.28	-72.07	196.18	796.55	751.76	44.79	17.785	
6,500.00	6,454.97	6,406.66	6,399.86	24.57	22.63	-172.19	-74.93	202.76	817.67	772.17	45.50	17.972	
6,600.00	6,553.87	6,504.40	6,497.34	24.98	22.98	-172.11	-77.79	209.34	838.79	792.58	46.21	18.153	
6,700.00	6,652.78	6,602.13	6,594.81	25.39	23.33	-172.04	-80.65	215.92	859.91	812.99	46.92	18.328	
6,800.00	6,751.69	6,699.87	6,692.28	25.80	23.69	-171.96	-83.51	222.50	881.03	833.40	47.63	18.497	
6,900.00	6,850.60	6,797.61	6,789.76	26.21	24.04	-171.90	-86.37	229.08	902.16	853.82	48.34	18.662	
7,000.00	6,949.51	6,895.35	6,887.23	26.62	24.39	-171.83	-89.24	235.66	923.29	874.23	49.06	18.821	
7,100.00	7,048.41	6,993.08	6,984.70	27.03	24.75	-171.77	-92.10	242.24	944.41	894.65	49.77	18.976	
7,200.00	7,147.32	7,090.82	7,082.18	27.44	25.10	-171.70	-94.96	248.82	965.54	915.06	50.48	19.126	
7,300.00	7,246.23	7,188.56	7,179.65	27.85	25.45	-171.65	-97.82	255.40	986.67	935.48	51.20	19.272	
7,400.00	7,345.14	7,286.30	7,277.13	28.26	25.81	-171.59	-100.68	261.98	1,007.80	955.89	51.91	19.414	
7,500.00	7,444.05	7,384.03	7,374.60	28.67	26.16	-171.54	-103.54	268.55	1,028.93	976.31	52.63	19.552	
7,600.00	7,542.95	7,481.77	7,472.07	29.08	26.52	-171.49	-106.40	275.13	1,050.07	996.73	53.34	19.686	
7,700.00	7,641.86	7,579.51	7,569.55	29.49	26.87	-171.44	-109.26	281.71	1,071.20	1,017.14	54.06	19.816	
7,800.00	7,740.77	7,677.25	7,667.02	29.90	27.23	-171.39	-112.12	288.29	1,092.33	1,037.56	54.77	19.943	
7,900.00	7,839.68	7,774.98	7,764.49	30.31	27.59	-171.34	-114.99	294.87	1,113.47	1,057.98	55.49	20.067	
8,000.00	7,938.58	7,872.72	7,861.97	30.73	27.94	-171.30	-117.85	301.45	1,134.60	1,078.40	56.21	20.187	
8,100.00	8,037.49	7,970.46	7,959.44	31.14	28.30	-171.26	-120.71	308.03	1,155.74	1,098.82	56.92	20.304	
8,200.00	8,136.40	8,068.20	8,056.92	31.55	28.65	-171.22	-123.57	314.61	1,176.88	1,119.24	57.64	20.418	
8,300.00	8,235.31	8,165.93	8,154.39	31.96	29.01	-171.18	-126.43	321.19	1,198.01	1,139.66	58.36	20.529	
8,400.00	8,334.22	8,263.67	8,251.86	32.37	29.37	-171.14	-129.29	327.77	1,219.15	1,160.08	59.08	20.637	
8,500.00	8,433.12	8,361.41	8,349.34	32.79	29.73	-171.10	-132.15	334.35	1,240.29	1,180.50	59.79	20.743	
8,600.00	8,532.03	8,459.15	8,446.81	33.20	30.08	-171.07	-135.01	340.93	1,261.43	1,200.92	60.51	20.846	
8,700.00	8,630.94	8,556.88	8,544.28	33.61	30.44	-171.04	-137.88	347.51	1,282.57	1,221.34	61.23	20.946	
8,800.00	8,729.85	8,654.62	8,641.76	34.02	30.80	-171.00	-140.74	354.09	1,303.71	1,241.76	61.95	21.044	
8,900.00	8,828.76	8,752.36	8,739.23	34.43	31.16	-170.97	-143.60	360.67	1,324.85	1,262.18	62.67	21.140	
9,000.00	8,927.66	8,850.09	8,836.71	34.85	31.51	-170.94	-146.46	367.25	1,345.99	1,282.60	63.39	21.234	
9,100.00	9,026.57	8,947.83	8,934.18	35.26	31.87	-170.91	-149.32	373.82	1,367.13	1,303.02	64.11	21.325	
9,200.00	9,125.48	9,045.57	9,031.65	35.67	32.23	-170.88	-152.18	380.40	1,388.27	1,323.44	64.83	21.414	
9,300.00	9,224.39	9,143.31	9,129.13	36.08	32.59	-170.85	-155.04	386.98	1,409.41	1,343.86	65.55	21.501	
9,400.00	9,323.29	9,241.04	9,226.60	36.50	32.95	-170.82	-157.90	393.56	1,430.55	1,364.28	66.27	21.586	
9,500.00	9,422.20	9,338.78	9,324.07	36.91	33.31	-170.80	-160.76	400.14	1,451.69	1,384.70	66.99	21.670	
9,600.00	9,521.11	9,436.52	9,421.55	37.32	33.66	-170.77	-163.63	406.72	1,472.83	1,405.12	67.71	21.751	
9,700.00	9,620.02	9,534.26	9,519.02	37.74	34.02	-170.75	-166.49	413.30	1,493.98	1,425.54	68.43	21.831	
9,800.00	9,718.93	9,631.99	9,616.49	38.15	34.38	-170.72	-169.35	419.88	1,515.12	1,445.96	69.16	21.909	
9,900.00	9,817.83	9,729.73	9,713.97	38.56	34.74	-170.70	-172.21	426.46	1,536.26	1,466.38	69.88	21.985	
10,000.00	9,916.74	9,827.47	9,811.44	38.98	35.10	-170.68	-175.07	433.04	1,557.40	1,486.80	70.60	22.060	
10,044.87	9,961.12	9,871.32	9,855.17	39.16	35.26	-170.67	-176.35	435.99	1,566.89	1,495.97	70.92	22.093	
10,100.00	10,015.71	9,925.29	9,909.00	39.39	35.46	-170.68	-177.93	439.62	1,578.16	1,506.84	71.32	22.127	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:
Survey Program: 0-MWD + HDGM													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,114.98	10,023.56	10,007.00	39.78	35.82	-170.69	-180.81	446.24	1,596.64	1,524.60	72.04	22.163	
10,300.00	10,214.53	10,122.26	10,105.44	40.16	36.18	-170.67	-183.70	452.88	1,612.58	1,539.82	72.76	22.163	
10,400.00	10,314.30	10,221.34	10,204.25	40.53	36.55	-170.64	-186.60	459.55	1,625.97	1,552.49	73.48	22.129	
10,500.00	10,414.21	10,359.86	10,342.49	40.87	37.06	-170.57	-190.14	467.68	1,636.06	1,561.62	74.45	21.976	
10,609.91	10,524.10	10,540.53	10,523.09	41.23	37.70	89.61	-191.84	471.60	1,640.00	1,564.40	75.60	21.694	
10,650.00	10,564.16	10,580.78	10,563.30	41.36	37.83	90.07	-190.43	471.59	1,640.00	1,564.13	75.87	21.617	
10,700.00	10,613.82	10,630.96	10,613.14	41.51	38.00	90.07	-184.72	471.54	1,640.00	1,563.80	76.19	21.524	
10,750.00	10,662.80	10,681.14	10,662.29	41.66	38.16	90.07	-174.68	471.46	1,640.00	1,563.49	76.51	21.435	
10,800.00	10,710.73	10,731.31	10,710.36	41.80	38.31	90.07	-160.38	471.35	1,640.00	1,563.18	76.82	21.349	
10,850.00	10,757.23	10,781.48	10,756.99	41.92	38.45	90.06	-141.94	471.20	1,640.00	1,562.88	77.11	21.268	
10,900.00	10,801.96	10,831.64	10,801.83	42.04	38.59	90.06	-119.48	471.02	1,640.00	1,562.60	77.39	21.190	
10,950.00	10,844.57	10,881.79	10,844.53	42.15	38.71	90.06	-93.20	470.80	1,639.99	1,562.33	77.66	21.116	
11,000.00	10,884.75	10,931.94	10,884.76	42.24	38.81	90.05	-63.29	470.56	1,639.99	1,562.07	77.92	21.046	
11,050.00	10,922.18	10,982.07	10,922.21	42.32	38.91	90.05	-29.99	470.29	1,639.99	1,561.82	78.18	20.978	
11,100.00	10,956.58	11,032.20	10,956.60	42.38	38.99	90.05	6.45	470.00	1,639.99	1,561.57	78.42	20.914	
11,150.00	10,987.69	11,082.31	10,987.67	42.44	39.06	90.04	45.74	469.68	1,639.99	1,561.34	78.65	20.851	
11,161.80	10,994.52	11,094.13	10,994.50	42.45	39.07	90.04	55.40	469.60	1,639.99	1,561.28	78.71	20.836	
11,200.00	11,015.27	11,132.41	11,015.19	42.48	39.11	90.04	87.59	469.34	1,639.99	1,561.11	78.88	20.790	
11,212.01	11,021.34	11,144.43	11,021.24	42.49	39.13	90.04	97.99	469.26	1,639.99	1,561.05	78.94	20.776	
11,250.00	11,039.11	11,182.49	11,038.93	42.52	39.16	90.03	131.67	468.98	1,639.99	1,560.88	79.11	20.730	
11,262.32	11,044.39	11,194.83	11,044.18	42.52	39.17	90.03	142.83	468.89	1,639.99	1,560.82	79.17	20.716	
11,300.00	11,059.04	11,232.57	11,058.74	42.55	39.22	90.03	177.64	468.61	1,639.99	1,560.65	79.33	20.672	
11,312.80	11,063.49	11,245.39	11,063.15	42.55	39.23	90.02	189.68	468.52	1,639.99	1,560.59	79.39	20.657	
11,350.00	11,074.89	11,282.62	11,074.45	42.57	39.30	90.02	225.15	468.23	1,639.98	1,560.43	79.56	20.614	
11,363.64	11,078.49	11,296.28	11,078.01	42.57	39.33	90.02	238.34	468.12	1,639.98	1,560.37	79.62	20.598	
11,400.00	11,086.55	11,332.67	11,085.95	42.59	39.41	90.01	273.84	467.84	1,639.98	1,560.20	79.78	20.557	
11,450.00	11,093.93	11,382.69	11,093.16	42.62	39.53	90.01	323.33	467.44	1,639.98	1,559.98	80.00	20.500	
11,500.00	11,096.97	11,432.71	11,096.02	42.65	39.65	90.00	373.24	467.03	1,639.98	1,559.76	80.22	20.444	
11,518.29	11,097.00	11,451.00	11,095.98	42.67	39.70	90.00	391.53	466.88	1,639.98	1,559.68	80.30	20.423	
11,600.00	11,095.80	11,532.71	11,094.62	42.75	39.92	89.99	473.22	466.22	1,639.98	1,559.27	80.71	20.319	
11,615.77	11,095.57	11,548.47	11,094.36	42.77	39.97	89.99	488.99	466.10	1,639.98	1,559.18	80.80	20.297	
11,700.00	11,094.34	11,632.71	11,092.96	42.92	40.24	89.99	573.21	465.42	1,639.97	1,558.68	81.30	20.172	
11,728.60	11,093.92	11,661.30	11,092.48	42.97	40.34	89.98	601.80	465.18	1,639.97	1,558.48	81.49	20.125	
11,800.00	11,092.87	11,732.71	11,091.29	43.14	40.60	89.98	673.19	464.61	1,639.97	1,557.98	81.99	20.003	
11,828.87	11,092.45	11,761.57	11,090.81	43.22	40.72	89.98	702.05	464.37	1,639.97	1,557.76	82.21	19.949	
11,900.00	11,091.41	11,832.71	11,089.63	43.44	41.02	89.97	773.17	463.80	1,639.97	1,557.20	82.77	19.813	
11,928.99	11,090.99	11,861.69	11,089.15	43.54	41.14	89.97	802.15	463.56	1,639.97	1,556.94	83.02	19.753	
12,000.00	11,089.95	11,932.71	11,087.96	43.80	41.47	89.97	873.16	462.99	1,639.96	1,556.31	83.65	19.605	
12,029.06	11,089.52	11,961.76	11,087.48	43.92	41.62	89.96	902.21	462.76	1,639.96	1,556.03	83.93	19.540	
12,100.00	11,088.48	12,032.71	11,086.30	44.23	41.98	89.96	973.14	462.18	1,639.96	1,555.34	84.62	19.379	
12,129.10	11,088.06	12,061.81	11,085.81	44.36	42.13	89.96	1,002.23	461.95	1,639.96	1,555.03	84.93	19.310	
12,200.00	11,087.02	12,132.71	11,084.63	44.71	42.52	89.95	1,073.12	461.37	1,639.96	1,554.27	85.68	19.139	
12,229.13	11,086.59	12,161.84	11,084.15	44.86	42.69	89.95	1,102.25	461.14	1,639.96	1,553.94	86.01	19.066	
12,300.00	11,085.55	12,232.70	11,082.97	45.24	43.11	89.94	1,173.10	460.57	1,639.96	1,553.12	86.83	18.887	
12,329.16	11,085.13	12,261.86	11,082.48	45.40	43.29	89.94	1,202.25	460.33	1,639.95	1,552.77	87.19	18.810	
12,400.00	11,084.09	12,332.70	11,081.30	45.81	43.74	89.94	1,273.09	459.76	1,639.95	1,551.89	88.06	18.623	
12,429.17	11,083.66	12,361.88	11,080.82	45.99	43.93	89.94	1,302.25	459.52	1,639.95	1,551.52	88.44	18.544	
12,500.00	11,082.63	12,432.70	11,079.64	46.43	44.40	89.93	1,373.07	458.95	1,639.95	1,550.58	89.37	18.351	
12,529.19	11,082.20	12,461.89	11,079.15	46.62	44.60	89.93	1,402.25	458.71	1,639.95	1,550.18	89.77	18.269	
12,600.00	11,081.16	12,532.70	11,077.97	47.09	45.11	89.92	1,473.05	458.14	1,639.95	1,549.20	90.75	18.072	
12,629.20	11,080.74	12,561.90	11,077.49	47.30	45.32	89.92	1,502.25	457.91	1,639.95	1,548.78	91.17	17.988	
12,700.00	11,079.70	12,632.70	11,076.31	47.79	45.84	89.92	1,573.03	457.33	1,639.94	1,547.74	92.20	17.787	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,729.21	11,079.27	12,661.91	11,075.82	48.00	46.07	89.91	1,602.24	457.10	1,639.94	1,547.30	92.64	17.702	
12,800.00	11,078.24	12,732.70	11,074.64	48.52	46.62	89.91	1,673.02	456.52	1,639.94	1,546.22	93.72	17.498	
12,829.22	11,077.81	12,761.92	11,074.16	48.75	46.85	89.91	1,702.23	456.29	1,639.94	1,545.76	94.18	17.412	
12,900.00	11,076.77	12,832.70	11,072.98	49.29	47.42	89.90	1,773.00	455.72	1,639.94	1,544.63	95.31	17.206	
12,929.22	11,076.34	12,861.93	11,072.49	49.52	47.66	89.90	1,802.22	455.48	1,639.94	1,544.15	95.79	17.120	
13,000.00	11,075.31	12,932.70	11,071.31	50.09	48.26	89.90	1,872.98	454.91	1,639.94	1,542.98	96.96	16.913	
13,029.23	11,074.88	12,961.93	11,070.83	50.33	48.51	89.89	1,902.21	454.67	1,639.94	1,542.48	97.46	16.827	
13,100.00	11,073.84	13,032.70	11,069.65	50.92	49.12	89.89	1,972.96	454.10	1,639.93	1,541.26	98.67	16.621	
13,129.23	11,073.42	13,061.94	11,069.16	51.17	49.38	89.89	2,002.19	453.86	1,639.93	1,540.75	99.18	16.535	
13,200.00	11,072.38	13,132.70	11,067.98	51.77	50.01	89.88	2,072.95	453.29	1,639.93	1,539.50	100.43	16.329	
13,229.24	11,071.95	13,161.94	11,067.49	52.03	50.28	89.88	2,102.18	453.06	1,639.93	1,538.97	100.96	16.243	
13,300.00	11,070.92	13,232.70	11,066.32	52.66	50.93	89.87	2,172.93	452.48	1,639.93	1,537.68	102.25	16.038	
13,329.24	11,070.49	13,261.95	11,065.83	52.92	51.20	89.87	2,202.17	452.25	1,639.93	1,537.13	102.79	15.953	
13,400.00	11,069.45	13,332.70	11,064.65	53.56	51.87	89.87	2,272.91	451.68	1,639.93	1,535.81	104.12	15.751	
13,429.25	11,069.02	13,361.95	11,064.16	53.84	52.15	89.87	2,302.15	451.44	1,639.92	1,535.25	104.68	15.667	
13,500.00	11,067.99	13,432.70	11,062.99	54.50	52.84	89.86	2,372.90	450.87	1,639.92	1,533.89	106.03	15.466	
13,529.25	11,067.56	13,461.95	11,062.50	54.78	53.12	89.86	2,402.14	450.63	1,639.92	1,533.32	106.61	15.383	
13,600.00	11,066.53	13,532.70	11,061.32	55.45	53.83	89.85	2,472.88	450.06	1,639.92	1,531.93	107.99	15.185	
13,629.25	11,066.10	13,561.96	11,060.83	55.74	54.12	89.85	2,502.13	449.82	1,639.92	1,531.34	108.58	15.104	
13,700.00	11,065.06	13,632.70	11,059.66	56.43	54.84	89.85	2,572.86	449.25	1,639.92	1,529.92	110.00	14.909	
13,729.26	11,064.63	13,661.96	11,059.17	56.72	55.13	89.84	2,602.11	449.01	1,639.92	1,529.32	110.59	14.828	
13,800.00	11,063.60	13,732.70	11,057.99	57.43	55.86	89.84	2,672.84	448.44	1,639.92	1,527.87	112.04	14.637	
13,829.26	11,063.17	13,761.96	11,057.50	57.72	56.17	89.84	2,702.10	448.21	1,639.91	1,527.27	112.65	14.558	
13,900.00	11,062.13	13,832.70	11,056.33	58.44	56.91	89.83	2,772.83	447.63	1,639.91	1,525.79	114.12	14.370	
13,929.26	11,061.71	13,861.96	11,055.84	58.74	57.22	89.83	2,802.08	447.40	1,639.91	1,525.17	114.74	14.292	
14,000.00	11,060.67	13,932.70	11,054.66	59.48	57.98	89.83	2,872.81	446.83	1,639.91	1,523.67	116.24	14.108	
14,029.26	11,060.24	13,961.96	11,054.17	59.78	58.29	89.82	2,902.07	446.59	1,639.91	1,523.04	116.87	14.032	
14,100.00	11,059.21	14,032.70	11,053.00	60.53	59.06	89.82	2,972.79	446.02	1,639.91	1,521.52	118.39	13.852	
14,129.26	11,058.78	14,061.97	11,052.51	60.84	59.38	89.82	3,002.05	445.78	1,639.91	1,520.88	119.03	13.777	
14,200.00	11,057.74	14,132.70	11,051.33	61.60	60.16	89.81	3,072.77	445.21	1,639.91	1,519.33	120.58	13.601	
14,229.27	11,057.31	14,161.97	11,050.84	61.92	60.48	89.81	3,102.03	444.97	1,639.90	1,518.68	121.22	13.528	
14,300.00	11,056.28	14,232.70	11,049.67	62.68	61.27	89.80	3,172.76	444.40	1,639.90	1,517.11	122.79	13.355	
14,329.27	11,055.85	14,261.97	11,049.18	63.01	61.60	89.80	3,202.02	444.16	1,639.90	1,516.46	123.45	13.284	
14,400.00	11,054.81	14,332.70	11,048.00	63.78	62.40	89.80	3,272.74	443.59	1,639.90	1,514.87	125.03	13.116	
14,429.27	11,054.39	14,361.97	11,047.51	64.11	62.73	89.79	3,302.00	443.36	1,639.90	1,514.20	125.70	13.046	
14,500.00	11,053.35	14,432.70	11,046.34	64.90	63.54	89.79	3,372.72	442.78	1,639.90	1,512.59	127.31	12.882	
14,529.27	11,052.92	14,461.97	11,045.85	65.23	63.88	89.79	3,401.99	442.55	1,639.90	1,511.92	127.98	12.814	
14,600.00	11,051.89	14,532.70	11,044.67	66.02	64.70	89.78	3,472.70	441.98	1,639.90	1,510.29	129.60	12.653	
14,629.27	11,051.46	14,561.97	11,044.18	66.36	65.04	89.78	3,501.97	441.74	1,639.90	1,509.61	130.28	12.587	
14,700.00	11,050.42	14,632.70	11,043.01	67.16	65.86	89.78	3,572.69	441.17	1,639.89	1,507.97	131.93	12.430	
14,729.27	11,049.99	14,661.97	11,042.52	67.50	66.21	89.77	3,601.96	440.93	1,639.89	1,507.28	132.61	12.366	
14,800.00	11,048.96	14,732.70	11,041.34	68.32	67.04	89.77	3,672.67	440.36	1,639.89	1,505.62	134.27	12.213	
14,829.27	11,048.53	14,761.97	11,040.85	68.66	67.39	89.77	3,701.94	440.12	1,639.89	1,504.93	134.96	12.151	
14,900.00	11,047.50	14,832.70	11,039.68	69.48	68.23	89.76	3,772.65	439.55	1,639.89	1,503.25	136.64	12.002	
14,929.28	11,047.07	14,861.97	11,039.19	69.82	68.58	89.76	3,801.92	439.31	1,639.89	1,502.55	137.34	11.941	
15,000.00	11,046.03	14,932.70	11,038.01	70.65	69.43	89.75	3,872.64	438.74	1,639.89	1,500.86	139.03	11.795	
15,029.28	11,045.60	14,961.98	11,037.52	71.00	69.78	89.75	3,901.91	438.51	1,639.89	1,500.15	139.73	11.736	
15,100.00	11,044.57	15,032.70	11,036.35	71.84	70.64	89.75	3,972.62	437.94	1,639.88	1,498.45	141.44	11.595	
15,129.28	11,044.14	15,061.98	11,035.86	72.19	70.99	89.75	4,001.89	437.70	1,639.88	1,497.74	142.15	11.537	
15,200.00	11,043.10	15,132.70	11,034.68	73.03	71.86	89.74	4,072.60	437.13	1,639.88	1,496.02	143.86	11.399	
15,229.28	11,042.68	15,161.98	11,034.19	73.39	72.22	89.74	4,101.87	436.89	1,639.88	1,495.30	144.58	11.343	
15,300.00	11,041.64	15,232.70	11,033.01	74.24	73.08	89.73	4,172.58	436.32	1,639.88	1,493.57	146.31	11.208	

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program:		0-MWD + HDGM				Rule Assigned:				Offset Well Error:		0.00 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
15,329.28	11,041.21	15,261.98	11,032.53	74.59	73.45	89.73	4,201.86	436.08	1,639.88	1,492.85	147.03	11.153		
15,400.00	11,040.18	15,332.70	11,031.35	75.45	74.32	89.73	4,272.57	435.51	1,639.88	1,491.11	148.77	11.023		
15,429.28	11,039.75	15,361.98	11,030.86	75.81	74.68	89.72	4,301.84	435.27	1,639.88	1,490.38	149.50	10.969		
15,500.00	11,038.71	15,432.70	11,029.68	76.67	75.56	89.72	4,372.55	434.70	1,639.88	1,488.62	151.25	10.842		
15,529.28	11,038.28	15,461.98	11,029.20	77.03	75.93	89.72	4,401.82	434.47	1,639.88	1,487.89	151.98	10.790		
15,600.00	11,037.25	15,532.70	11,028.02	77.91	76.81	89.71	4,472.53	433.89	1,639.87	1,486.13	153.75	10.666		
15,629.28	11,036.82	15,561.98	11,027.53	78.27	77.18	89.71	4,501.81	433.66	1,639.87	1,485.39	154.48	10.615		
15,700.00	11,035.79	15,632.70	11,026.35	79.14	78.07	89.71	4,572.51	433.09	1,639.87	1,483.62	156.26	10.495		
15,729.28	11,035.36	15,661.98	11,025.87	79.51	78.44	89.70	4,601.79	432.85	1,639.87	1,482.88	156.99	10.445		
15,800.00	11,034.32	15,732.70	11,024.69	80.39	79.34	89.70	4,672.50	432.28	1,639.87	1,481.09	158.78	10.328		
15,829.28	11,033.89	15,761.98	11,024.20	80.76	79.71	89.70	4,701.77	432.04	1,639.87	1,480.35	159.52	10.280		
15,900.00	11,032.86	15,832.70	11,023.02	81.64	80.61	89.69	4,772.48	431.47	1,639.87	1,478.55	161.32	10.166		
15,929.28	11,032.43	15,861.98	11,022.54	82.01	80.98	89.69	4,801.76	431.23	1,639.87	1,477.81	162.06	10.119		
16,000.00	11,031.39	15,932.70	11,021.36	82.90	81.89	89.68	4,872.46	430.66	1,639.87	1,476.00	163.87	10.007		
16,029.28	11,030.97	15,961.98	11,020.87	83.27	82.27	89.68	4,901.74	430.42	1,639.87	1,475.25	164.61	9.962		
16,100.00	11,029.93	16,032.70	11,019.69	84.17	83.17	89.68	4,972.44	429.85	1,639.86	1,473.44	166.43	9.853		
16,129.28	11,029.50	16,061.98	11,019.21	84.54	83.55	89.68	5,001.72	429.62	1,639.86	1,472.68	167.18	9.809		
16,200.00	11,028.47	16,132.70	11,018.03	85.44	84.46	89.67	5,072.43	429.04	1,639.86	1,470.86	169.00	9.703		
16,229.29	11,028.04	16,161.98	11,017.54	85.81	84.84	89.67	5,101.71	428.81	1,639.86	1,470.10	169.76	9.660		
16,300.00	11,027.00	16,232.70	11,016.36	86.72	85.76	89.66	5,172.41	428.24	1,639.86	1,468.27	171.59	9.557		
16,329.29	11,026.57	16,261.98	11,015.88	87.09	86.14	89.66	5,201.69	428.00	1,639.86	1,467.51	172.35	9.515		
16,400.00	11,025.54	16,332.70	11,014.70	88.00	87.06	89.66	5,272.39	427.43	1,639.86	1,465.68	174.18	9.415		
16,429.29	11,025.11	16,361.98	11,014.21	88.38	87.44	89.65	5,301.67	427.19	1,639.86	1,464.91	174.94	9.374		
16,500.00	11,024.08	16,432.70	11,013.03	89.29	88.37	89.65	5,372.38	426.62	1,639.86	1,463.07	176.79	9.276		
16,529.29	11,023.65	16,461.98	11,012.55	89.67	88.75	89.65	5,401.66	426.38	1,639.86	1,462.30	177.55	9.236		
16,600.00	11,022.61	16,532.70	11,011.37	90.58	89.68	89.64	5,472.36	425.81	1,639.85	1,460.45	179.40	9.141		
16,629.29	11,022.18	16,561.98	11,010.88	90.96	90.06	89.64	5,501.64	425.57	1,639.85	1,459.68	180.17	9.102		
16,700.00	11,021.15	16,632.70	11,009.70	91.88	90.99	89.64	5,572.34	425.00	1,639.85	1,457.83	182.03	9.009		
16,729.29	11,020.72	16,661.98	11,009.22	92.26	91.38	89.63	5,601.62	424.77	1,639.85	1,457.05	182.80	8.971		
16,800.00	11,019.68	16,732.70	11,008.04	93.19	92.31	89.63	5,672.32	424.19	1,639.85	1,455.19	184.66	8.880		
16,829.29	11,019.26	16,761.98	11,007.55	93.57	92.70	89.63	5,701.61	423.96	1,639.85	1,454.42	185.43	8.843		
16,900.00	11,018.22	16,832.70	11,006.37	94.49	93.64	89.62	5,772.31	423.39	1,639.85	1,452.55	187.30	8.755		
16,929.29	11,017.79	16,861.98	11,005.89	94.88	94.02	89.62	5,801.59	423.15	1,639.85	1,451.77	188.08	8.719		
17,000.00	11,016.76	16,932.70	11,004.71	95.81	94.96	89.61	5,872.29	422.58	1,639.85	1,449.90	189.95	8.633		
17,029.29	11,016.33	16,961.98	11,004.22	96.19	95.35	89.61	5,901.57	422.34	1,639.85	1,449.12	190.73	8.598		
17,100.00	11,015.29	17,032.70	11,003.04	97.12	96.29	89.61	5,972.27	421.77	1,639.85	1,447.24	192.61	8.514		
17,129.29	11,014.86	17,061.98	11,002.56	97.51	96.69	89.60	6,001.56	421.53	1,639.84	1,446.45	193.39	8.479		
17,200.00	11,013.83	17,132.70	11,001.38	98.44	97.63	89.60	6,072.25	420.96	1,639.84	1,444.57	195.28	8.398		
17,229.29	11,013.40	17,161.98	11,000.89	98.83	98.02	89.60	6,101.54	420.73	1,639.84	1,443.79	196.06	8.364		
17,300.00	11,012.37	17,232.69	10,999.71	99.77	98.97	89.59	6,172.24	420.15	1,639.84	1,441.89	197.95	8.284		
17,329.29	11,011.94	17,261.98	10,999.23	100.16	99.36	89.59	6,201.52	419.92	1,639.84	1,441.11	198.73	8.252		
17,400.00	11,010.90	17,332.69	10,998.05	101.10	100.31	89.59	6,272.22	419.35	1,639.84	1,439.21	200.63	8.174		
17,429.29	11,010.47	17,361.98	10,997.56	101.49	100.71	89.58	6,301.50	419.11	1,639.84	1,438.43	201.41	8.142		
17,500.00	11,009.44	17,432.69	10,996.38	102.43	101.66	89.58	6,372.20	418.54	1,639.84	1,436.53	203.31	8.066		
17,529.29	11,009.01	17,461.98	10,995.90	102.82	102.05	89.58	6,401.49	418.30	1,639.84	1,435.74	204.10	8.034		
17,600.00	11,007.97	17,532.69	10,994.72	103.77	103.01	89.57	6,472.18	417.73	1,639.84	1,433.83	206.01	7.960		
17,629.29	11,007.55	17,561.98	10,994.23	104.16	103.40	89.57	6,501.47	417.49	1,639.84	1,433.04	206.80	7.930		
17,700.00	11,006.51	17,632.69	10,993.05	105.11	104.36	89.56	6,572.17	416.92	1,639.84	1,431.13	208.71	7.857		
17,729.29	11,006.08	17,661.99	10,992.57	105.50	104.75	89.56	6,601.45	416.68	1,639.84	1,430.34	209.50	7.827		
17,800.00	11,005.05	17,732.69	10,991.39	106.45	105.71	89.56	6,672.15	416.11	1,639.83	1,428.42	211.41	7.757		
17,829.29	11,004.62	17,761.99	10,990.90	106.84	106.11	89.56	6,701.44	415.88	1,639.83	1,427.63	212.20	7.728		
17,900.00	11,003.58	17,832.69	10,989.72	107.79	107.07	89.55	6,772.13	415.30	1,639.83	1,425.71	214.12	7.658		

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design:Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD + HDGM		Offset			Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Offset Well Error:	0.00 usft
Reference	Offset	Reference	Offset	Reference	Offset	Highside Toolface			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
17,929.29	11,003.15	17,861.99	10,989.23	108.19	107.47	89.55	6,801.42	415.07	1,639.83	1,424.92	214.92	7.630			
18,000.00	11,002.12	17,932.69	10,988.06	109.14	108.43	89.54	6,872.12	414.50	1,639.83	1,423.00	216.84	7.563			
18,029.29	11,001.69	17,961.99	10,987.57	109.54	108.83	89.54	6,901.40	414.26	1,639.83	1,422.20	217.63	7.535			
18,100.00	11,000.65	18,032.69	10,986.39	110.49	109.79	89.54	6,972.10	413.69	1,639.83	1,420.27	219.56	7.469			
18,129.29	11,000.23	18,061.99	10,985.90	110.89	110.19	89.53	7,001.39	413.45	1,639.83	1,419.47	220.36	7.442			
18,200.00	10,999.19	18,132.69	10,984.73	111.85	111.16	89.53	7,072.08	412.88	1,639.83	1,417.55	222.28	7.377			
18,229.29	10,998.76	18,161.99	10,984.24	112.24	111.56	89.53	7,101.37	412.64	1,639.83	1,416.74	223.08	7.351			
18,300.00	10,997.73	18,232.69	10,983.06	113.20	112.52	89.52	7,172.06	412.07	1,639.83	1,414.81	225.01	7.288			
18,329.29	10,997.30	18,261.99	10,982.57	113.60	112.93	89.52	7,201.35	411.83	1,639.83	1,414.01	225.82	7.262			
18,400.00	10,996.26	18,332.69	10,981.40	114.56	113.89	89.52	7,272.05	411.26	1,639.83	1,412.08	227.75	7.200			
18,429.29	10,995.83	18,361.99	10,980.91	114.96	114.30	89.51	7,301.33	411.03	1,639.82	1,411.27	228.55	7.175			
18,500.00	10,994.80	18,432.69	10,979.73	115.92	115.27	89.51	7,372.03	410.45	1,639.82	1,409.33	230.49	7.115			
18,529.29	10,994.37	18,461.99	10,979.24	116.32	115.67	89.51	7,401.32	410.22	1,639.82	1,408.53	231.29	7.090			
18,600.00	10,993.34	18,532.69	10,978.07	117.29	116.64	89.50	7,472.01	409.65	1,639.82	1,406.59	233.23	7.031			
18,629.29	10,992.91	18,561.99	10,977.58	117.69	117.04	89.50	7,501.30	409.41	1,639.82	1,405.78	234.04	7.007			
18,700.00	10,991.87	18,632.69	10,976.40	118.65	118.02	89.49	7,571.99	408.84	1,639.82	1,403.84	235.98	6.949			
18,729.29	10,991.44	18,661.99	10,975.91	119.05	118.42	89.49	7,601.28	408.60	1,639.82	1,403.03	236.79	6.925			
18,800.00	10,990.41	18,732.69	10,974.74	120.02	119.40	89.49	7,671.98	408.03	1,639.82	1,401.08	238.74	6.869			
18,829.29	10,989.98	18,761.99	10,974.25	120.42	119.80	89.49	7,701.27	407.79	1,639.82	1,400.28	239.54	6.846			
18,900.00	10,988.94	18,832.69	10,973.07	121.39	120.78	89.48	7,771.96	407.22	1,639.82	1,398.33	241.49	6.790			
18,929.29	10,988.52	18,861.99	10,972.58	121.79	121.18	89.48	7,801.25	406.99	1,639.82	1,397.52	242.30	6.768			
19,000.00	10,987.48	18,932.69	10,971.41	122.76	122.16	89.47	7,871.94	406.41	1,639.82	1,395.56	244.25	6.714			
19,029.29	10,987.05	18,961.99	10,970.92	123.17	122.56	89.47	7,901.23	406.18	1,639.82	1,394.75	245.06	6.691			
19,100.00	10,986.02	19,032.69	10,969.74	124.14	123.54	89.47	7,971.92	405.61	1,639.82	1,392.80	247.02	6.638			
19,129.29	10,985.59	19,061.99	10,969.25	124.54	123.95	89.46	8,001.21	405.37	1,639.82	1,391.99	247.83	6.617			
19,200.00	10,984.55	19,132.69	10,968.08	125.51	124.93	89.46	8,071.91	404.80	1,639.82	1,390.03	249.79	6.565			
19,229.30	10,984.12	19,161.99	10,967.59	125.92	125.33	89.46	8,101.20	404.56	1,639.81	1,389.22	250.60	6.544			
19,300.00	10,983.09	19,232.69	10,966.41	126.89	126.31	89.45	8,171.89	403.99	1,639.81	1,387.26	252.56	6.493			
19,329.30	10,982.66	19,261.99	10,965.92	127.30	126.72	89.45	8,201.18	403.75	1,639.81	1,386.44	253.37	6.472			
19,400.00	10,981.63	19,332.69	10,964.75	128.27	127.70	89.45	8,271.87	403.18	1,639.81	1,384.48	255.33	6.422			
19,429.30	10,981.20	19,361.99	10,964.26	128.68	128.11	89.44	8,301.16	402.94	1,639.81	1,383.67	256.15	6.402			
19,500.00	10,980.16	19,432.69	10,963.08	129.66	129.09	89.44	8,371.86	402.37	1,639.81	1,381.70	258.11	6.353			
19,529.30	10,979.73	19,461.99	10,962.59	130.06	129.50	89.44	8,401.15	402.14	1,639.81	1,380.89	258.93	6.333			
19,600.00	10,978.70	19,532.69	10,961.42	131.04	130.49	89.43	8,471.84	401.56	1,639.81	1,378.92	260.89	6.285			
19,629.30	10,978.27	19,561.99	10,960.93	131.45	130.89	89.43	8,501.13	401.33	1,639.81	1,378.10	261.71	6.266			
19,700.00	10,977.23	19,632.69	10,959.75	132.42	131.88	89.42	8,571.82	400.76	1,639.81	1,376.13	263.68	6.219			
19,729.30	10,976.81	19,661.99	10,959.26	132.83	132.29	89.42	8,601.11	400.52	1,639.81	1,375.32	264.49	6.200			
19,800.00	10,975.77	19,732.69	10,958.09	133.81	133.28	89.42	8,671.80	399.95	1,639.81	1,373.35	266.46	6.154			
19,829.30	10,975.34	19,761.99	10,957.60	134.22	133.68	89.41	8,701.09	399.71	1,639.81	1,372.53	267.28	6.135			
19,900.00	10,974.31	19,832.69	10,956.42	135.20	134.67	89.41	8,771.79	399.14	1,639.81	1,370.55	269.25	6.090			
19,929.30	10,973.88	19,861.99	10,955.93	135.61	135.08	89.41	8,801.08	398.90	1,639.81	1,369.74	270.07	6.072			
20,000.00	10,972.84	19,932.69	10,954.76	136.59	136.07	89.40	8,871.77	398.33	1,639.81	1,367.76	272.05	6.028			
20,029.30	10,972.41	19,961.99	10,954.27	137.00	136.48	89.40	8,901.06	398.09	1,639.81	1,366.94	272.86	6.010			
20,100.00	10,971.38	20,032.69	10,953.09	137.98	137.47	89.40	8,971.75	397.52	1,639.81	1,364.96	274.84	5.966			
20,129.30	10,970.95	20,061.99	10,952.60	138.39	137.88	89.39	9,001.04	397.29	1,639.81	1,364.14	275.66	5.949			
20,200.00	10,969.92	20,132.69	10,951.43	139.37	138.87	89.39	9,071.73	396.71	1,639.80	1,362.17	277.64	5.906			
20,229.30	10,969.49	20,161.99	10,950.94	139.78	139.28	89.39	9,101.03	396.48	1,639.80	1,361.35	278.46	5.889			
20,300.00	10,968.45	20,232.69	10,949.76	140.77	140.27	89.38	9,171.72	395.91	1,639.80	1,359.36	280.44	5.847			
20,329.30	10,968.02	20,261.99	10,949.27	141.18	140.68	89.38	9,201.01	395.67	1,639.80	1,358.54	281.26	5.830			
20,400.00	10,966.99	20,332.69	10,948.10	142.16	141.67	89.37	9,271.70	395.10	1,639.80	1,356.56	283.24	5.789			
20,429.30	10,966.56	20,361.99	10,947.61	142.57	142.08	89.37	9,300.99	394.86	1,639.80	1,355.74	284.06	5.773			
20,500.00	10,965.52	20,432.69	10,946.43	143.56	143.08	89.37	9,371.68	394.29	1,639.80	1,353.76	286.05	5.733			

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



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Charolais Hereford Pad - Charolais 28-21 W1MD State Com 1H - OH - Plan #1

Survey Program: Reference		0-MWD + HDGM Offset						Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,529.30	10,965.10	20,461.99	10,945.94	143.97	143.49	89.37	9,400.97	394.05	1,639.80	1,352.93	286.87	5.716	
20,600.00	10,964.06	20,532.69	10,944.77	144.96	144.48	89.36	9,471.66	393.48	1,639.80	1,350.95	288.85	5.677	
20,629.30	10,963.63	20,561.99	10,944.28	145.37	144.89	89.36	9,500.96	393.24	1,639.80	1,350.12	289.68	5.661	
20,700.00	10,962.60	20,632.69	10,943.10	146.36	145.89	89.35	9,571.65	392.67	1,639.80	1,348.14	291.66	5.622	
20,729.30	10,962.17	20,661.99	10,942.61	146.77	146.30	89.35	9,600.94	392.44	1,639.80	1,347.31	292.49	5.606	
20,800.00	10,961.13	20,732.69	10,941.44	147.76	147.30	89.35	9,671.63	391.87	1,639.80	1,345.32	294.48	5.569	
20,829.30	10,960.70	20,761.99	10,940.95	148.17	147.71	89.34	9,700.92	391.63	1,639.80	1,344.50	295.30	5.553	
20,900.00	10,959.67	20,832.69	10,939.77	149.16	148.70	89.34	9,771.61	391.06	1,639.80	1,342.51	297.29	5.516	
20,929.30	10,959.24	20,861.99	10,939.28	149.57	149.12	89.34	9,800.91	390.82	1,639.80	1,341.68	298.11	5.501	
21,000.00	10,958.21	20,932.69	10,938.10	150.56	150.11	89.33	9,871.60	390.25	1,639.80	1,339.69	300.11	5.464	
21,029.30	10,957.78	20,961.99	10,937.62	150.97	150.53	89.33	9,900.89	390.01	1,639.80	1,338.87	300.93	5.449	
21,100.00	10,956.74	21,032.69	10,936.44	151.97	151.52	89.33	9,971.58	389.44	1,639.80	1,336.87	302.92	5.413	
21,129.30	10,956.31	21,061.99	10,935.95	152.38	151.94	89.32	10,000.87	389.20	1,639.80	1,336.05	303.75	5.399	
21,200.00	10,955.28	21,132.69	10,934.77	153.37	152.93	89.32	10,071.56	388.63	1,639.80	1,334.05	305.74	5.363	
21,229.30	10,954.85	21,161.98	10,934.29	153.78	153.35	89.32	10,100.85	388.40	1,639.80	1,333.23	306.57	5.349	
21,300.00	10,953.81	21,232.69	10,933.11	154.78	154.35	89.31	10,171.54	387.82	1,639.80	1,331.23	308.56	5.314	
21,329.30	10,953.39	21,261.98	10,932.62	155.19	154.76	89.31	10,200.84	387.59	1,639.80	1,330.40	309.39	5.300	
21,400.00	10,952.35	21,332.69	10,931.44	156.18	155.76	89.30	10,271.53	387.02	1,639.79	1,328.41	311.39	5.266	
21,418.85	10,952.07	21,351.54	10,931.13	156.45	156.03	89.30	10,290.37	386.86	1,639.79	1,327.87	311.92	5.257	
21,419.30	10,952.07	21,351.98	10,931.12	156.46	156.03	89.30	10,290.82	386.86	1,639.79	1,327.86	311.93	5.257	
21,423.90	10,952.00	21,356.59	10,931.05	156.52	156.10	89.30	10,295.42	386.82	1,639.79	1,327.73	312.06	5.255	



Altitude Energy Partners

Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

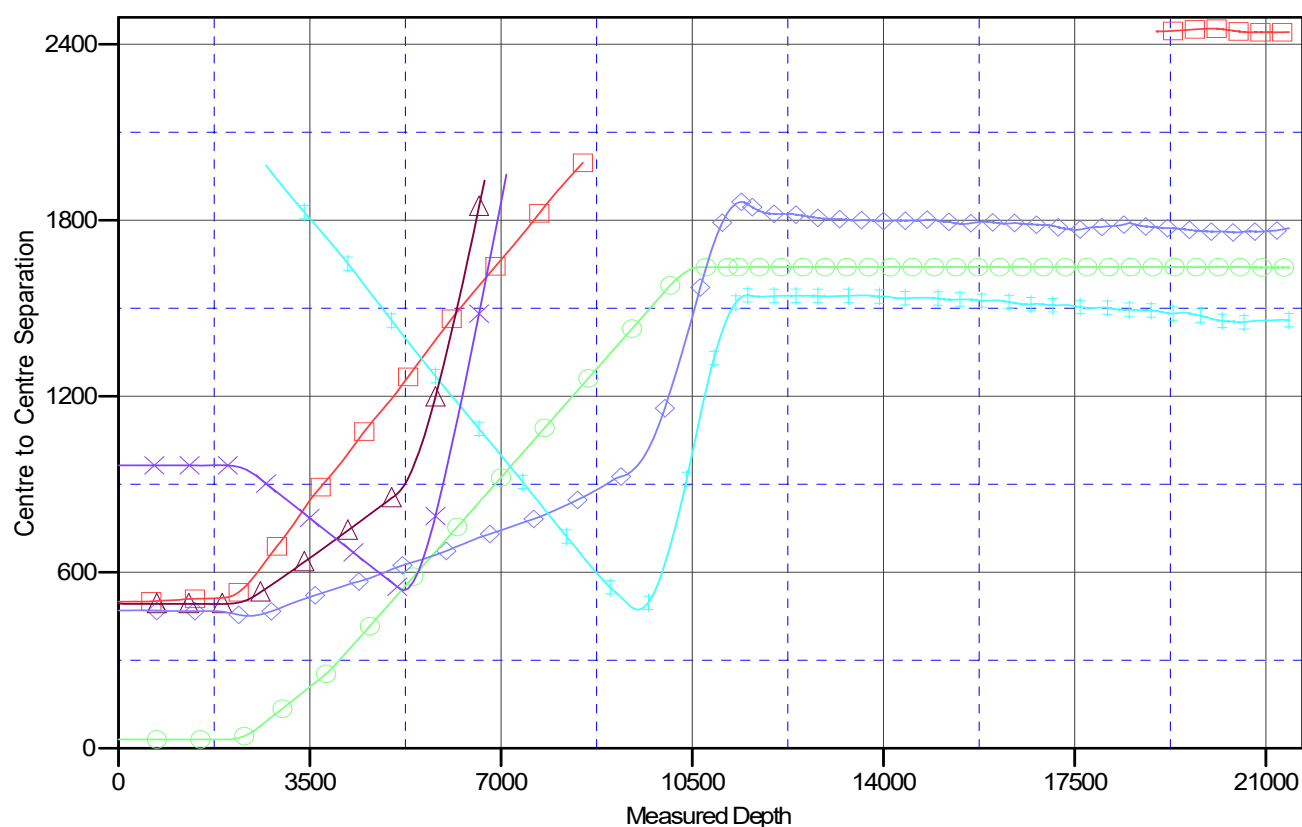
Reference Depths are relative to KB=28' @ 3757.00usft (Patterson 575) Coordinates are relative to: Hereford 29-20 W1PA State Com 1H

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.47°

Ladder Plot



LEGEND

Charolais28-21 W1MD State Com 1H OH Plan #1 V0	Charolais28-21 B1MD State Com 1H OH Plan #1 V0	WestParrQueen Unit 163 (P&A) OH OH V0
Charolais28-21 B1MD State Com 2H OH OH V0	Hereford29-20 B1 P&A State Com 1H OH OH V0	WestParrQueen Unit 194 (P&A) OH OH V0



Altitude Energy Partners

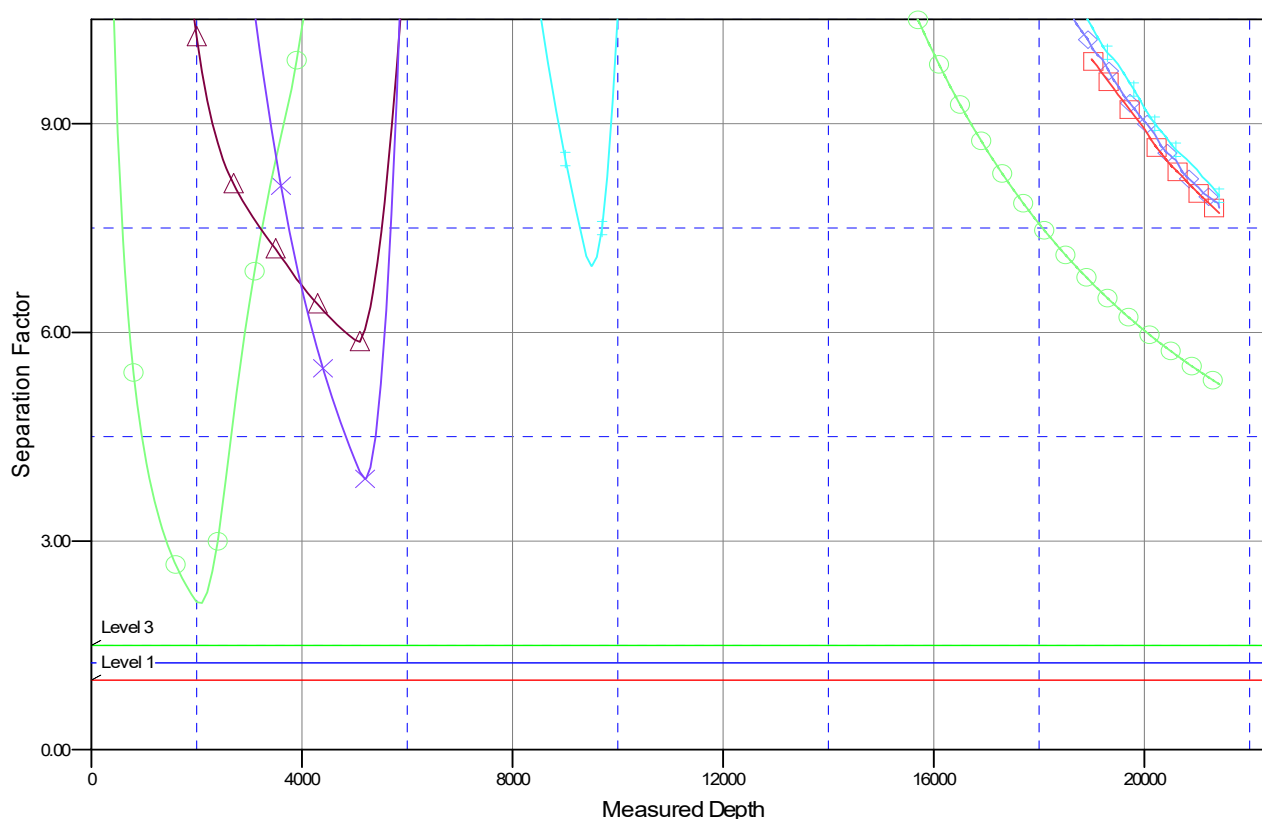
Anticollision Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Hereford 29-20 W1PA State Com 1H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Reference Site:	Charolais Hereford Pad	MD Reference:	KB=28' @ 3757.00usft (Patterson 575)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Hereford 29-20 W1PA State Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=28' @ 3757.00usft (Patterson 575) Coordinates are relative to: Hereford 29-20 W1PA State Com 1H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Central Meridian is -104.333334 Grid Convergence at Surface is: 0.47°

Separation Factor Plot



LEGEND

Charolais28-21 W1MD State Com 1H OH Plan#1 V0
 Charolais28-21 B1MD State Com 2H OH OH V0
 Charolais28-21 B2NC State Com 1H OH OH V0
 Hereford 29-20 B1 PA State Com 1H OH OH V0
 WestPeerQueen Unit 163 (PA) OH OH V0
 WestPeerQueen Unit 194 (PA) OH OH V0