

C-104 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Section 1 - Operator and Well Information

Submittal Type: <input type="checkbox"/> Test Allowable (C-104RT) <input checked="" type="checkbox"/> New Well (C-104NW) <input type="checkbox"/> Recomplete (C-104RC) <input type="checkbox"/> Pay Add (C-104RC) <input type="checkbox"/> Amended	
Operator Name: EOG Resources, INC	OGRID: 7377
Property Name and Well Number: INGA 33 FED COM 512H	Property Code: 334073
Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	API Number: 30-025-51724
Pool Name: MESA VERDE; BONE SPRING	Pool Code: 96229

Section 2 – Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	33	23S	32E		2089' FSL	459' FEL	32.2595458	-103.6725338	LEA

Section 3 – Completion Information

Producing Method	Ready Date	Perforations MD	Perforations TVD
FLOWS FROM WELL	8/15/2024	10,740'-17,941	10,450'-10,439'

Section 4 – Action IDs for Submissions and Order Numbers

List Action IDs for Drilling Sundries	Was an Order required / needed (Y/N), if yes list Order number:
C-104 RT Action ID (if C-104NW): N/A	Communitization Agreement <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, Order No NMNM106319423
Surface Casing Action ID: 332793	Unit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, Order No.
Intermediate 1 Casing Action ID: 332793	Compulsory Pooling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, Order No.
Intermediate 2 Casing Action ID:	Down Hole Commingling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, Order No.
Production Casing Action ID: 332793	Surface Commingling: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, Order No. PLC-963
All casing was pressure tested in accordance with NMAC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Non-standard Location: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Common ownership Order No.
Liner 1 Action ID:	Non-standard Proration: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, Order No. NSP2163
Casing was installed prior to OCD's Action ID system (Y/N): N	Simultaneous Dedication: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, Order No.

Section 5 - Operator Signature and Certification

<input checked="" type="checkbox"/> I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
<input checked="" type="checkbox"/> I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
<input checked="" type="checkbox"/> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Kristina Agee	
Title REGULATORY SPECIALIST	Date 10/2/2024

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
		Submittal Type: <input type="checkbox"/> Initial Submittal <input type="checkbox"/> Amended Report <input checked="" type="checkbox"/> As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025- 51724	Pool Code 96229	Pool Name MESA VERDE; BONE SPRING
Property Code 334073	Property Name INGA 33 FED COM	Well Number 512H
OGRID No. 7377	Operator Name EOG RESOURCES, INC.	Ground Level Elevation 3661'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
I	33	23-S	32-E	-	2089' S	459' E	N 32.2595458	W 103.6725338	LEA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	4	24-S	32-E	-	111' S	650' E	N 32.2396120	W 103.6731447	LEA

Dedicated Acres 958.48	Infill or Defining Well INFILL	Defining Well API 30-025-51571	Overlapping Spacing Unit (Y/N) Y	Consolidated Code C
Order Numbers NSP ORDER #2163, PENDING COMM AGREEMENT NMNM106319423			Well Setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
I	33	23-S	32-E	-	2588' S	693' E	N 32.2609156	W 103.6732907	LEA


First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
I	33	23-S	32-E	-	2058' S	639' E	N 32.2594607	W 103.6731182	LEA

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	4	24-S	32-E	-	140' S	649' E	N 32.2396917	W 103.6731427	LEA

Unitized Area or Area of Uniform Intrest COMM AGREEMENT	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation 3686'
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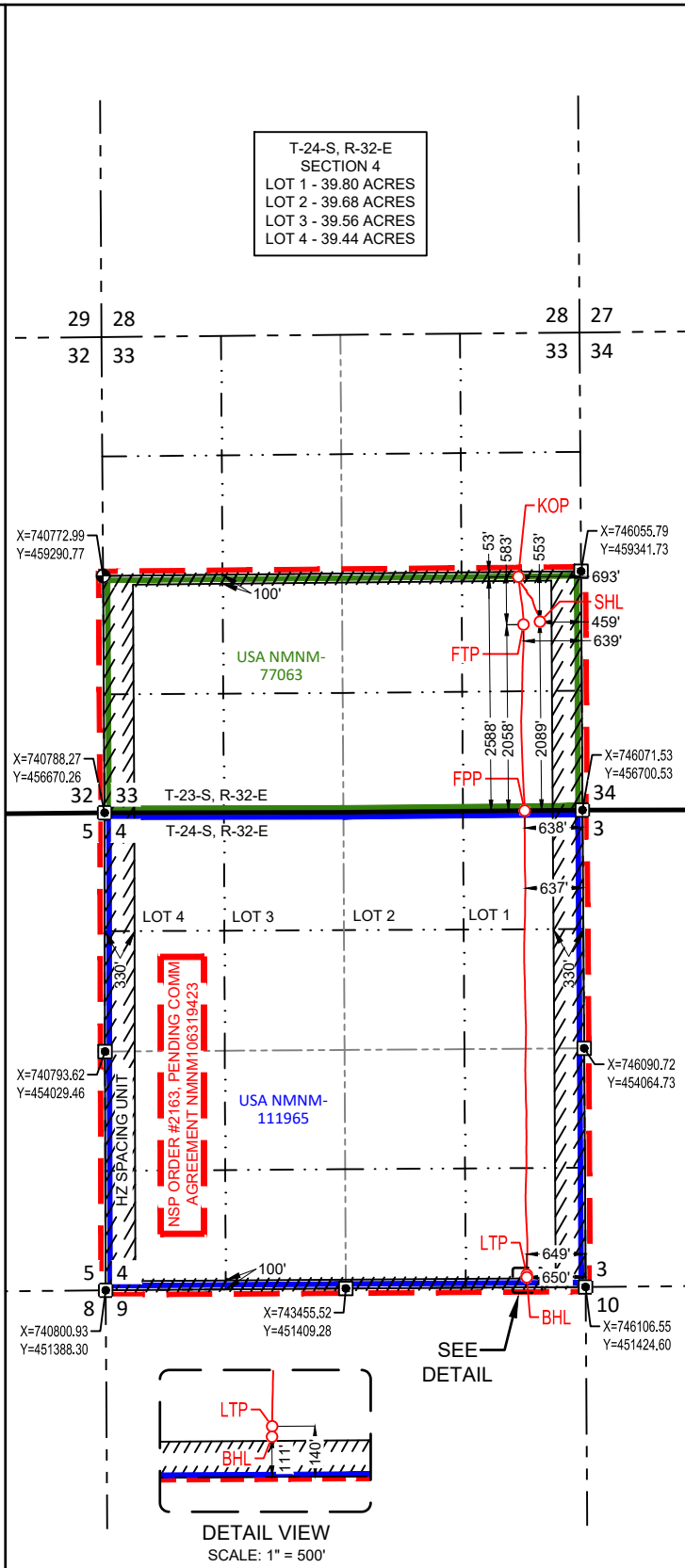
<p>OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p><i>If this well is a horizontal well, I further certify that this organization has received The consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i></p> <p><i>Kristina Agee</i> 9/11/2024</p>	<p>SURVEYORS CERTIFICATION</p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <div style="text-align: center;">  </div> <p>9/3/2024 4:40:52 PM</p>
Signature Kristina Agee	Signature and Seal of Professional Surveyor
Date 9/11/2024	Date
Print Name kristina_agee@eogresources.com	Certificate Number
E-mail Address	Date of Survey 03/11/2024

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
	Property Name and Well Number <p align="center">INGA 33 FED COM 512H</p>	Submittal Type: <input type="checkbox"/> Initial Submittal <input type="checkbox"/> Amended Report <input checked="" type="checkbox"/> As Drilled

SURFACE LOCATION (SHL)
 NEW MEXICO EAST
 NAD 1983
 X=745600 Y=458785
 LAT.: N 32.2595458
 LONG.: W 103.6725338
 NAD 1927
 X=704417 Y=458725
 LAT.: N 32.2594224
 LONG.: W 103.6720513
 2089' FSL 459' FEL

KICK OFF POINT (KOP)
 NEW MEXICO EAST
 NAD 1983
 X=745363 Y=459282
 LAT.: N 32.2609156
 LONG.: W 103.6732907
 NAD 1927
 X=704180 Y=459222
 LAT.: N 32.2607922
 LONG.: W 103.6728082
 2588' FSL 693' FEL
 MD=9912' TVD=9872'

FIRST TAKE POINT (FTP)
 NEW MEXICO EAST
 NAD 1983
 X=745420 Y=458753
 LAT.: N 32.2594607
 LONG.: W 103.6731182
 NAD 1927
 X=704236 Y=458693
 LAT.: N 32.2593373
 LONG.: W 103.6726357
 2058' FSL 639' FEL
 MD=10740' TVD=10453'



FED PERF. POINT (FPP)
 NEW MEXICO EAST
 NAD 1983
 X=745434 Y=456694
 LAT.: N 32.2538028
 LONG.: W 103.6731147
 NAD 1927
 X=704250 Y=456635
 LAT.: N 32.2536793
 LONG.: W 103.6726325
 0' FNL 638' FEL
 MD=12805' TVD=10484'

LAST TAKE POINT (LTP)
 NEW MEXICO EAST
 NAD 1983
 X=745457 Y=451502
 LAT.: N 32.2396917
 LONG.: W 103.6731427
 NAD 1927
 X=704273 Y=451502
 LAT.: N 32.2395681
 LONG.: W 103.6726611
 140' FSL 649' FEL
 MD=17941' TVD=10440'

BOTTOM HOLE LOCATION (BHL)
 NEW MEXICO EAST
 NAD 1983
 X=745456 Y=451532
 LAT.: N 32.2396120
 LONG.: W 103.6731447
 NAD 1927
 X=704272 Y=451473
 LAT.: N 32.2394885
 LONG.: W 103.6726632
 111' FSL 650' FEL
 MD=17970' TVD=10441'

SURVEYORS CERTIFICATION
 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
 03/11/2024
 Date of Survey
 Signature and Seal of Professional Surveyor:

SECTION 33, TOWNSHIP 23-S, RANGE 32-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURFACE LOCATION (SHL)

NEW MEXICO EAST
NAD 1983
X=745600 Y=458785
LAT.: N 32.2595458
LONG.: W 103.6725338
2089' FSL 459' FEL

KICK OFF POINT (KOP)

NEW MEXICO EAST
NAD 1983
X=745363 Y=459282
LAT.: N 32.2609156
LONG.: W 103.6732907
2588' FSL 693' FEL
MD=9912' TVD=9872'

FIRST TAKE POINT (FTP)

NEW MEXICO EAST
NAD 1983
X=745420 Y=458753
LAT.: N 32.2594607
LONG.: W 103.6731182
2058' FSL 639' FEL
MD=10740' TVD=10453'

FED PERF. POINT (FPP)

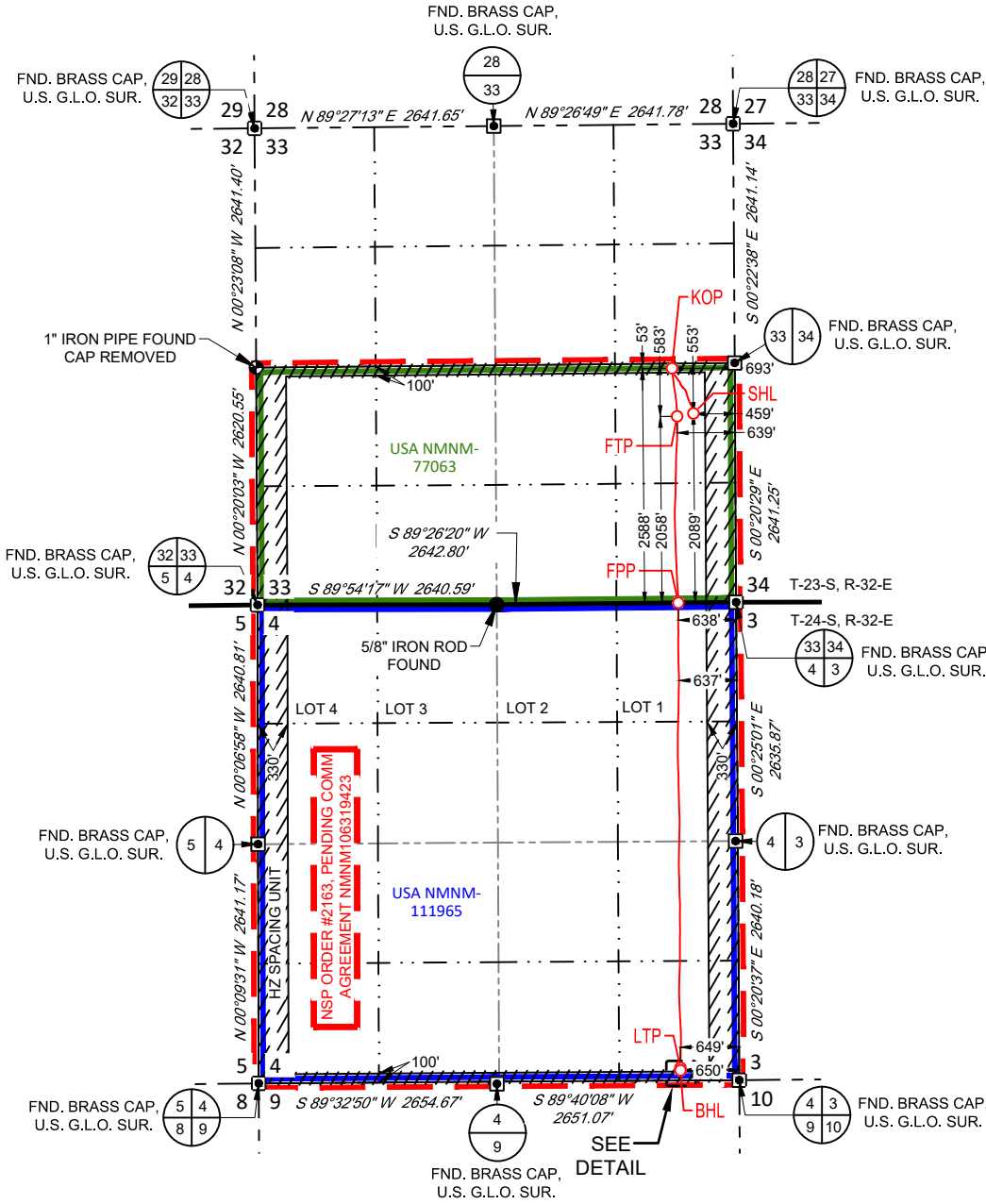
NEW MEXICO EAST
NAD 1983
X=745434 Y=456694
LAT.: N 32.2538028
LONG.: W 103.6731147
0' FNL 638' FEL
MD=12805' TVD=10484'

LAST TAKE POINT (LTP)

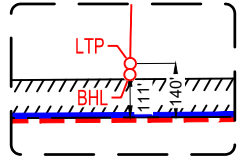
NEW MEXICO EAST
NAD 1983
X=745457 Y=451561
LAT.: N 32.2396917
LONG.: W 103.6731427
140' FSL 649' FEL
MD=17941' TVD=10440'

BOTTOM HOLE LOCATION (BHL)

NEW MEXICO EAST
NAD 1983
X=745456 Y=451532
LAT.: N 32.2396120
LONG.: W 103.6731447
111' FSL 650' FEL
MD=17970' TVD=10441'



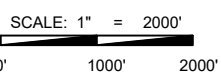
NSP ORDER #2163, PENDING COMM AGREEMENT, NMNM106319423



DETAIL VIEW
SCALE: 1" = 500'

T-24-S, R-32-E
SECTION 4
LOT 1 - 39.80 ACRES
LOT 2 - 39.68 ACRES
LOT 3 - 39.56 ACRES
LOT 4 - 39.44 ACRES

LEASE NAME & WELL NO.: INGA 33 FED COM 512H
SECTION 33 TWP 23-S RGE 32-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3661'
DESCRIPTION 2089' FSL & 459' FEL



481 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM



9/3/2024 4:40:53 PM

Ramon A. Dominguez, P.S. No. 24508



INGA 33 FED COM 512H AS-DRILLED	REVISION:	NOTES: 1. ORIGINAL DOCUMENT SIZE: 8.5" X 14" 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. 3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
	DATE: 08/29/24	
	FILE:AD_INGA_33_FED_COM_512H	
	DRAWN BY: MML	
	SHEET: 3 OF 3	



Lea County, NM (NAD 83 NME)

Inga 33 Fed Com #512H

H&P 653

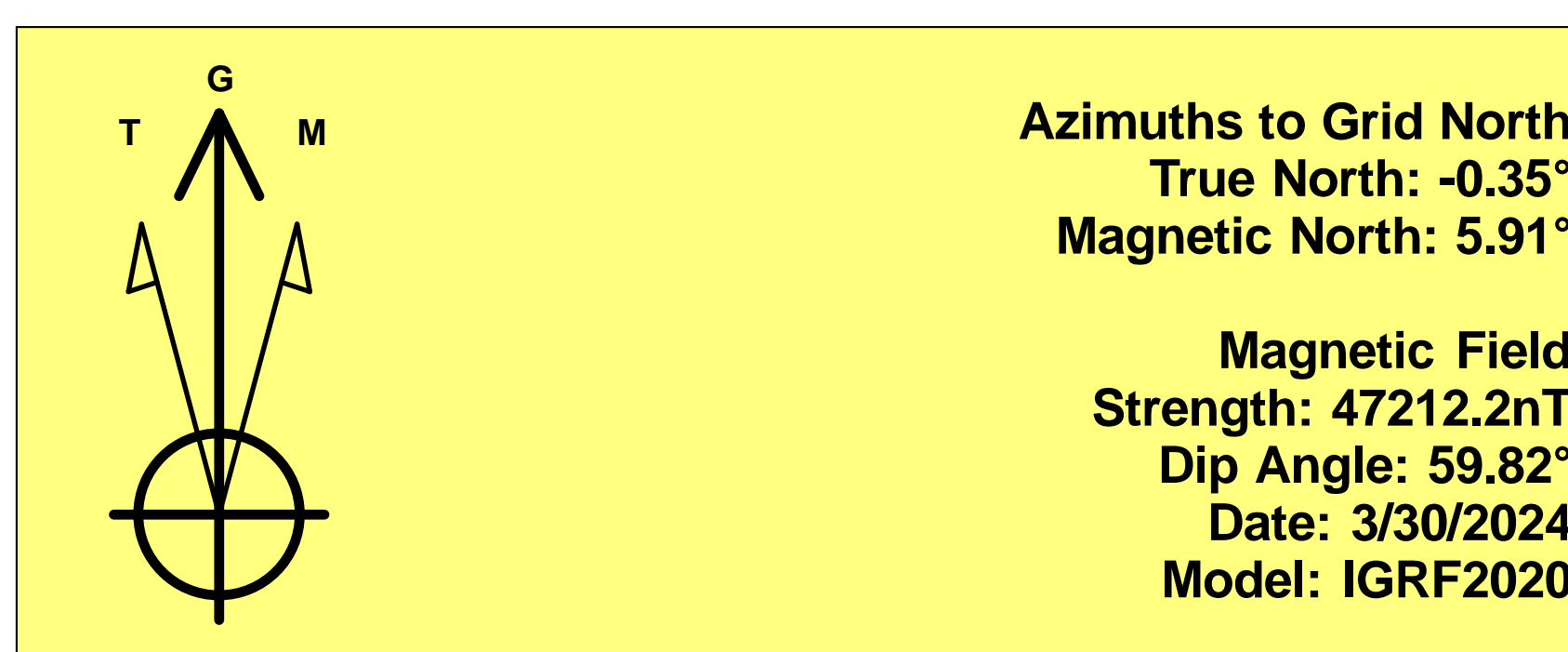
OH

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

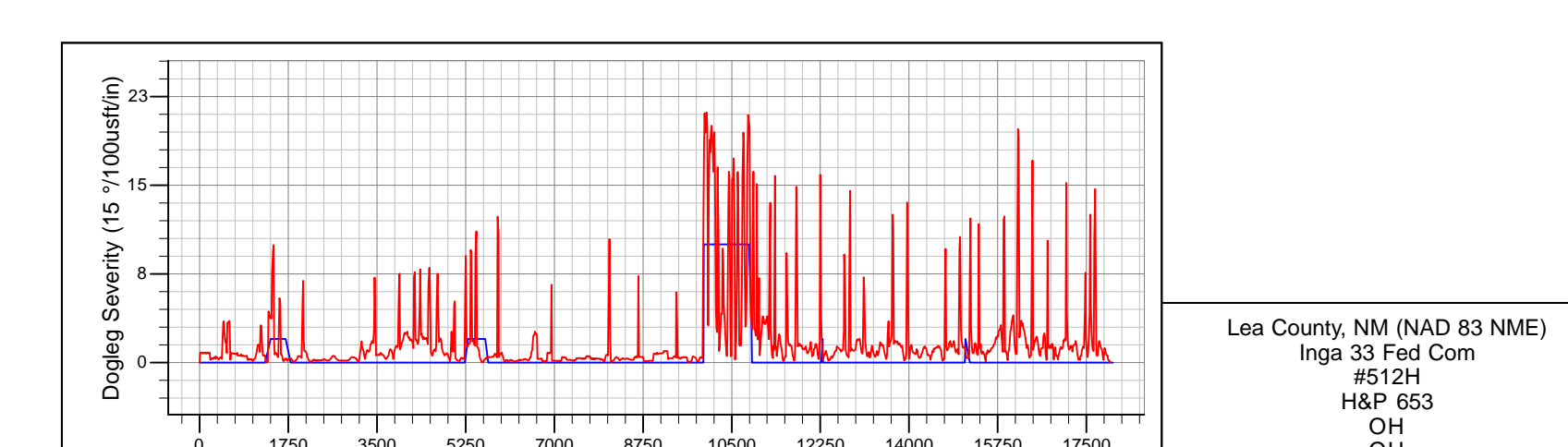
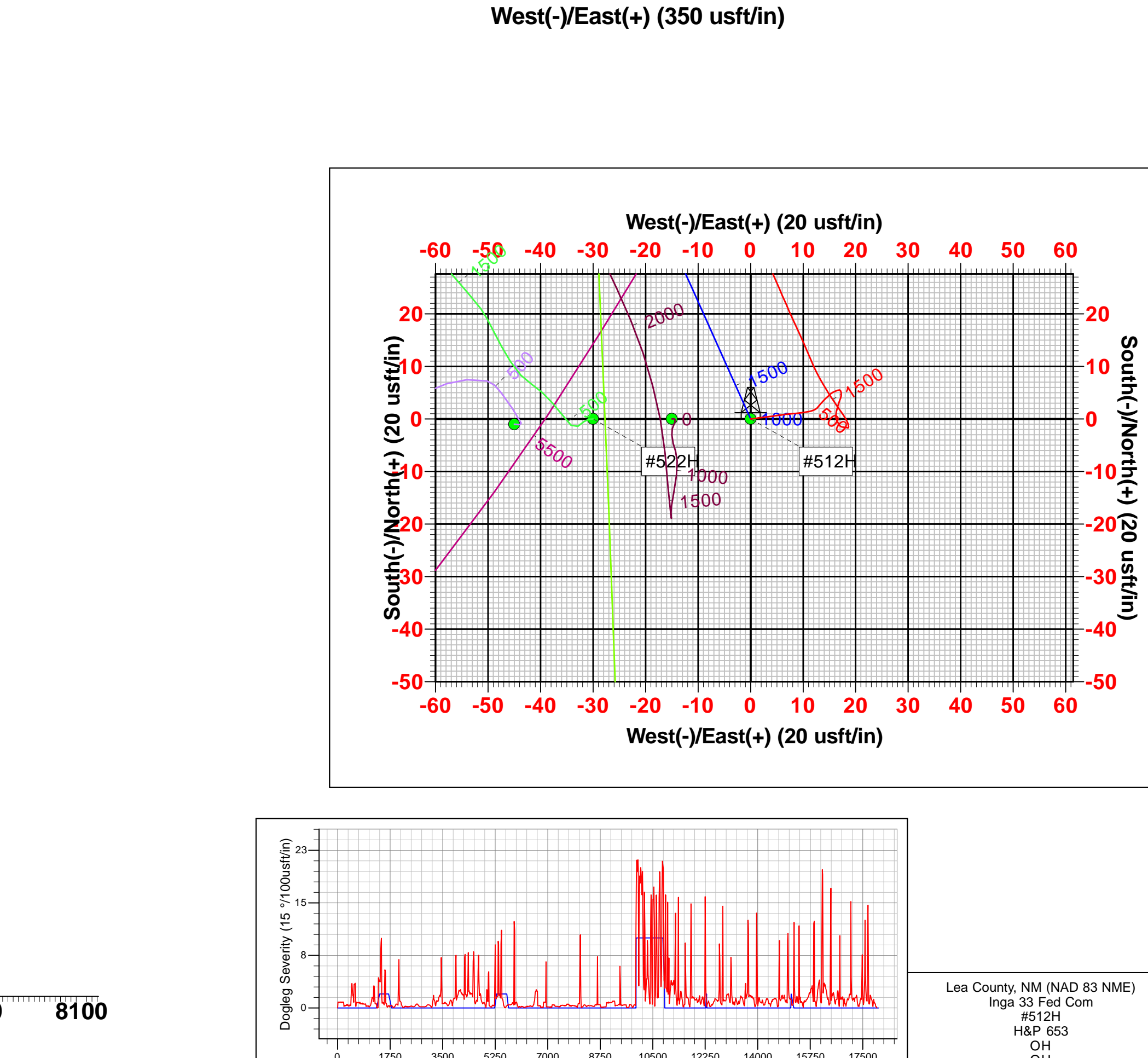
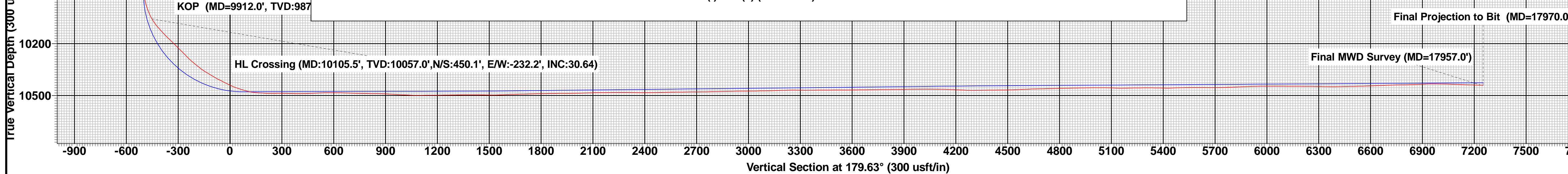
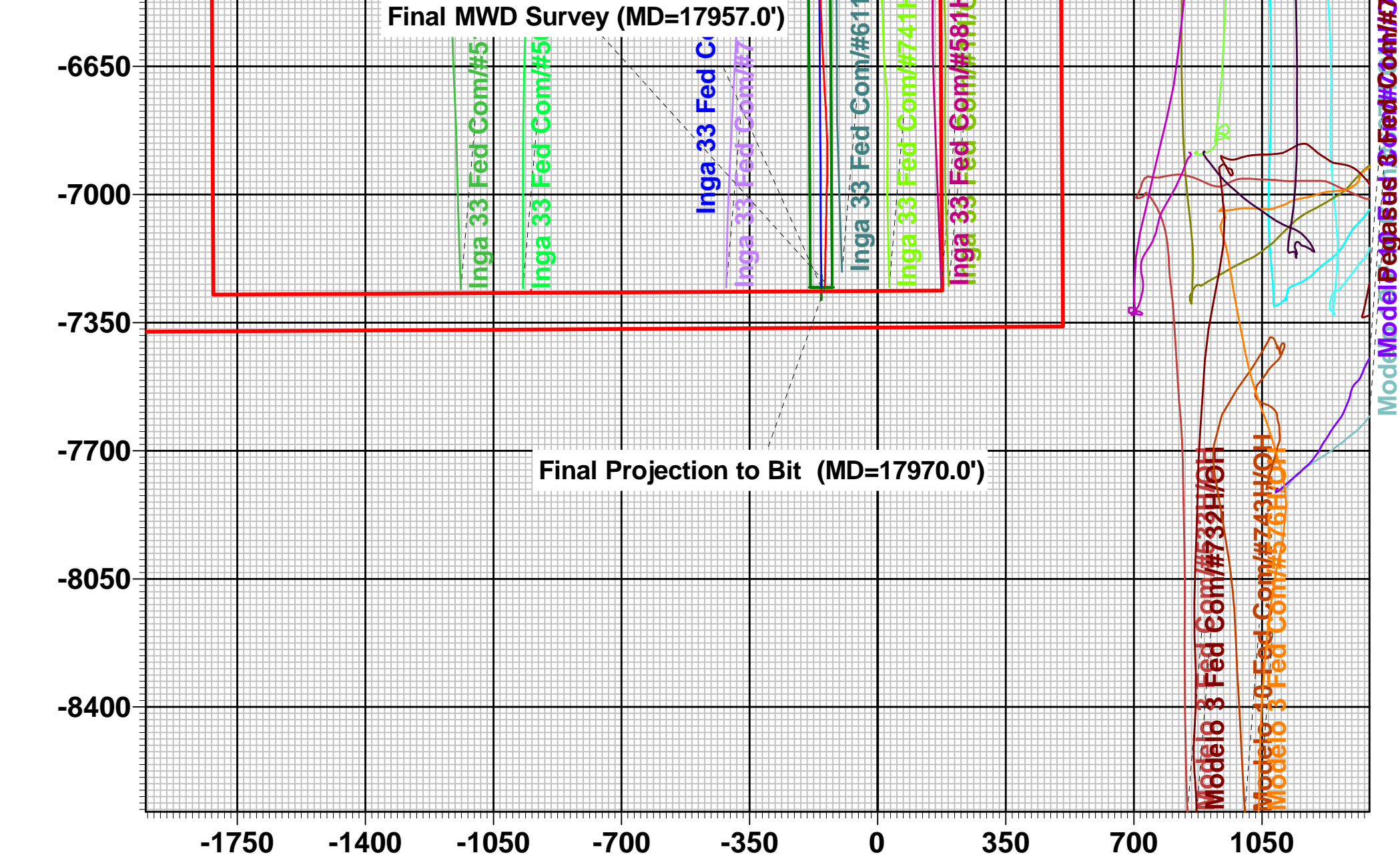
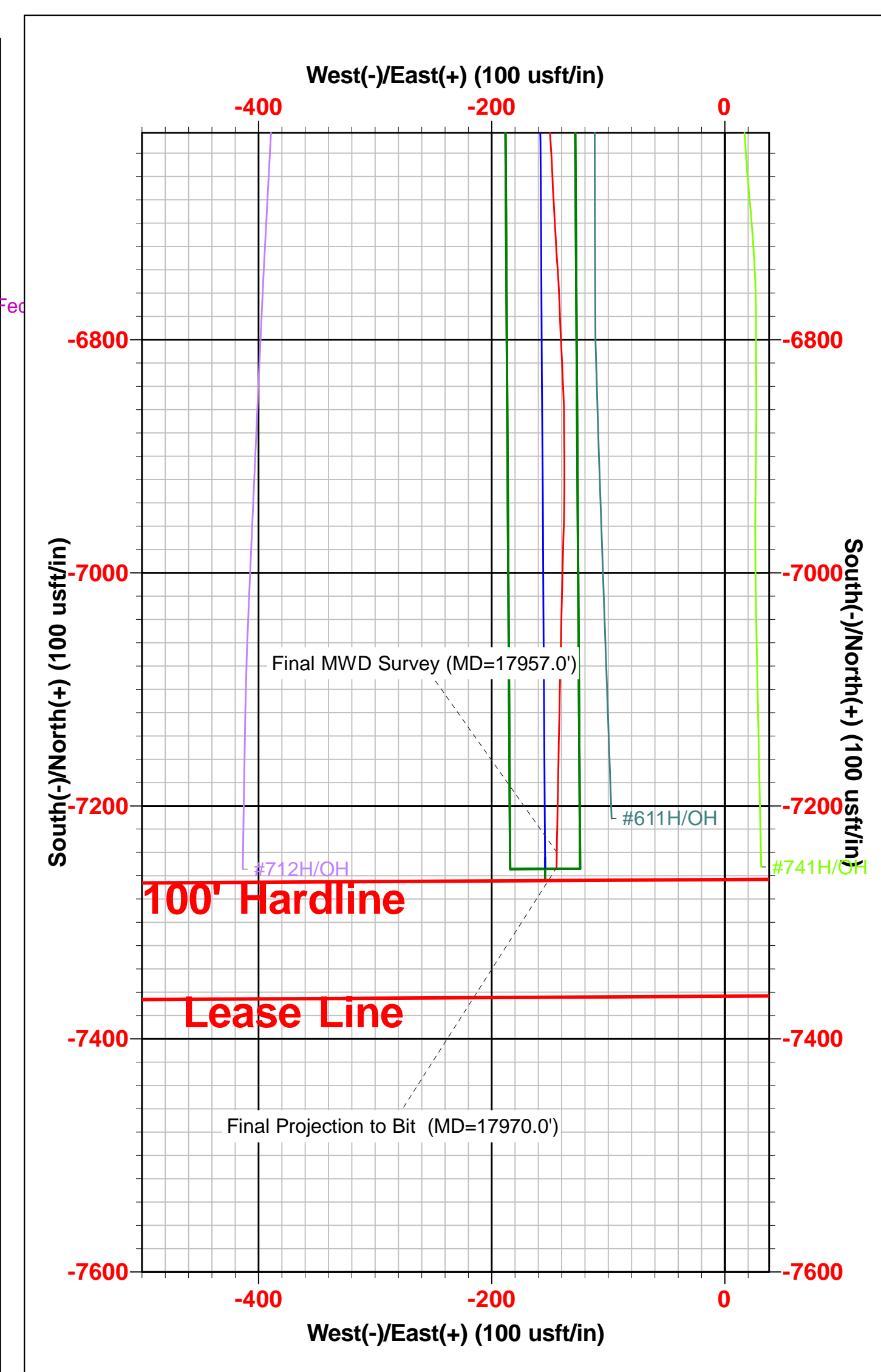
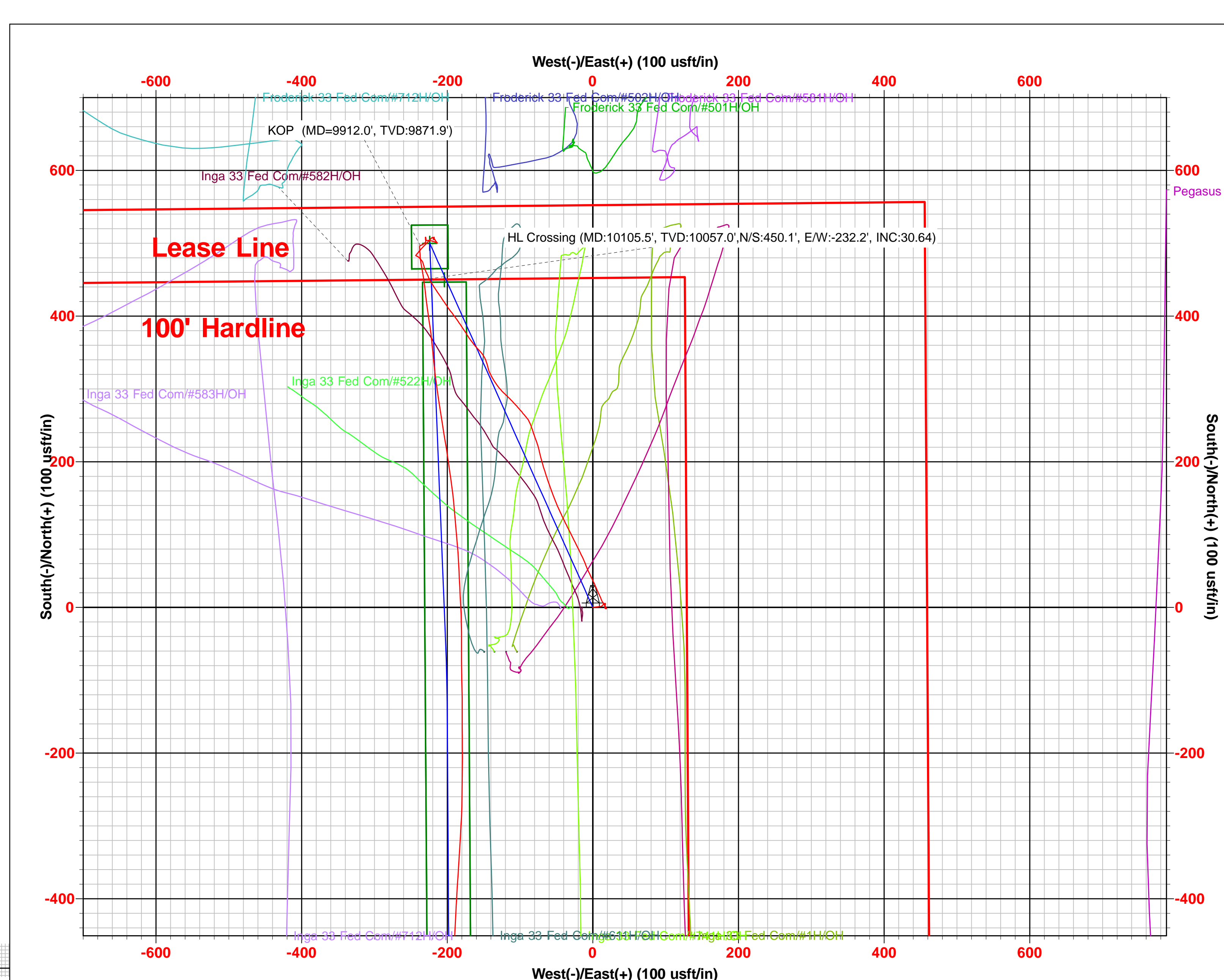
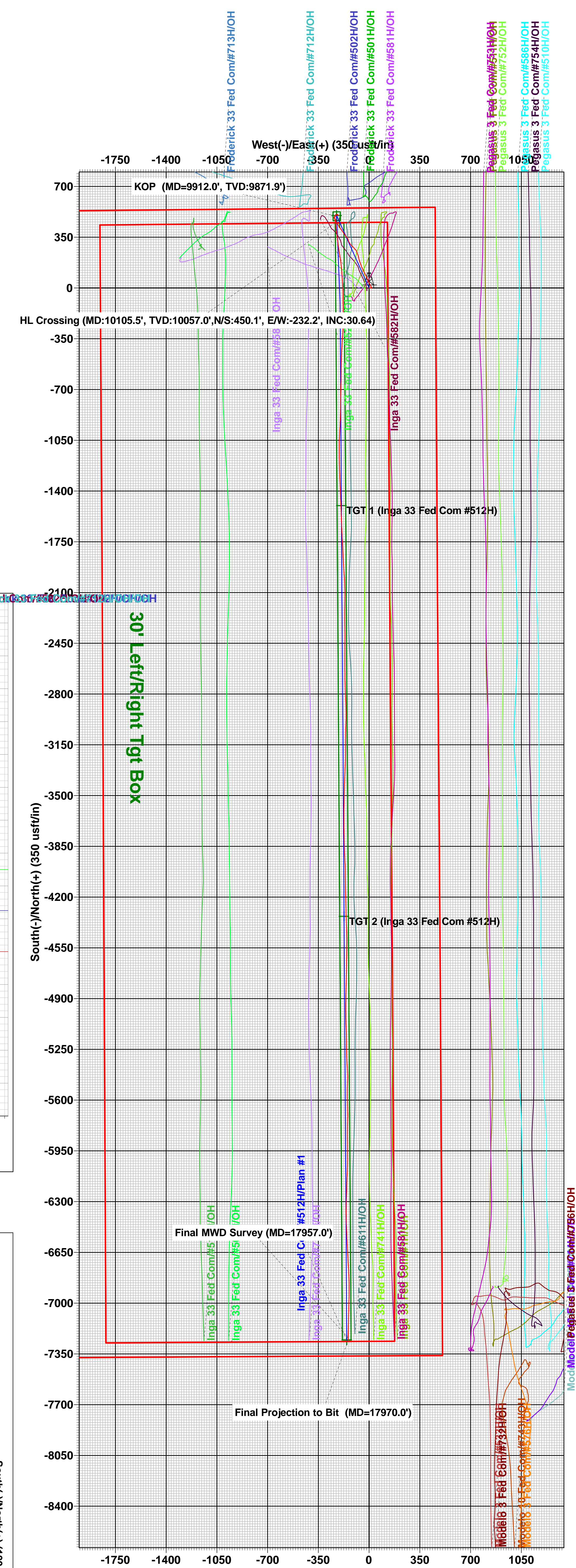
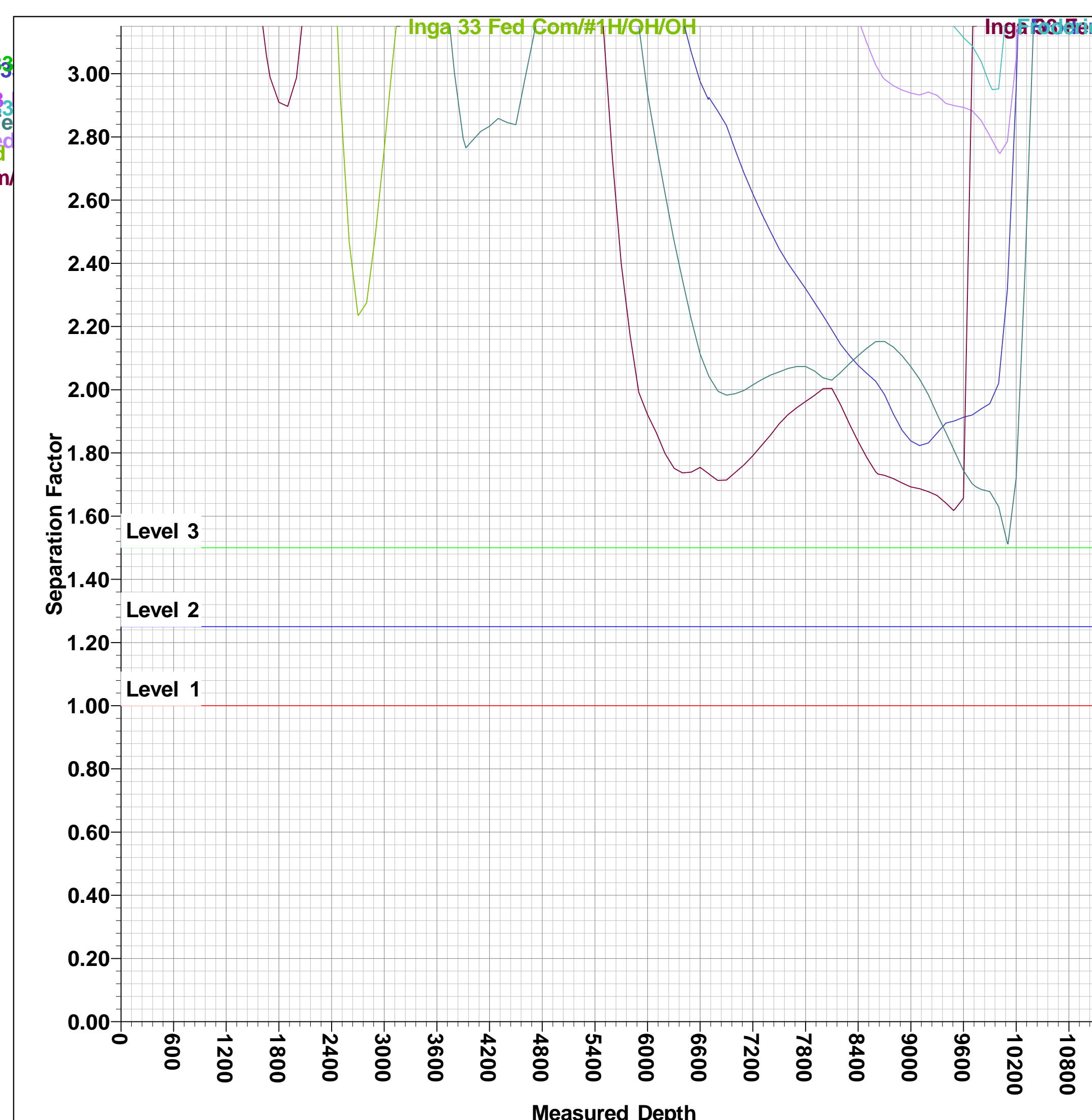
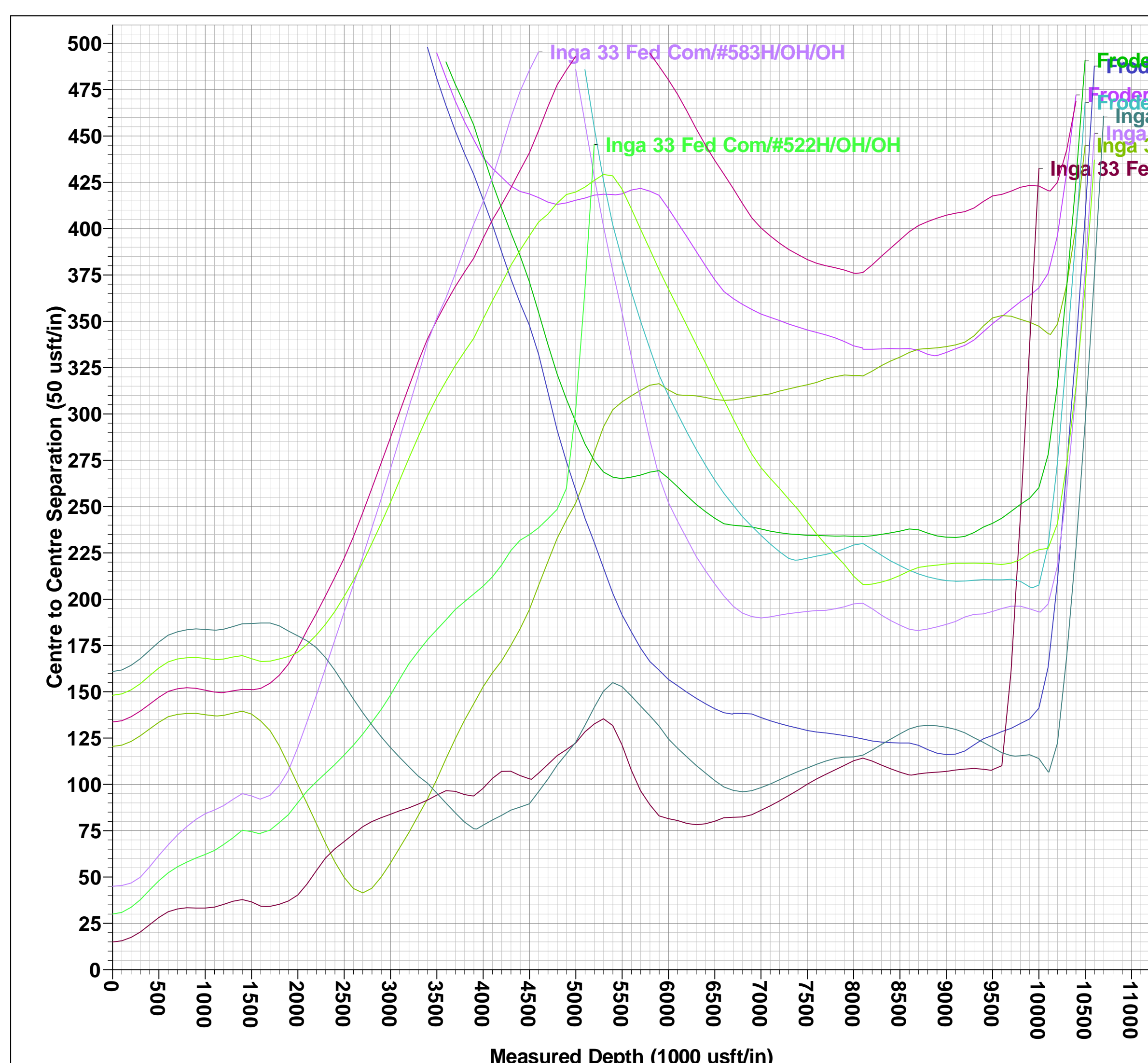
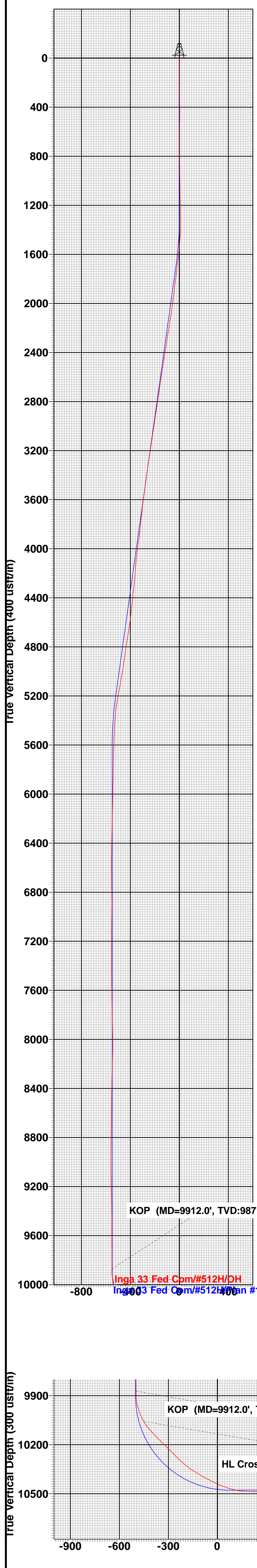
Geodetic System: US State Plane 1983
 Datum: North American 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

WELL DETAILS: #512H

KB = 26' @ 3688.0usft (H&P 653) 3662.0
 Northing 458785.00 Easting 745600.00 Latitude 32° 15' 34.368 N Longitude 103° 40' 21.125 W



To convert a Magnetic Direction to a Grid Direction, Add 5.91°
 To convert a Magnetic Direction to a True Direction, Add 6.27° East
 To convert a True Direction to a Grid Direction, Subtract 0.35°





Midland

Lea County, NM (NAD 83 NME)

Inga 33 Fed Com

#512H

OH

Design: OH

Final PVA

08 April, 2024



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

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

Site	Inga 33 Fed Com				
Site Position:		Northing:	458,724.00 usft	Latitude:	32° 15' 33.773 N
From:	Map	Easting:	745,466.00 usft	Longitude:	103° 40' 22.690 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	#512H					
Well Position	+N/-S	0.0 usft	Northing:	458,785.00 usft	Latitude:	32° 15' 34.368 N
	+E/-W	0.0 usft	Easting:	745,600.00 usft	Longitude:	103° 40' 21.125 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,662.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/30/2024	6.27	59.82	47,212.21289015

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	179.63

Survey Program	Date	4/8/2024			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
14.0	17,970.0	MS MWD (OH)	EOG MWD+IFR1	MWD + IFR1	



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
14.0	0.12	82.77	14.0	0.0	0.0	0.86	0.86	0.00	0.0	0.0	0.0	0.0
29.0	0.24	82.77	29.0	0.1	0.0	0.80	0.80	0.00	-0.1	0.0	0.0	0.0
43.0	0.36	82.77	43.0	0.1	0.0	0.86	0.86	0.00	-0.1	0.0	0.0	0.0
57.0	0.48	82.76	57.0	0.2	0.0	0.86	0.86	-0.07	-0.2	0.0	0.0	0.0
71.0	0.59	82.76	71.0	0.4	0.0	0.79	0.79	0.00	-0.4	0.0	0.0	0.0
86.0	0.71	82.75	86.0	0.5	0.1	0.80	0.80	-0.07	-0.5	0.0	0.0	0.0
100.0	0.83	82.75	100.0	0.7	0.1	0.86	0.86	0.00	-0.7	0.0	0.0	0.0
114.0	0.95	82.74	114.0	0.9	0.1	0.86	0.86	-0.07	-0.9	0.0	0.0	0.0
129.0	1.06	82.74	129.0	1.2	0.2	0.73	0.73	0.00	-1.2	0.0	0.0	0.0
143.0	1.18	82.73	143.0	1.5	0.2	0.86	0.86	-0.07	-1.5	0.0	0.0	0.0
157.0	1.30	82.73	157.0	1.8	0.2	0.86	0.86	0.00	-1.8	0.0	0.0	0.0
171.0	1.41	82.73	171.0	2.1	0.3	0.79	0.79	0.00	-2.1	0.0	0.0	0.0
186.0	1.53	82.72	186.0	2.5	0.3	0.80	0.80	-0.07	-2.5	0.0	0.0	0.0
200.0	1.65	82.72	200.0	2.9	0.4	0.86	0.86	0.00	-2.9	0.0	0.0	0.0
213.0	1.68	82.63	213.0	3.2	0.4	0.23	0.23	-0.69	-3.3	0.0	0.0	0.0
227.0	1.73	82.48	227.0	3.7	0.5	0.36	0.36	-1.07	-3.7	0.0	0.0	0.0
240.0	1.77	82.33	240.0	4.0	0.5	0.31	0.31	-1.15	-4.1	0.0	0.0	0.0
254.0	1.82	82.21	253.9	4.5	0.6	0.36	0.36	-0.86	-4.5	0.0	0.0	0.0
267.0	1.86	82.16	266.9	4.9	0.6	0.31	0.31	-0.38	-4.9	0.0	0.0	0.0
281.0	1.91	82.23	280.9	5.4	0.7	0.36	0.36	0.50	-5.4	0.0	0.0	0.0
294.0	1.97	82.47	293.9	5.8	0.8	0.47	0.46	1.85	-5.8	0.0	0.0	0.0
309.0	2.02	82.98	308.9	6.3	0.8	0.35	0.33	3.40	-6.4	0.0	0.0	0.0
323.0	2.09	83.58	322.9	6.8	0.9	0.52	0.50	4.29	-6.9	0.1	0.1	0.1
338.0	2.14	84.13	337.9	7.4	0.9	0.36	0.33	3.67	-7.4	0.2	0.2	0.2
352.0	2.20	84.51	351.9	7.9	1.0	0.44	0.43	2.71	-7.9	0.2	0.2	0.2
367.0	2.24	84.58	366.9	8.5	1.0	0.27	0.27	0.47	-8.5	0.2	0.2	0.2



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
381.0	2.27	84.16	380.9	9.0	1.1	0.24	0.21	-3.00	-9.1	0.2		
395.0	2.28	82.90	394.9	9.6	1.2	0.36	0.07	-9.00	-9.6	0.0		
409.0	2.28	81.30	408.8	10.1	1.2	0.45	0.00	-11.43	-10.2	-0.3		
423.0	2.28	79.72	422.8	10.7	1.3	0.45	0.00	-11.29	-10.7	-0.6		
437.0	2.28	78.57	436.8	11.2	1.4	0.33	0.00	-8.21	-11.3	-0.8		
451.0	2.20	73.47	450.8	11.7	1.6	1.53	-0.57	-36.43	-11.7	-1.8		
465.0	2.06	61.09	464.8	12.2	1.8	3.43	-1.00	-88.43	-11.5	-4.4		
479.0	2.00	47.35	478.8	12.6	2.1	3.49	-0.43	-98.14	-10.7	-7.0		
494.0	2.09	36.82	493.8	13.0	2.5	2.57	0.60	-70.20	-9.7	-8.9		
508.0	2.29	40.41	507.8	13.3	2.9	1.73	1.43	25.64	-10.8	-8.3		
522.0	2.52	43.71	521.8	13.7	3.3	1.92	1.64	23.57	-11.9	-7.6		
537.0	2.59	45.86	536.7	14.2	3.8	0.79	0.47	14.33	-12.8	-7.2		
551.0	2.12	45.76	550.7	14.6	4.2	3.36	-3.36	-0.71	-13.4	-7.2		
565.0	1.66	48.62	564.7	14.9	4.5	3.35	-3.29	20.43	-14.2	-6.5		
579.0	1.18	50.03	578.7	15.2	4.7	3.44	-3.43	10.07	-14.7	-6.1		
593.0	0.69	52.56	592.7	15.4	4.9	3.51	-3.50	18.07	-15.2	-5.5		
608.0	0.66	53.12	607.7	15.5	5.0	0.20	-0.20	3.73	-15.4	-5.3		
622.0	0.74	59.57	621.7	15.6	5.1	0.80	0.57	46.07	-16.1	-3.6		
636.0	0.83	64.71	635.7	15.8	5.2	0.82	0.64	36.71	-16.5	-2.1		
650.0	0.92	68.84	649.7	16.0	5.2	0.78	0.64	29.50	-16.8	-0.9		
663.0	0.82	69.61	662.7	16.2	5.3	0.77	-0.77	5.92	-17.0	-0.7		
677.0	0.72	70.58	676.7	16.4	5.4	0.72	-0.71	6.93	-17.2	-0.4		
690.0	0.62	71.86	689.7	16.5	5.4	0.78	-0.77	9.85	-17.4	0.0		
704.0	0.52	73.62	703.7	16.6	5.5	0.73	-0.71	12.57	-17.5	0.5		
717.0	0.42	76.19	716.7	16.8	5.5	0.79	-0.77	19.77	-17.6	1.3		
731.0	0.33	80.31	730.7	16.8	5.5	0.67	-0.64	29.43	-17.5	2.6		
744.0	0.23	87.83	743.7	16.9	5.5	0.82	-0.77	57.85	-17.1	4.9		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
758.0	0.23	107.93	757.7	17.0	5.5	0.57	0.00	143.57	-14.4	10.5		
771.0	0.26	125.74	770.7	17.0	5.5	0.63	0.23	137.00	-10.6	14.4		
785.0	0.31	139.14	784.7	17.1	5.4	0.59	0.36	95.71	-7.0	16.5		
798.0	0.37	148.64	797.7	17.1	5.4	0.63	0.46	73.08	-4.3	17.4		
812.0	0.43	155.40	811.7	17.1	5.3	0.54	0.43	48.29	-2.3	17.8		
825.0	0.51	160.33	824.7	17.2	5.2	0.69	0.62	37.92	-0.9	17.9		
839.0	0.58	164.05	838.7	17.2	5.1	0.56	0.50	26.57	0.1	18.0		
853.0	0.60	171.10	852.7	17.3	4.9	0.54	0.14	50.36	2.2	17.8		
866.0	0.63	177.60	865.7	17.3	4.8	0.58	0.23	50.00	4.1	17.5		
880.0	0.67	183.45	879.7	17.3	4.6	0.55	0.29	41.79	5.7	17.0		
894.0	0.71	188.65	893.7	17.3	4.5	0.53	0.29	37.14	7.0	16.4		
908.0	0.76	193.24	907.7	17.2	4.3	0.55	0.36	32.79	8.1	15.8		
921.0	0.81	197.25	920.7	17.2	4.1	0.57	0.38	30.85	9.0	15.2		
935.0	0.87	200.77	934.7	17.1	3.9	0.57	0.43	25.14	9.7	14.6		
949.0	0.90	200.01	948.7	17.0	3.7	0.23	0.21	-5.43	9.3	14.7		
962.0	0.94	199.31	961.7	17.0	3.5	0.32	0.31	-5.38	8.9	14.8		
976.0	0.97	198.67	975.7	16.9	3.3	0.23	0.21	-4.57	8.5	14.9		
989.0	1.00	198.08	988.7	16.8	3.1	0.24	0.23	-4.54	8.1	15.0		
1,003.0	1.04	197.54	1,002.7	16.7	2.8	0.29	0.29	-3.86	7.8	15.1		
1,016.0	1.07	197.05	1,015.7	16.7	2.6	0.24	0.23	-3.77	7.4	15.2		
1,030.0	1.11	196.59	1,029.7	16.6	2.4	0.29	0.29	-3.29	7.0	15.2		
1,044.0	1.10	195.68	1,043.7	16.5	2.1	0.14	-0.07	-6.50	6.5	15.3		
1,057.0	1.10	194.61	1,056.7	16.4	1.9	0.16	0.00	-8.23	6.0	15.4		
1,071.0	1.09	193.21	1,070.7	16.4	1.6	0.20	-0.07	-10.00	5.3	15.6		
1,084.0	1.09	191.29	1,083.7	16.3	1.4	0.28	0.00	-14.77	4.5	15.8		
1,098.0	1.10	188.63	1,097.7	16.3	1.1	0.37	0.07	-19.00	3.5	15.9		
1,111.0	1.12	184.95	1,110.7	16.3	0.8	0.57	0.15	-28.31	2.2	16.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
1,125.0	1.17	180.02	1,124.7	16.2	0.6	0.79	0.36	-35.21	0.6	16.2		
1,139.0	1.22	172.20	1,138.7	16.3	0.3	1.22	0.36	-55.86	-1.9	16.2		
1,152.0	1.30	163.96	1,151.7	16.3	0.0	1.52	0.62	-63.38	-4.5	15.7		
1,166.0	1.41	156.58	1,165.7	16.4	-0.3	1.47	0.79	-52.71	-6.8	15.0		
1,179.0	1.53	150.74	1,178.7	16.6	-0.6	1.48	0.92	-44.92	-8.6	14.2		
1,193.0	1.41	152.04	1,192.6	16.8	-0.9	0.89	-0.86	9.29	-8.7	14.4		
1,206.0	1.00	151.74	1,205.6	16.9	-1.2	3.15	-3.15	-2.31	-9.0	14.3		
1,220.0	0.69	130.27	1,219.6	17.0	-1.3	3.13	-2.21	-153.36	-13.8	10.0		
1,234.0	0.75	111.91	1,233.6	17.2	-1.4	1.69	0.43	-131.14	-16.4	5.1		
1,249.0	0.67	109.05	1,248.6	17.3	-1.5	0.58	-0.53	-19.07	-16.9	4.3		
1,263.0	0.59	105.44	1,262.6	17.5	-1.5	0.64	-0.57	-25.79	-17.3	3.2		
1,278.0	0.52	100.80	1,277.6	17.6	-1.6	0.55	-0.47	-30.93	-17.6	1.8		
1,292.0	0.45	94.69	1,291.6	17.7	-1.6	0.62	-0.50	-43.64	-17.8	-0.1		
1,306.0	0.45	94.51	1,305.6	17.8	-1.6	0.01	0.00	-1.29	-17.9	-0.2		
1,321.0	0.45	94.34	1,320.6	18.0	-1.6	0.01	0.00	-1.13	-18.1	-0.3		
1,335.0	0.45	94.17	1,334.6	18.1	-1.6	0.01	0.00	-1.21	-18.2	-0.5		
1,349.0	0.44	94.01	1,348.6	18.2	-1.6	0.07	-0.07	-1.14	-18.4	-0.7		
1,363.0	0.99	116.04	1,362.6	18.3	-1.7	4.32	3.93	157.36	-17.7	6.1		
1,376.0	0.60	89.07	1,375.6	18.5	-1.7	4.08	-3.00	-207.46	-18.9	-2.9		
1,390.0	0.55	34.64	1,389.6	18.6	-1.7	3.77	-0.36	-388.79	-8.5	-17.5		
1,404.0	0.90	1.64	1,403.6	18.7	-1.5	3.79	2.50	-235.71	2.6	-19.5		
1,418.0	1.36	348.94	1,417.6	18.6	-1.2	3.72	3.29	-90.71	7.1	-18.6		
1,431.0	2.31	341.76	1,430.6	18.5	-0.8	7.50	7.31	-55.23	9.5	-17.6		
1,445.0	3.52	331.59	1,444.6	18.2	-0.2	9.37	8.64	-72.64	12.5	-15.7		
1,459.0	4.82	324.63	1,458.6	17.7	0.7	9.95	9.29	-49.71	14.0	-14.0		
1,472.0	5.04	324.76	1,471.5	17.0	1.6	1.69	1.69	1.00	13.5	-13.9		
1,486.0	5.06	325.80	1,485.5	16.3	2.6	0.67	0.14	7.43	12.9	-13.9		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
1,499.0	5.10	326.91	1,498.4	15.7	3.6	0.82	0.31	8.54	12.3	-14.0		
1,513.0	5.13	327.96	1,512.4	15.0	4.6	0.70	0.21	7.50	11.8	-14.1		
1,526.0	5.18	328.86	1,525.3	14.4	5.6	0.73	0.38	6.92	11.4	-14.2		
1,540.0	5.23	329.47	1,539.2	13.8	6.7	0.53	0.36	4.36	11.1	-14.2		
1,554.0	5.29	329.69	1,553.2	13.1	7.8	0.45	0.43	1.57	11.0	-14.1		
1,567.0	5.42	333.40	1,566.1	12.5	8.9	2.84	1.00	28.54	10.0	-14.7		
1,581.0	6.08	337.21	1,580.1	12.0	10.2	5.44	4.71	27.21	8.9	-15.3		
1,594.0	6.74	336.83	1,593.0	11.4	11.5	5.09	5.08	-2.92	8.9	-15.2		
1,608.0	6.82	336.39	1,606.9	10.7	13.0	0.68	0.57	-3.14	8.8	-15.2		
1,621.0	6.89	335.97	1,619.8	10.1	14.4	0.66	0.54	-3.23	8.8	-15.1		
1,635.0	6.94	335.66	1,633.7	9.4	16.0	0.45	0.36	-2.21	8.8	-15.1		
1,649.0	6.96	335.61	1,647.6	8.7	17.5	0.15	0.14	-0.36	8.8	-15.1		
1,662.0	6.95	335.72	1,660.5	8.1	18.9	0.13	-0.08	0.85	8.8	-15.1		
1,676.0	6.93	335.92	1,674.4	7.4	20.5	0.22	-0.14	1.43	8.8	-15.1		
1,689.0	6.90	336.16	1,687.3	6.7	21.9	0.32	-0.23	1.85	8.9	-15.2		
1,703.0	6.87	336.39	1,701.2	6.1	23.4	0.29	-0.21	1.64	9.1	-15.2		
1,716.0	6.83	336.56	1,714.1	5.4	24.9	0.34	-0.31	1.31	9.3	-15.3		
1,730.0	6.81	336.61	1,728.0	4.8	26.4	0.15	-0.14	0.36	9.6	-15.3		
1,744.0	6.79	336.44	1,741.9	4.1	27.9	0.20	-0.14	-1.21	9.9	-15.3		
1,757.0	6.78	336.14	1,754.8	3.5	29.3	0.28	-0.08	-2.31	10.3	-15.2		
1,771.0	6.78	335.77	1,768.7	2.8	30.8	0.31	0.00	-2.64	10.7	-15.2		
1,784.0	6.78	335.37	1,781.6	2.2	32.2	0.36	0.00	-3.08	11.0	-15.1		
1,798.0	6.78	334.96	1,795.5	1.5	33.7	0.35	0.00	-2.93	11.4	-15.0		
1,811.0	6.79	334.59	1,808.4	0.9	35.1	0.34	0.08	-2.85	11.8	-14.9		
1,825.0	6.80	334.30	1,822.3	0.1	36.6	0.26	0.07	-2.07	12.2	-14.8		
1,839.0	6.80	334.13	1,836.2	-0.6	38.1	0.14	0.00	-1.21	12.5	-14.7		
1,852.0	6.81	334.05	1,849.1	-1.3	39.5	0.11	0.08	-0.62	12.8	-14.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
1,866.0	6.82	334.04	1,863.0	-2.0	41.0	0.07	0.07	-0.07	13.1	-14.5		
1,879.0	6.82	334.09	1,876.0	-2.7	42.4	0.05	0.00	0.38	13.4	-14.5		
1,893.0	6.84	334.20	1,889.9	-3.4	43.9	0.17	0.14	0.79	13.6	-14.5		
1,906.0	6.85	334.39	1,902.8	-4.1	45.3	0.19	0.08	1.46	13.8	-14.5		
1,920.0	6.87	334.68	1,916.7	-4.8	46.8	0.29	0.14	2.07	14.0	-14.5		
1,934.0	6.89	335.13	1,930.6	-5.5	48.3	0.41	0.14	3.21	14.2	-14.6		
1,947.0	6.92	335.66	1,943.5	-6.1	49.7	0.54	0.23	4.08	14.3	-14.7		
1,961.0	6.96	336.21	1,957.4	-6.8	51.3	0.55	0.29	3.93	14.4	-14.8		
1,975.0	7.00	336.74	1,971.3	-7.5	52.8	0.54	0.29	3.79	14.5	-15.0		
1,989.0	7.04	337.22	1,985.2	-8.2	54.4	0.51	0.29	3.43	14.6	-15.1		
2,002.0	7.08	337.58	1,998.1	-8.8	55.9	0.46	0.31	2.77	14.8	-15.3		
2,016.0	7.13	337.76	2,011.9	-9.4	57.5	0.39	0.36	1.29	14.9	-15.4		
2,030.0	7.69	340.67	2,025.8	-10.1	59.2	4.81	4.00	20.79	14.3	-16.2		
2,043.0	8.52	338.18	2,038.7	-10.7	60.9	6.93	6.38	-19.15	14.9	-15.7		
2,057.0	8.71	336.81	2,052.5	-11.5	62.8	2.00	1.36	-9.79	15.2	-15.4		
2,070.0	8.80	336.22	2,065.4	-12.3	64.6	0.98	0.69	-4.54	15.1	-15.3		
2,084.0	8.89	335.59	2,079.2	-13.2	66.6	0.94	0.64	-4.50	15.1	-15.1		
2,097.0	8.97	335.00	2,092.1	-14.0	68.4	0.94	0.62	-4.54	15.0	-14.9		
2,111.0	9.05	334.50	2,105.9	-15.0	70.4	0.80	0.57	-3.57	14.9	-14.8		
2,125.0	9.10	334.19	2,119.7	-15.9	72.4	0.50	0.36	-2.21	14.7	-14.6		
2,138.0	9.14	334.00	2,132.6	-16.8	74.3	0.39	0.31	-1.46	14.5	-14.5		
2,152.0	9.16	333.88	2,146.4	-17.8	76.3	0.20	0.14	-0.86	14.3	-14.4		
2,165.0	9.18	333.81	2,159.2	-18.7	78.1	0.18	0.15	-0.54	14.0	-14.4		
2,179.0	9.19	333.77	2,173.0	-19.7	80.1	0.08	0.07	-0.29	13.7	-14.3		
2,192.0	9.19	333.73	2,185.9	-20.6	82.0	0.05	0.00	-0.31	13.5	-14.2		
2,206.0	9.19	333.68	2,199.7	-21.6	84.0	0.06	0.00	-0.36	13.2	-14.1		
2,220.0	9.17	333.60	2,213.5	-22.6	86.0	0.17	-0.14	-0.57	12.9	-14.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
2,233.0	9.16	333.51	2,226.3	-23.5	87.8	0.13	-0.08	-0.69	12.7	-13.9		
2,247.0	9.13	333.41	2,240.2	-24.5	89.8	0.24	-0.21	-0.71	12.4	-13.8		
2,260.0	9.11	333.30	2,253.0	-25.5	91.7	0.20	-0.15	-0.85	12.2	-13.7		
2,274.0	9.08	333.21	2,266.8	-26.5	93.6	0.24	-0.21	-0.64	11.9	-13.6		
2,287.0	9.06	333.13	2,279.7	-27.4	95.5	0.18	-0.15	-0.62	11.7	-13.5		
2,301.0	9.03	333.07	2,293.5	-28.4	97.4	0.22	-0.21	-0.43	11.5	-13.4		
2,315.0	9.01	333.05	2,307.3	-29.4	99.4	0.14	-0.14	-0.14	11.2	-13.3		
2,328.0	8.99	333.06	2,320.2	-30.3	101.2	0.15	-0.15	0.08	11.0	-13.2		
2,342.0	8.96	333.10	2,334.0	-31.3	103.2	0.22	-0.21	0.29	10.7	-13.1		
2,356.0	8.94	333.15	2,347.8	-32.3	105.1	0.15	-0.14	0.36	10.5	-13.0		
2,370.0	8.92	333.23	2,361.6	-33.2	107.0	0.17	-0.14	0.57	10.3	-13.0		
2,383.0	8.90	333.33	2,374.5	-34.1	108.8	0.19	-0.15	0.77	10.0	-12.9		
2,397.0	8.89	333.46	2,388.3	-35.1	110.8	0.16	-0.07	0.93	9.8	-12.8		
2,411.0	8.87	333.62	2,402.1	-36.1	112.7	0.23	-0.14	1.14	9.5	-12.8		
2,424.0	8.86	333.80	2,415.0	-37.0	114.5	0.23	-0.08	1.38	9.3	-12.8		
2,438.0	8.85	334.00	2,428.8	-37.9	116.4	0.23	-0.07	1.43	9.0	-12.7		
2,451.0	8.83	334.21	2,441.7	-38.8	118.2	0.29	-0.15	1.62	8.8	-12.7		
2,465.0	8.82	334.41	2,455.5	-39.7	120.2	0.23	-0.07	1.43	8.5	-12.7		
2,478.0	8.81	334.61	2,468.4	-40.6	122.0	0.25	-0.08	1.54	8.3	-12.7		
2,492.0	8.79	334.77	2,482.2	-41.5	123.9	0.23	-0.14	1.14	8.1	-12.6		
2,506.0	8.77	334.89	2,496.0	-42.4	125.8	0.19	-0.14	0.86	7.9	-12.6		
2,519.0	8.75	334.98	2,508.9	-43.2	127.6	0.19	-0.15	0.69	7.7	-12.6		
2,533.0	8.73	335.07	2,522.7	-44.1	129.6	0.17	-0.14	0.64	7.5	-12.6		
2,546.0	8.71	335.17	2,535.6	-45.0	131.3	0.19	-0.15	0.77	7.3	-12.6		
2,560.0	8.69	335.30	2,549.4	-45.9	133.3	0.20	-0.14	0.93	7.1	-12.6		
2,573.0	8.67	335.47	2,562.2	-46.7	135.1	0.25	-0.15	1.31	6.9	-12.6		
2,587.0	8.65	335.73	2,576.1	-47.5	137.0	0.31	-0.14	1.86	6.7	-12.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
2,601.0	8.64	336.10	2,589.9	-48.4	138.9	0.40	-0.07	2.64	6.4	-12.6		
2,614.0	8.64	336.54	2,602.8	-49.2	140.7	0.51	0.00	3.38	6.2	-12.7		
2,628.0	8.63	337.03	2,616.6	-50.0	142.6	0.53	-0.07	3.50	5.9	-12.8		
2,641.0	8.63	337.53	2,629.5	-50.8	144.4	0.58	0.00	3.85	5.7	-12.9		
2,655.0	8.63	338.03	2,643.3	-51.6	146.4	0.54	0.00	3.57	5.4	-13.0		
2,668.0	8.63	338.50	2,656.2	-52.3	148.2	0.54	0.00	3.62	5.2	-13.1		
2,682.0	8.63	338.91	2,670.0	-53.0	150.1	0.44	0.00	2.93	4.9	-13.2		
2,696.0	8.62	339.22	2,683.9	-53.8	152.1	0.34	-0.07	2.21	4.7	-13.4		
2,709.0	8.62	339.46	2,696.7	-54.5	153.9	0.28	0.00	1.85	4.5	-13.5		
2,723.0	8.61	339.66	2,710.6	-55.2	155.9	0.23	-0.07	1.43	4.3	-13.6		
2,736.0	8.60	339.83	2,723.4	-55.9	157.7	0.21	-0.08	1.31	4.1	-13.8		
2,750.0	8.60	339.99	2,737.2	-56.6	159.7	0.17	0.00	1.14	3.9	-13.9		
2,763.0	8.59	340.14	2,750.1	-57.3	161.5	0.19	-0.08	1.15	3.7	-14.1		
2,777.0	8.58	340.28	2,763.9	-58.0	163.5	0.17	-0.07	1.00	3.5	-14.2		
2,791.0	8.58	340.43	2,777.8	-58.7	165.4	0.16	0.00	1.07	3.4	-14.4		
2,804.0	8.57	340.58	2,790.6	-59.3	167.3	0.19	-0.08	1.15	3.2	-14.5		
2,818.0	8.57	340.74	2,804.5	-60.0	169.2	0.17	0.00	1.14	3.0	-14.7		
2,831.0	8.57	340.89	2,817.3	-60.7	171.1	0.17	0.00	1.15	2.8	-14.9		
2,845.0	8.56	341.05	2,831.2	-61.3	173.0	0.18	-0.07	1.14	2.6	-15.1		
2,858.0	8.56	341.20	2,844.0	-62.0	174.9	0.17	0.00	1.15	2.5	-15.2		
2,872.0	8.55	341.35	2,857.9	-62.6	176.8	0.17	-0.07	1.07	2.3	-15.4		
2,886.0	8.55	341.49	2,871.7	-63.3	178.8	0.15	0.00	1.00	2.1	-15.6		
2,899.0	8.54	341.64	2,884.6	-63.9	180.6	0.19	-0.08	1.15	1.9	-15.8		
2,913.0	8.53	341.79	2,898.4	-64.6	182.6	0.17	-0.07	1.07	1.7	-16.0		
2,926.0	8.52	341.95	2,911.3	-65.2	184.4	0.20	-0.08	1.23	1.6	-16.2		
2,940.0	8.52	342.13	2,925.1	-65.8	186.4	0.19	0.00	1.29	1.4	-16.4		
2,953.0	8.51	342.34	2,938.0	-66.4	188.2	0.25	-0.08	1.62	1.2	-16.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
2,967.0	8.51	342.60	2,951.8	-67.0	190.2	0.27	0.00	1.86	1.0	-16.8		
2,981.0	8.50	342.93	2,965.7	-67.6	192.2	0.36	-0.07	2.36	0.7	-17.1		
2,994.0	8.50	343.31	2,978.5	-68.2	194.0	0.43	0.00	2.92	0.5	-17.3		
3,008.0	8.50	343.72	2,992.4	-68.8	196.0	0.43	0.00	2.93	0.2	-17.6		
3,021.0	8.50	344.13	3,005.2	-69.3	197.9	0.47	0.00	3.15	0.0	-17.8		
3,035.0	8.50	344.54	3,019.1	-69.9	199.9	0.43	0.00	2.93	-0.3	-18.1		
3,048.0	8.50	344.94	3,031.9	-70.4	201.7	0.45	0.00	3.08	-0.5	-18.4		
3,062.0	8.49	345.32	3,045.8	-70.9	203.7	0.41	-0.07	2.71	-0.8	-18.7		
3,076.0	8.48	345.66	3,059.6	-71.4	205.7	0.37	-0.07	2.43	-1.1	-19.0		
3,089.0	8.46	345.96	3,072.5	-71.9	207.6	0.37	-0.15	2.31	-1.3	-19.3		
3,103.0	8.45	346.20	3,086.3	-72.4	209.6	0.26	-0.07	1.71	-1.5	-19.7		
3,116.0	8.44	346.36	3,099.2	-72.8	211.4	0.20	-0.08	1.23	-1.7	-20.0		
3,130.0	8.44	346.40	3,113.0	-73.3	213.4	0.04	0.00	0.29	-1.9	-20.3		
3,143.0	8.45	346.29	3,125.9	-73.8	215.3	0.15	0.08	-0.85	-2.0	-20.7		
3,157.0	8.47	345.94	3,139.8	-74.3	217.3	0.39	0.14	-2.50	-2.0	-21.0		
3,171.0	8.53	345.21	3,153.6	-74.8	219.3	0.88	0.43	-5.21	-1.9	-21.4		
3,184.0	8.60	344.30	3,166.5	-75.3	221.1	1.17	0.54	-7.00	-1.7	-21.7		
3,198.0	8.71	342.80	3,180.3	-75.9	223.2	1.79	0.79	-10.71	-1.3	-22.0		
3,212.0	8.78	341.81	3,194.1	-76.5	225.2	1.19	0.50	-7.07	-1.1	-22.2		
3,226.0	8.86	340.89	3,208.0	-77.2	227.2	1.16	0.57	-6.57	-1.0	-22.4		
3,239.0	8.91	340.16	3,220.8	-77.9	229.1	0.95	0.38	-5.62	-0.9	-22.6		
3,253.0	8.93	339.71	3,234.6	-78.6	231.2	0.52	0.14	-3.21	-0.9	-22.7		
3,267.0	8.89	339.78	3,248.5	-79.4	233.2	0.30	-0.29	0.50	-1.2	-22.9		
3,280.0	8.82	340.16	3,261.3	-80.1	235.1	0.70	-0.54	2.92	-1.5	-23.0		
3,294.0	8.74	340.70	3,275.2	-80.8	237.1	0.82	-0.57	3.86	-2.0	-23.1		
3,307.0	8.63	341.29	3,288.0	-81.4	238.9	1.09	-0.85	4.54	-2.4	-23.3		
3,321.0	8.52	341.81	3,301.9	-82.1	240.9	0.96	-0.79	3.71	-2.7	-23.4		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
3,334.0	8.41	342.14	3,314.7	-82.7	242.7	0.92	-0.85	2.54	-3.0	-23.6		
3,348.0	8.28	342.10	3,328.6	-83.3	244.7	0.93	-0.93	-0.29	-3.0	-23.8		
3,362.0	8.17	341.31	3,342.4	-83.9	246.6	1.13	-0.79	-5.64	-2.8	-24.1		
3,375.0	8.06	340.11	3,355.3	-84.5	248.3	1.55	-0.85	-9.23	-2.3	-24.3		
3,389.0	7.96	338.64	3,369.2	-85.2	250.1	1.63	-0.71	-10.50	-1.7	-24.4		
3,402.0	7.87	337.04	3,382.0	-85.9	251.8	1.83	-0.69	-12.31	-1.0	-24.5		
3,416.0	7.79	335.42	3,395.9	-86.7	253.5	1.68	-0.57	-11.57	-0.3	-24.6		
3,429.0	7.72	333.91	3,408.8	-87.4	255.1	1.66	-0.54	-11.62	0.4	-24.5		
3,443.0	7.73	330.94	3,422.7	-88.3	256.8	2.85	0.07	-21.21	1.7	-24.4		
3,457.0	8.03	323.93	3,436.5	-89.3	258.4	7.19	2.14	-50.07	4.7	-23.7		
3,470.0	8.32	320.62	3,449.4	-90.4	259.9	4.25	2.23	-25.46	5.9	-23.0		
3,484.0	8.24	320.45	3,463.2	-91.7	261.4	0.60	-0.57	-1.21	5.8	-22.4		
3,498.0	8.15	320.40	3,477.1	-93.0	263.0	0.64	-0.64	-0.36	5.7	-21.9		
3,512.0	8.06	320.41	3,491.0	-94.3	264.5	0.64	-0.64	0.07	5.6	-21.4		
3,525.0	7.98	320.42	3,503.8	-95.4	265.9	0.62	-0.62	0.08	5.6	-20.9		
3,539.0	7.89	320.37	3,517.7	-96.6	267.4	0.64	-0.64	-0.36	5.5	-20.4		
3,552.0	7.80	320.10	3,530.6	-97.8	268.7	0.75	-0.69	-2.08	5.6	-19.9		
3,566.0	7.72	319.75	3,544.4	-99.0	270.2	0.66	-0.57	-2.50	5.7	-19.3		
3,579.0	7.63	319.34	3,557.3	-100.1	271.5	0.81	-0.69	-3.15	5.8	-18.7		
3,593.0	7.55	318.90	3,571.2	-101.3	272.9	0.71	-0.57	-3.14	6.0	-18.1		
3,606.0	7.48	318.45	3,584.1	-102.5	274.2	0.70	-0.54	-3.46	6.2	-17.6		
3,620.0	7.41	318.03	3,598.0	-103.7	275.5	0.63	-0.50	-3.00	6.3	-16.9		
3,633.0	7.35	317.64	3,610.9	-104.8	276.8	0.60	-0.46	-3.00	6.5	-16.3		
3,647.0	7.30	317.33	3,624.8	-106.0	278.1	0.46	-0.36	-2.21	6.7	-15.7		
3,660.0	7.26	317.07	3,637.7	-107.1	279.3	0.40	-0.31	-2.00	6.8	-15.1		
3,674.0	7.23	316.84	3,651.5	-108.3	280.6	0.30	-0.21	-1.64	6.9	-14.4		
3,688.0	7.19	316.62	3,665.4	-109.5	281.9	0.35	-0.29	-1.57	7.1	-13.7		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
3,702.0	7.14	316.40	3,679.3	-110.7	283.1	0.41	-0.36	-1.57	7.2	-13.1		
3,715.0	7.08	316.13	3,692.2	-111.8	284.3	0.53	-0.46	-2.08	7.4	-12.4		
3,729.0	7.01	315.79	3,706.1	-113.0	285.5	0.58	-0.50	-2.43	7.6	-11.7		
3,743.0	6.90	315.30	3,720.0	-114.2	286.7	0.89	-0.79	-3.50	7.8	-11.0		
3,756.0	6.77	314.74	3,732.9	-115.3	287.8	1.12	-1.00	-4.31	8.0	-10.2		
3,770.0	6.64	314.17	3,746.8	-116.5	289.0	1.04	-0.93	-4.07	8.3	-9.5		
3,783.0	6.51	313.64	3,759.7	-117.5	290.0	1.10	-1.00	-4.08	8.6	-8.7		
3,797.0	6.40	313.23	3,773.6	-118.7	291.1	0.85	-0.79	-2.93	8.9	-7.9		
3,810.0	6.31	313.03	3,786.6	-119.7	292.1	0.71	-0.69	-1.54	9.1	-7.2		
3,824.0	6.27	313.17	3,800.5	-120.9	293.1	0.31	-0.29	1.00	9.4	-6.4		
3,838.0	6.32	313.85	3,814.4	-122.0	294.2	0.64	0.36	4.86	9.6	-5.8		
3,851.0	6.41	314.83	3,827.3	-123.0	295.2	1.09	0.69	7.54	9.7	-5.3		
3,865.0	6.53	315.97	3,841.2	-124.1	296.3	1.26	0.86	8.14	9.9	-4.8		
3,878.0	6.65	317.17	3,854.1	-125.1	297.4	1.41	0.92	9.23	10.0	-4.4		
3,892.0	6.78	318.37	3,868.0	-126.2	298.6	1.37	0.93	8.57	10.1	-4.0		
3,905.0	6.88	319.51	3,881.0	-127.3	299.8	1.30	0.77	8.77	10.3	-3.7		
3,919.0	7.05	320.48	3,894.9	-128.3	301.1	1.48	1.21	6.93	10.4	-3.4		
3,933.0	7.91	320.68	3,908.7	-129.5	302.5	6.15	6.14	1.43	10.4	-2.9		
3,946.0	8.68	324.86	3,921.6	-130.6	304.0	7.52	5.92	32.15	10.1	-3.2		
3,960.0	8.55	325.45	3,935.4	-131.8	305.7	1.12	-0.93	4.21	9.9	-3.0		
3,974.0	8.38	326.05	3,949.3	-133.0	307.4	1.37	-1.21	4.29	9.7	-2.7		
3,988.0	8.18	326.68	3,963.1	-134.1	309.1	1.57	-1.43	4.50	9.6	-2.5		
4,001.0	7.96	327.34	3,976.0	-135.1	310.6	1.84	-1.69	5.08	9.5	-2.3		
4,015.0	7.71	328.07	3,989.9	-136.1	312.2	1.92	-1.79	5.21	9.5	-2.2		
4,029.0	7.42	328.82	4,003.8	-137.1	313.8	2.19	-2.07	5.36	9.6	-2.0		
4,042.0	7.11	329.66	4,016.7	-137.9	315.2	2.52	-2.38	6.46	9.7	-2.0		
4,056.0	6.79	330.59	4,030.6	-138.8	316.7	2.42	-2.29	6.64	9.9	-1.9		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
4,070.0	6.47	331.65	4,044.5	-139.6	318.1	2.45	-2.29	7.57	10.2	-2.0		
4,084.0	6.15	332.83	4,058.4	-140.3	319.4	2.47	-2.29	8.43	10.6	-2.0		
4,097.0	5.84	334.16	4,071.3	-140.9	320.7	2.61	-2.38	10.23	11.0	-2.2		
4,111.0	5.56	335.67	4,085.2	-141.5	321.9	2.27	-2.00	10.79	11.5	-2.5		
4,125.0	5.30	337.11	4,099.2	-142.0	323.1	2.10	-1.86	10.29	12.0	-2.8		
4,138.0	5.06	338.70	4,112.1	-142.4	324.2	2.15	-1.85	12.23	12.6	-3.2		
4,152.0	4.84	340.42	4,126.1	-142.9	325.4	1.90	-1.57	12.29	13.2	-3.7		
4,165.0	4.63	342.24	4,139.0	-143.2	326.4	1.99	-1.62	14.00	13.8	-4.3		
4,179.0	4.42	344.13	4,153.0	-143.5	327.4	1.84	-1.50	13.50	14.5	-5.0		
4,192.0	4.22	346.03	4,165.9	-143.8	328.4	1.89	-1.54	14.62	15.1	-5.8		
4,206.0	4.02	347.88	4,179.9	-144.0	329.4	1.72	-1.43	13.21	15.8	-6.7		
4,220.0	4.17	346.68	4,193.9	-144.2	330.3	1.23	1.07	-8.57	16.9	-6.7		
4,233.0	5.08	343.51	4,206.8	-144.5	331.3	7.27	7.00	-24.38	18.0	-6.0		
4,247.0	6.15	343.67	4,220.8	-144.9	332.7	7.64	7.64	1.14	18.5	-6.3		
4,260.0	5.89	343.76	4,233.7	-145.3	334.0	2.00	-2.00	0.69	19.0	-6.6		
4,274.0	5.63	343.57	4,247.6	-145.7	335.3	1.86	-1.86	-1.36	19.5	-6.8		
4,287.0	5.39	342.93	4,260.6	-146.0	336.5	1.91	-1.85	-4.92	20.1	-6.8		
4,301.0	5.21	341.57	4,274.5	-146.4	337.7	1.57	-1.29	-9.71	20.9	-6.6		
4,315.0	5.11	339.13	4,288.4	-146.8	338.9	1.72	-0.71	-17.43	21.9	-5.8		
4,328.0	5.07	336.24	4,301.4	-147.3	340.0	2.00	-0.31	-22.23	22.8	-4.8		
4,342.0	5.64	334.07	4,315.3	-147.8	341.2	4.32	4.07	-15.50	23.6	-3.9		
4,355.0	6.66	332.86	4,328.3	-148.4	342.4	7.91	7.85	-9.31	24.1	-3.3		
4,369.0	6.83	330.49	4,342.2	-149.2	343.9	2.33	1.21	-16.93	24.5	-2.1		
4,382.0	6.86	327.82	4,355.1	-150.0	345.2	2.46	0.23	-20.54	24.8	-0.8		
4,396.0	6.86	325.27	4,369.0	-150.9	346.6	2.18	0.00	-18.21	25.1	0.6		
4,410.0	6.71	323.33	4,382.9	-151.9	347.9	1.96	-1.07	-13.86	25.3	1.9		
4,423.0	6.50	321.71	4,395.8	-152.8	349.1	2.16	-1.62	-12.46	25.5	3.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
4,437.0	6.27	320.29	4,409.7	-153.8	350.3	1.99	-1.64	-10.14	25.8	4.1		
4,451.0	6.02	319.00	4,423.6	-154.8	351.5	2.04	-1.79	-9.21	26.0	5.2		
4,465.0	5.77	317.80	4,437.5	-155.7	352.5	1.99	-1.79	-8.57	26.3	6.4		
4,478.0	5.52	316.69	4,450.5	-156.6	353.5	2.10	-1.92	-8.54	26.6	7.5		
4,492.0	5.29	315.70	4,464.4	-157.5	354.4	1.77	-1.64	-7.07	27.0	8.6		
4,506.0	5.08	315.05	4,478.4	-158.4	355.3	1.56	-1.50	-4.64	27.5	9.6		
4,519.0	5.92	317.33	4,491.3	-159.3	356.2	6.68	6.46	17.54	28.3	9.1		
4,533.0	6.99	320.41	4,505.2	-160.3	357.4	8.03	7.64	22.00	29.1	8.1		
4,546.0	7.86	321.16	4,518.1	-161.3	358.7	6.73	6.69	5.77	29.2	8.2		
4,560.0	7.73	321.05	4,532.0	-162.5	360.2	0.93	-0.93	-0.79	29.2	8.7		
4,573.0	7.62	321.10	4,544.9	-163.6	361.6	0.85	-0.85	0.38	29.2	9.2		
4,587.0	7.55	321.40	4,558.7	-164.8	363.0	0.57	-0.50	2.14	29.3	9.5		
4,601.0	7.54	322.12	4,572.6	-165.9	364.4	0.68	-0.07	5.14	29.5	9.6		
4,614.0	7.57	323.07	4,585.5	-167.0	365.8	0.99	0.23	7.31	29.7	9.6		
4,628.0	7.61	324.12	4,599.4	-168.1	367.3	1.03	0.29	7.50	29.9	9.4		
4,641.0	7.65	325.18	4,612.3	-169.1	368.7	1.13	0.31	8.15	30.2	9.2		
4,655.0	7.68	326.15	4,626.1	-170.1	370.2	0.95	0.21	6.93	30.4	9.1		
4,668.0	7.82	327.01	4,639.0	-171.1	371.7	1.40	1.08	6.62	30.5	8.9		
4,682.0	8.54	327.69	4,652.9	-172.2	373.4	5.19	5.14	4.86	30.6	8.8		
4,697.0	9.67	327.72	4,667.7	-173.4	375.4	7.53	7.53	0.20	30.3	9.1		
4,711.0	10.23	327.08	4,681.5	-174.7	377.4	4.08	4.00	-4.57	29.7	9.7		
4,726.0	9.97	326.91	4,696.2	-176.2	379.6	1.74	-1.73	-1.13	29.1	10.2		
4,741.0	9.68	326.64	4,711.0	-177.6	381.8	1.96	-1.93	-1.80	28.5	10.6		
4,755.0	9.40	326.32	4,724.8	-178.8	383.7	2.04	-2.00	-2.29	28.0	11.1		
4,770.0	9.15	325.98	4,739.6	-180.2	385.7	1.71	-1.67	-2.27	27.6	11.6		
4,783.0	8.99	325.73	4,752.5	-181.3	387.4	1.27	-1.23	-1.92	27.3	12.0		
4,796.0	8.87	325.49	4,765.3	-182.5	389.1	0.97	-0.92	-1.85	27.0	12.5		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,809.0	8.77	325.26	4,778.2	-183.6	390.7	0.82	-0.77	-1.77	26.7	12.9	
4,822.0	8.68	325.02	4,791.0	-184.7	392.3	0.75	-0.69	-1.85	26.5	13.4	
4,835.0	8.61	324.78	4,803.9	-185.9	393.9	0.61	-0.54	-1.85	26.2	13.8	
4,848.0	8.53	324.52	4,816.7	-187.0	395.5	0.68	-0.62	-2.00	26.0	14.3	
4,862.0	8.44	324.20	4,830.6	-188.2	397.2	0.73	-0.64	-2.29	25.8	14.8	
4,875.0	8.35	323.86	4,843.4	-189.3	398.7	0.79	-0.69	-2.62	25.6	15.3	
4,889.0	8.27	323.53	4,857.3	-190.5	400.4	0.67	-0.57	-2.36	25.4	15.9	
4,902.0	8.19	323.22	4,870.1	-191.6	401.9	0.70	-0.62	-2.38	25.2	16.4	
4,916.0	8.14	322.97	4,884.0	-192.8	403.4	0.44	-0.36	-1.79	25.0	16.9	
4,929.0	8.11	322.81	4,896.9	-193.9	404.9	0.29	-0.23	-1.23	24.9	17.4	
4,943.0	8.12	322.78	4,910.7	-195.1	406.5	0.08	0.07	-0.21	24.8	17.9	
4,957.0	8.19	322.97	4,924.6	-196.3	408.1	0.54	0.50	1.36	24.8	18.2	
4,970.0	8.46	324.39	4,937.4	-197.4	409.6	2.61	2.08	10.92	25.1	18.0	
4,984.0	8.59	324.72	4,951.3	-198.6	411.3	0.99	0.93	2.36	25.0	18.2	
4,997.0	8.73	325.06	4,964.1	-199.7	412.9	1.15	1.08	2.62	25.0	18.4	
5,011.0	8.85	325.36	4,978.0	-201.0	414.6	0.92	0.86	2.14	24.8	18.7	
5,024.0	9.49	325.24	4,990.8	-202.1	416.3	4.93	4.92	-0.92	24.5	19.1	
5,038.0	10.20	326.02	5,004.6	-203.5	418.3	5.16	5.07	5.57	24.3	19.1	
5,052.0	10.25	326.06	5,018.4	-204.9	420.4	0.36	0.36	0.29	23.7	19.4	
5,065.0	10.29	326.05	5,031.2	-206.2	422.3	0.31	0.31	-0.08	23.2	19.7	
5,079.0	10.32	326.02	5,045.0	-207.6	424.4	0.22	0.21	-0.21	22.6	20.0	
5,093.0	10.34	325.98	5,058.7	-209.0	426.5	0.15	0.14	-0.29	22.0	20.4	
5,107.0	10.36	325.95	5,072.5	-210.4	428.5	0.15	0.14	-0.21	21.3	20.7	
5,120.0	10.38	325.96	5,085.3	-211.7	430.5	0.15	0.15	0.08	20.8	21.0	
5,134.0	10.39	326.04	5,099.1	-213.1	432.6	0.13	0.07	0.57	20.2	21.3	
5,148.0	10.41	326.23	5,112.8	-214.5	434.7	0.28	0.14	1.36	19.7	21.6	
5,161.0	10.43	326.49	5,125.6	-215.8	436.6	0.39	0.15	2.00	19.2	21.8	



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
5,175.0	10.44	326.76	5,139.4	-217.2	438.7	0.36	0.07	1.93	18.7	22.0		
5,188.0	10.45	327.04	5,152.2	-218.5	440.7	0.40	0.08	2.15	18.2	22.2		
5,202.0	10.44	327.27	5,165.9	-219.9	442.8	0.31	-0.07	1.64	17.7	22.5		
5,215.0	10.42	327.44	5,178.7	-221.2	444.8	0.28	-0.15	1.31	17.2	22.7		
5,229.0	10.38	327.50	5,192.5	-222.5	447.0	0.30	-0.29	0.43	16.6	22.9		
5,243.0	10.17	331.32	5,206.3	-223.8	449.1	5.09	-1.50	27.29	17.5	22.0		
5,256.0	9.50	336.95	5,219.1	-224.8	451.1	9.01	-5.15	43.31	19.1	20.3		
5,270.0	9.26	336.64	5,232.9	-225.6	453.2	1.75	-1.71	-2.21	18.5	20.4		
5,283.0	9.11	336.13	5,245.7	-226.5	455.1	1.31	-1.15	-3.92	17.9	20.5		
5,297.0	8.93	335.57	5,259.5	-227.4	457.1	1.43	-1.29	-4.00	17.2	20.7		
5,310.0	8.74	335.01	5,272.4	-228.2	458.9	1.60	-1.46	-4.31	16.5	20.9		
5,324.0	8.53	334.51	5,286.2	-229.1	460.8	1.59	-1.50	-3.57	15.8	21.1		
5,338.0	8.30	334.22	5,300.1	-230.0	462.7	1.67	-1.64	-2.07	15.2	21.2		
5,351.0	7.29	339.51	5,313.0	-230.7	464.3	9.52	-7.77	40.69	16.6	19.7		
5,365.0	6.15	344.08	5,326.9	-231.2	465.8	8.99	-8.14	32.64	17.9	18.2		
5,379.0	5.90	344.23	5,340.8	-231.6	467.3	1.79	-1.79	1.07	17.7	18.0		
5,393.0	5.65	344.39	5,354.7	-232.0	468.6	1.79	-1.79	1.14	17.6	17.7		
5,406.0	5.40	344.40	5,367.7	-232.3	469.8	1.92	-1.92	0.08	17.4	17.6		
5,420.0	5.18	344.05	5,381.6	-232.7	471.1	1.59	-1.57	-2.50	17.1	17.5		
5,434.0	5.01	342.86	5,395.5	-233.0	472.2	1.43	-1.21	-8.50	16.6	17.7		
5,447.0	3.82	342.17	5,408.5	-233.3	473.2	9.16	-9.15	-5.31	16.2	17.8		
5,461.0	2.27	339.84	5,422.5	-233.6	473.9	11.10	-11.07	-16.64	15.7	18.4		
5,474.0	2.20	335.55	5,435.5	-233.8	474.4	1.39	-0.54	-33.00	14.5	19.5		
5,488.0	2.15	330.92	5,449.5	-234.0	474.8	1.30	-0.36	-33.07	13.2	20.6		
5,501.0	2.12	326.51	5,462.5	-234.3	475.3	1.28	-0.23	-33.92	11.7	21.7		
5,515.0	2.12	322.89	5,476.4	-234.6	475.7	0.96	0.00	-25.86	10.4	22.5		
5,529.0	2.09	320.98	5,490.4	-234.9	476.1	0.54	-0.21	-13.64	9.7	23.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
5,542.0	2.07	319.98	5,503.4	-235.2	476.5	0.32	-0.15	-7.69	9.3	23.2		
5,556.0	2.05	319.58	5,517.4	-235.5	476.8	0.18	-0.14	-2.86	9.0	23.4		
5,570.0	2.05	319.54	5,531.4	-235.8	477.2	0.01	0.00	-0.29	8.9	23.5		
5,584.0	2.04	319.68	5,545.4	-236.1	477.6	0.08	-0.07	1.00	8.7	23.6		
5,597.0	2.04	319.81	5,558.4	-236.4	478.0	0.04	0.00	1.00	8.5	23.6		
5,611.0	2.02	319.74	5,572.4	-236.8	478.3	0.14	-0.14	-0.50	8.2	23.7		
5,624.0	2.00	319.07	5,585.4	-237.1	478.7	0.24	-0.15	-5.15	7.5	23.8		
5,638.0	1.98	318.05	5,599.4	-237.4	479.0	0.29	-0.14	-7.29	6.6	24.0		
5,651.0	1.95	316.80	5,612.4	-237.7	479.4	0.40	-0.23	-9.62	5.7	24.1		
5,665.0	1.93	315.37	5,626.3	-238.0	479.7	0.37	-0.14	-10.21	4.6	24.2		
5,678.0	1.91	313.81	5,639.3	-238.3	480.0	0.43	-0.15	-12.00	3.5	24.3		
5,692.0	1.89	312.15	5,653.3	-238.7	480.3	0.42	-0.14	-11.86	2.3	24.4		
5,705.0	1.87	310.39	5,666.3	-239.0	480.6	0.47	-0.15	-13.54	1.2	24.5		
5,719.0	1.85	308.55	5,680.3	-239.3	480.9	0.45	-0.14	-13.14	-0.1	24.5		
5,732.0	1.84	306.65	5,693.3	-239.7	481.2	0.48	-0.08	-14.62	-1.3	24.5		
5,746.0	1.82	304.72	5,707.3	-240.0	481.4	0.46	-0.14	-13.79	-2.6	24.4		
5,760.0	1.81	302.80	5,721.3	-240.4	481.7	0.44	-0.07	-13.71	-3.8	24.3		
5,774.0	1.79	300.89	5,735.3	-240.8	481.9	0.45	-0.14	-13.64	-5.1	24.1		
5,787.0	1.76	298.99	5,748.3	-241.1	482.1	0.51	-0.23	-14.62	-6.3	24.0		
5,801.0	1.72	297.08	5,762.3	-241.5	482.3	0.50	-0.29	-13.64	-7.5	23.7		
5,815.0	1.65	295.39	5,776.3	-241.9	482.5	0.61	-0.50	-12.07	-8.6	23.5		
5,828.0	1.56	293.72	5,789.3	-242.2	482.6	0.78	-0.69	-12.85	-9.7	23.2		
5,842.0	1.48	292.08	5,803.3	-242.5	482.8	0.65	-0.57	-11.71	-10.7	22.9		
5,856.0	1.40	290.54	5,817.3	-242.9	482.9	0.63	-0.57	-11.00	-11.7	22.6		
5,870.0	1.35	289.27	5,831.3	-243.2	483.0	0.42	-0.36	-9.07	-12.5	22.4		
5,883.0	0.98	14.79	5,844.3	-243.3	483.2	12.35	-2.85	657.85	21.2	14.4		
5,897.0	2.39	38.59	5,858.2	-243.1	483.5	11.03	10.07	170.00	24.8	4.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
5,910.0	2.45	38.76	5,871.2	-242.7	484.0	0.46	0.46	1.31	24.2	4.6		
5,924.0	2.54	39.09	5,885.2	-242.4	484.4	0.65	0.64	2.36	23.7	4.4		
5,937.0	2.64	39.50	5,898.2	-242.0	484.9	0.78	0.77	3.15	23.1	4.3		
5,951.0	2.74	39.91	5,912.2	-241.6	485.4	0.73	0.71	2.93	22.5	4.1		
5,964.0	2.85	40.29	5,925.2	-241.2	485.9	0.86	0.85	2.92	21.9	4.0		
5,978.0	2.94	40.61	5,939.2	-240.7	486.4	0.65	0.64	2.29	21.2	3.8		
5,991.0	3.00	40.82	5,952.1	-240.3	486.9	0.47	0.46	1.62	20.5	3.8		
6,005.0	3.03	40.92	5,966.1	-239.8	487.5	0.22	0.21	0.71	19.8	3.7		
6,018.0	3.02	40.87	5,979.1	-239.3	488.0	0.08	-0.08	-0.38	19.1	3.7		
6,032.0	3.01	40.74	5,993.1	-238.8	488.6	0.09	-0.07	-0.93	18.4	3.8		
6,046.0	2.98	40.57	6,007.1	-238.4	489.1	0.22	-0.21	-1.21	17.6	3.8		
6,060.0	2.96	40.41	6,021.0	-237.9	489.7	0.15	-0.14	-1.14	16.9	3.9		
6,073.0	2.93	40.32	6,034.0	-237.5	490.2	0.23	-0.23	-0.69	16.2	3.9		
6,087.0	2.91	40.34	6,048.0	-237.0	490.7	0.14	-0.14	0.14	15.5	3.9		
6,101.0	2.91	40.59	6,062.0	-236.5	491.3	0.09	0.00	1.79	14.8	3.8		
6,114.0	2.91	40.97	6,075.0	-236.1	491.8	0.15	0.00	2.92	14.2	3.7		
6,128.0	2.93	41.43	6,089.0	-235.6	492.3	0.22	0.14	3.29	13.5	3.6		
6,141.0	2.94	41.92	6,101.9	-235.2	492.8	0.21	0.08	3.77	12.9	3.5		
6,155.0	2.95	42.41	6,115.9	-234.7	493.3	0.19	0.07	3.50	12.2	3.4		
6,168.0	2.96	42.87	6,128.9	-234.3	493.8	0.20	0.08	3.54	11.5	3.3		
6,182.0	2.97	43.26	6,142.9	-233.8	494.3	0.16	0.07	2.79	10.8	3.2		
6,196.0	2.97	43.53	6,156.9	-233.3	494.9	0.10	0.00	1.93	10.1	3.2		
6,209.0	2.96	43.71	6,169.9	-232.8	495.4	0.11	-0.08	1.38	9.4	3.2		
6,223.0	2.95	43.83	6,183.8	-232.3	495.9	0.08	-0.07	0.86	8.7	3.1		
6,237.0	2.94	43.89	6,197.8	-231.8	496.4	0.07	-0.07	0.43	8.0	3.1		
6,251.0	2.92	43.92	6,211.8	-231.3	496.9	0.14	-0.14	0.21	7.3	3.1		
6,264.0	2.90	43.89	6,224.8	-230.9	497.4	0.15	-0.15	-0.23	6.6	3.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
6,278.0	2.88	43.80	6,238.8	-230.4	497.9	0.15	-0.14	-0.64	5.9	3.1		
6,292.0	2.86	43.62	6,252.7	-229.9	498.4	0.16	-0.14	-1.29	5.2	3.2		
6,305.0	2.83	43.40	6,265.7	-229.4	498.9	0.25	-0.23	-1.69	4.6	3.2		
6,319.0	2.81	43.16	6,279.7	-229.0	499.4	0.17	-0.14	-1.71	3.9	3.2		
6,332.0	2.78	42.93	6,292.7	-228.5	499.8	0.25	-0.23	-1.77	3.2	3.2		
6,346.0	2.75	42.75	6,306.7	-228.1	500.3	0.22	-0.21	-1.29	2.5	3.2		
6,359.0	2.72	42.64	6,319.7	-227.7	500.8	0.23	-0.23	-0.85	1.9	3.2		
6,373.0	2.69	42.66	6,333.6	-227.2	501.3	0.21	-0.21	0.14	1.2	3.2		
6,387.0	2.66	42.92	6,347.6	-226.8	501.7	0.23	-0.21	1.86	0.6	3.2		
6,400.0	2.63	43.31	6,360.6	-226.4	502.2	0.27	-0.23	3.00	0.0	3.2		
6,414.0	2.60	43.78	6,374.6	-225.9	502.6	0.26	-0.21	3.36	-0.6	3.2		
6,428.0	2.56	44.27	6,388.6	-225.5	503.1	0.33	-0.29	3.50	-1.2	3.2		
6,442.0	2.53	44.73	6,402.6	-225.0	503.5	0.26	-0.21	3.29	-1.8	3.2		
6,455.0	2.50	45.07	6,415.6	-224.6	504.0	0.26	-0.23	2.62	-2.3	3.2		
6,469.0	2.47	45.20	6,429.6	-224.2	504.4	0.22	-0.21	0.93	-2.9	3.3		
6,483.0	2.45	44.90	6,443.5	-223.8	504.8	0.17	-0.14	-2.14	-3.6	3.2		
6,496.0	2.43	44.39	6,456.5	-223.4	505.2	0.23	-0.15	-3.92	-4.1	3.2		
6,510.0	2.40	43.81	6,470.5	-223.0	505.6	0.28	-0.21	-4.14	-4.8	3.2		
6,523.0	2.35	43.25	6,483.5	-222.6	506.0	0.42	-0.38	-4.31	-5.3	3.1		
6,537.0	2.29	42.83	6,497.5	-222.2	506.4	0.45	-0.43	-3.00	-5.9	3.1		
6,550.0	2.18	42.67	6,510.5	-221.9	506.8	0.85	-0.85	-1.23	-6.4	3.0		
6,564.0	2.03	43.04	6,524.5	-221.5	507.2	1.08	-1.07	2.64	-6.9	3.1		
6,578.0	1.79	45.03	6,538.5	-221.2	507.5	1.78	-1.71	14.21	-7.3	3.3		
6,591.0	1.51	48.67	6,551.5	-220.9	507.8	2.30	-2.15	28.00	-7.4	3.8		
6,605.0	1.22	54.84	6,565.5	-220.7	508.0	2.32	-2.07	44.07	-7.3	4.6		
6,618.0	0.94	65.40	6,578.5	-220.5	508.1	2.63	-2.15	81.23	-6.6	5.9		
6,632.0	0.72	83.47	6,592.5	-220.3	508.2	2.42	-1.57	129.07	-4.6	7.7		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
6,645.0	0.62	109.82	6,605.4	-220.1	508.1	2.47	-0.77	202.69	-0.9	9.0	
6,659.0	0.66	139.24	6,619.4	-220.0	508.1	2.34	0.29	210.14	3.5	8.3	
6,673.0	0.68	142.61	6,633.4	-219.9	507.9	0.32	0.14	24.07	3.8	8.1	
6,686.0	0.69	145.84	6,646.4	-219.8	507.8	0.31	0.08	24.85	4.1	7.9	
6,700.0	0.71	148.94	6,660.4	-219.7	507.7	0.31	0.14	22.14	4.3	7.6	
6,714.0	0.73	151.88	6,674.4	-219.6	507.5	0.30	0.14	21.00	4.6	7.4	
6,728.0	0.75	154.67	6,688.4	-219.5	507.3	0.29	0.14	19.93	4.7	7.2	
6,741.0	0.78	157.31	6,701.4	-219.5	507.2	0.36	0.23	20.31	4.9	6.9	
6,755.0	0.80	159.81	6,715.4	-219.4	507.0	0.28	0.14	17.86	5.0	6.7	
6,769.0	0.81	159.38	6,729.4	-219.3	506.8	0.08	0.07	-3.07	4.7	6.8	
6,782.0	0.83	158.99	6,742.4	-219.3	506.6	0.16	0.15	-3.00	4.5	6.8	
6,796.0	0.84	158.61	6,756.4	-219.2	506.5	0.08	0.07	-2.71	4.3	6.8	
6,809.0	0.85	158.27	6,769.4	-219.1	506.3	0.09	0.08	-2.62	4.0	6.9	
6,823.0	0.86	157.94	6,783.4	-219.0	506.1	0.08	0.07	-2.36	3.8	6.9	
6,836.0	0.88	157.64	6,796.4	-219.0	505.9	0.16	0.15	-2.31	3.5	6.9	
6,850.0	0.89	157.36	6,810.4	-218.9	505.7	0.08	0.07	-2.00	3.3	6.9	
6,864.0	0.79	153.47	6,824.4	-218.8	505.5	0.82	-0.71	-27.79	2.6	7.1	
6,877.0	0.70	148.55	6,837.4	-218.7	505.4	0.85	-0.69	-37.85	1.8	7.3	
6,891.0	0.62	142.24	6,851.4	-218.6	505.2	0.77	-0.57	-45.07	0.9	7.5	
6,905.0	0.54	134.07	6,865.4	-218.5	505.1	0.82	-0.57	-58.36	-0.4	7.5	
6,919.0	0.48	123.57	6,879.4	-218.4	505.1	0.79	-0.43	-75.00	-1.8	7.3	
6,932.0	0.40	112.35	6,892.4	-218.4	505.0	0.90	-0.62	-86.31	-3.3	6.8	
6,946.0	0.76	11.21	6,906.4	-218.3	505.1	6.60	2.57	-722.43	-6.1	-4.6	
6,960.0	0.75	9.75	6,920.4	-218.3	505.3	0.15	-0.07	-10.43	-6.2	-4.8	
6,973.0	0.75	8.27	6,933.4	-218.2	505.4	0.15	0.00	-11.38	-6.2	-4.9	
6,987.0	0.75	6.76	6,947.4	-218.2	505.6	0.14	0.00	-10.79	-6.2	-5.1	
7,000.0	0.74	5.22	6,960.4	-218.2	505.8	0.17	-0.08	-11.85	-6.3	-5.3	



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
7,014.0	0.74	3.67	6,974.4	-218.2	506.0	0.14	0.00	-11.07	-6.3	-5.4		
7,027.0	0.74	2.08	6,987.4	-218.2	506.1	0.16	0.00	-12.23	-6.3	-5.6		
7,041.0	0.74	0.48	7,001.4	-218.2	506.3	0.15	0.00	-11.43	-6.4	-5.8		
7,055.0	0.72	359.98	7,015.4	-218.2	506.5	0.15	-0.14	-3.57	-6.5	-5.8		
7,068.0	0.71	359.44	7,028.4	-218.2	506.6	0.09	-0.08	-4.15	-6.6	-5.9		
7,082.0	0.69	358.86	7,042.4	-218.2	506.8	0.15	-0.14	-4.14	-6.7	-6.0		
7,095.0	0.67	358.24	7,055.4	-218.2	507.0	0.16	-0.15	-4.77	-6.8	-6.0		
7,109.0	0.66	357.57	7,069.4	-218.2	507.1	0.09	-0.07	-4.79	-6.9	-6.1		
7,122.0	0.64	356.84	7,082.4	-218.2	507.3	0.17	-0.15	-5.62	-6.9	-6.2		
7,136.0	0.63	356.07	7,096.4	-218.2	507.4	0.09	-0.07	-5.50	-7.0	-6.3		
7,150.0	0.57	356.31	7,110.4	-218.2	507.6	0.43	-0.43	1.71	-7.2	-6.3		
7,163.0	0.51	356.60	7,123.4	-218.2	507.7	0.46	-0.46	2.23	-7.3	-6.2		
7,177.0	0.45	356.93	7,137.4	-218.2	507.8	0.43	-0.43	2.36	-7.5	-6.2		
7,190.0	0.39	357.33	7,150.4	-218.2	507.9	0.46	-0.46	3.08	-7.6	-6.1		
7,204.0	0.33	357.84	7,164.4	-218.2	508.0	0.43	-0.43	3.64	-7.8	-6.1		
7,217.0	0.28	358.52	7,177.4	-218.2	508.1	0.39	-0.38	5.23	-7.9	-6.0		
7,231.0	0.22	359.52	7,191.4	-218.2	508.1	0.43	-0.43	7.14	-8.1	-5.8		
7,245.0	0.19	358.82	7,205.4	-218.2	508.2	0.22	-0.21	-5.00	-8.1	-5.9		
7,258.0	0.16	357.79	7,218.4	-218.2	508.2	0.23	-0.23	-7.92	-8.0	-6.1		
7,272.0	0.13	356.18	7,232.4	-218.2	508.3	0.22	-0.21	-11.50	-7.9	-6.3		
7,286.0	0.10	353.44	7,246.4	-218.2	508.3	0.22	-0.21	-19.57	-7.6	-6.7		
7,300.0	0.07	348.08	7,260.4	-218.2	508.3	0.22	-0.21	-38.29	-6.9	-7.4		
7,313.0	0.04	334.39	7,273.4	-218.2	508.3	0.25	-0.23	-105.31	-5.0	-8.8		
7,327.0	0.02	282.91	7,287.4	-218.2	508.3	0.23	-0.14	-367.71	3.8	-9.4		
7,341.0	0.02	194.45	7,301.4	-218.2	508.3	0.20	0.00	-631.86	9.5	3.5		
7,354.0	0.04	159.99	7,314.4	-218.2	508.3	0.20	0.15	-265.08	5.8	8.3		
7,368.0	0.06	152.01	7,328.4	-218.2	508.3	0.15	0.14	-57.00	4.6	9.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
7,381.0	0.08	148.76	7,341.4	-218.2	508.3	0.16	0.15	-25.00	4.1	9.2		
7,395.0	0.11	147.06	7,355.4	-218.2	508.3	0.22	0.21	-12.14	3.8	9.3		
7,408.0	0.13	146.07	7,368.4	-218.2	508.2	0.15	0.15	-7.62	3.6	9.4		
7,422.0	0.16	145.45	7,382.4	-218.2	508.2	0.21	0.21	-4.43	3.5	9.4		
7,436.0	0.21	150.50	7,396.4	-218.2	508.2	0.38	0.36	36.07	4.2	9.1		
7,449.0	0.25	153.70	7,409.4	-218.1	508.1	0.32	0.31	24.62	4.7	8.9		
7,463.0	0.30	155.90	7,423.4	-218.1	508.1	0.36	0.36	15.71	5.0	8.7		
7,477.0	0.35	157.53	7,437.4	-218.1	508.0	0.36	0.36	11.64	5.1	8.5		
7,491.0	0.40	158.79	7,451.4	-218.0	507.9	0.36	0.36	9.00	5.2	8.4		
7,504.0	0.45	159.79	7,464.4	-218.0	507.8	0.39	0.38	7.69	5.3	8.3		
7,518.0	0.50	160.62	7,478.4	-218.0	507.7	0.36	0.36	5.93	5.3	8.2		
7,532.0	0.53	164.28	7,492.4	-217.9	507.6	0.32	0.21	26.14	5.7	7.9		
7,545.0	0.56	167.56	7,505.4	-217.9	507.5	0.33	0.23	25.23	6.0	7.6		
7,559.0	0.59	170.51	7,519.4	-217.9	507.3	0.30	0.21	21.07	6.2	7.3		
7,572.0	0.63	173.15	7,532.4	-217.9	507.2	0.38	0.31	20.31	6.4	7.0		
7,586.0	0.66	175.54	7,546.4	-217.8	507.0	0.29	0.21	17.07	6.5	6.7		
7,599.0	0.70	177.70	7,559.4	-217.8	506.9	0.37	0.31	16.62	6.6	6.4		
7,613.0	0.74	179.65	7,573.4	-217.8	506.7	0.34	0.29	13.93	6.7	6.2		
7,627.0	0.71	174.64	7,587.4	-217.8	506.5	0.50	-0.21	-35.79	5.9	6.8		
7,640.0	0.68	169.21	7,600.4	-217.8	506.4	0.56	-0.23	-41.77	5.1	7.3		
7,654.0	0.66	163.40	7,614.4	-217.8	506.2	0.51	-0.14	-41.50	4.2	7.8		
7,667.0	0.64	157.31	7,627.4	-217.7	506.1	0.55	-0.15	-46.85	3.2	8.2		
7,681.0	0.64	151.05	7,641.4	-217.6	505.9	0.50	0.00	-44.71	2.1	8.4		
7,694.0	0.64	144.77	7,654.4	-217.6	505.8	0.54	0.00	-48.31	1.0	8.6		
7,708.0	0.65	138.62	7,668.4	-217.5	505.7	0.50	0.07	-43.93	0.0	8.7		
7,722.0	0.68	140.90	7,682.4	-217.4	505.6	0.29	0.21	16.29	0.1	8.7		
7,735.0	0.72	142.98	7,695.4	-217.3	505.4	0.36	0.31	16.00	0.3	8.7		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
7,749.0	0.75	144.89	7,709.4	-217.2	505.3	0.28	0.21	13.64	0.4	8.6		
7,762.0	0.79	146.65	7,722.4	-217.1	505.2	0.36	0.31	13.54	0.5	8.6		
7,776.0	0.82	148.26	7,736.4	-217.0	505.0	0.27	0.21	11.50	0.5	8.6		
7,789.0	0.86	149.75	7,749.4	-216.9	504.8	0.35	0.31	11.46	0.6	8.6		
7,803.0	0.89	151.13	7,763.4	-216.8	504.6	0.26	0.21	9.86	0.6	8.6		
7,817.0	0.93	149.35	7,777.4	-216.6	504.5	0.35	0.29	-12.71	0.1	8.6		
7,830.0	0.97	147.73	7,790.4	-216.5	504.3	0.37	0.31	-12.46	-0.4	8.6		
7,844.0	1.01	146.23	7,804.4	-216.4	504.1	0.34	0.29	-10.71	-0.8	8.6		
7,858.0	1.05	144.86	7,818.4	-216.3	503.9	0.34	0.29	-9.79	-1.3	8.6		
7,872.0	1.09	143.59	7,832.4	-216.1	503.6	0.33	0.29	-9.07	-1.8	8.5		
7,885.0	1.13	142.43	7,845.4	-215.9	503.4	0.35	0.31	-8.92	-2.2	8.5		
7,899.0	1.17	141.35	7,859.4	-215.8	503.2	0.32	0.29	-7.71	-2.6	8.4		
7,913.0	1.20	141.24	7,873.4	-215.6	503.0	0.21	0.21	-0.79	-2.9	8.4		
7,926.0	1.24	141.13	7,886.4	-215.4	502.8	0.31	0.31	-0.85	-3.2	8.4		
7,940.0	1.28	141.04	7,900.4	-215.2	502.5	0.29	0.29	-0.64	-3.5	8.4		
7,953.0	1.31	140.98	7,913.4	-215.0	502.3	0.23	0.23	-0.46	-3.8	8.4		
7,967.0	1.34	140.98	7,927.4	-214.8	502.1	0.21	0.21	0.00	-4.2	8.4		
7,980.0	1.35	141.04	7,940.3	-214.6	501.8	0.08	0.08	0.46	-4.5	8.4		
7,994.0	1.33	141.22	7,954.3	-214.4	501.6	0.15	-0.14	1.29	-4.8	8.4		
8,008.0	1.28	141.65	7,968.3	-214.2	501.3	0.36	-0.36	3.07	-5.0	8.5		
8,021.0	1.20	142.27	7,981.3	-214.1	501.1	0.62	-0.62	4.77	-5.2	8.5		
8,035.0	1.11	143.06	7,995.3	-213.9	500.9	0.65	-0.64	5.64	-5.4	8.6		
8,048.0	1.02	143.98	8,008.3	-213.8	500.7	0.70	-0.69	7.08	-5.5	8.7		
8,062.0	0.94	144.96	8,022.3	-213.6	500.5	0.58	-0.57	7.00	-5.6	8.8		
8,075.0	0.37	197.33	8,035.3	-213.6	500.4	5.94	-4.38	402.85	3.4	9.9		
8,089.0	1.39	291.61	8,049.3	-213.7	500.4	10.46	7.29	673.43	9.4	-4.1		
8,103.0	1.62	294.49	8,063.3	-214.1	500.5	1.73	1.64	20.57	8.8	-4.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
8,116.0	1.62	294.73	8,076.3	-214.4	500.7	0.05	0.00	1.85	8.4	-4.6		
8,130.0	1.62	294.90	8,090.3	-214.8	500.8	0.03	0.00	1.21	8.0	-4.7		
8,143.0	1.64	294.99	8,103.3	-215.1	501.0	0.16	0.15	0.69	7.6	-4.7		
8,157.0	1.66	294.92	8,117.3	-215.5	501.2	0.14	0.14	-0.50	7.2	-4.7		
8,170.0	1.68	294.65	8,130.3	-215.8	501.3	0.17	0.15	-2.08	6.9	-4.6		
8,184.0	1.71	294.08	8,144.3	-216.2	501.5	0.25	0.21	-4.07	6.5	-4.6		
8,198.0	1.75	293.03	8,158.3	-216.6	501.7	0.36	0.29	-7.50	6.2	-4.4		
8,211.0	1.79	291.77	8,171.3	-217.0	501.8	0.43	0.31	-9.69	5.9	-4.3		
8,225.0	1.84	290.41	8,185.3	-217.4	502.0	0.47	0.36	-9.71	5.5	-4.2		
8,238.0	1.88	289.08	8,198.3	-217.8	502.1	0.45	0.31	-10.23	5.2	-4.0		
8,252.0	1.92	287.84	8,212.3	-218.2	502.3	0.41	0.29	-8.86	4.8	-3.9		
8,265.0	1.95	286.76	8,225.2	-218.6	502.4	0.36	0.23	-8.31	4.5	-3.8		
8,279.0	1.97	285.93	8,239.2	-219.1	502.5	0.25	0.14	-5.93	4.0	-3.8		
8,293.0	1.95	285.54	8,253.2	-219.5	502.7	0.17	-0.14	-2.79	3.6	-3.8		
8,306.0	1.92	285.44	8,266.2	-220.0	502.8	0.23	-0.23	-0.77	3.1	-3.8		
8,320.0	1.88	285.52	8,280.2	-220.4	502.9	0.29	-0.29	0.57	2.7	-3.8		
8,333.0	1.84	285.66	8,293.2	-220.8	503.0	0.31	-0.31	1.08	2.2	-3.8		
8,347.0	1.79	285.77	8,307.2	-221.2	503.1	0.36	-0.36	0.79	1.8	-3.8		
8,360.0	1.74	285.75	8,320.2	-221.6	503.2	0.38	-0.38	-0.15	1.4	-3.8		
8,374.0	1.70	285.45	8,334.2	-222.0	503.4	0.29	-0.29	-2.14	1.0	-3.8		
8,388.0	1.67	284.58	8,348.2	-222.4	503.5	0.28	-0.21	-6.21	0.6	-3.7		
8,401.0	1.65	283.39	8,361.2	-222.8	503.6	0.31	-0.15	-9.15	0.3	-3.7		
8,415.0	1.63	282.00	8,375.2	-223.2	503.6	0.32	-0.14	-9.93	0.0	-3.7		
8,428.0	1.62	280.48	8,388.2	-223.5	503.7	0.34	-0.08	-11.69	-0.2	-3.7		
8,442.0	1.61	278.92	8,402.2	-223.9	503.8	0.32	-0.07	-11.14	-0.5	-3.7		
8,455.0	1.60	277.36	8,415.2	-224.3	503.8	0.34	-0.08	-12.00	-0.8	-3.8		
8,469.0	1.60	275.88	8,429.2	-224.7	503.9	0.30	0.00	-10.57	-1.1	-3.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
8,483.0	1.59	274.57	8,443.1	-225.1	503.9	0.27	-0.07	-9.36	-1.4	-3.8		
8,496.0	1.58	273.37	8,456.1	-225.4	503.9	0.27	-0.08	-9.23	-1.7	-3.8		
8,510.0	1.57	272.26	8,470.1	-225.8	504.0	0.23	-0.07	-7.93	-2.0	-3.9		
8,524.0	1.56	271.25	8,484.1	-226.2	504.0	0.21	-0.07	-7.21	-2.3	-3.9		
8,538.0	1.54	270.34	8,498.1	-226.6	504.0	0.23	-0.14	-6.50	-2.6	-4.0		
8,551.0	1.52	269.55	8,511.1	-226.9	504.0	0.22	-0.15	-6.08	-2.9	-4.0		
8,565.0	1.49	268.91	8,525.1	-227.3	504.0	0.25	-0.21	-4.57	-3.2	-4.0		
8,579.0	1.43	268.62	8,539.1	-227.7	504.0	0.43	-0.43	-2.07	-3.6	-4.0		
8,592.0	1.37	268.52	8,552.1	-228.0	504.0	0.46	-0.46	-0.77	-3.9	-4.1		
8,606.0	1.31	268.56	8,566.1	-228.3	503.9	0.43	-0.43	0.29	-4.2	-4.1		
8,619.0	1.24	268.71	8,579.1	-228.6	503.9	0.54	-0.54	1.15	-4.5	-4.0		
8,633.0	1.18	268.92	8,593.1	-228.9	503.9	0.43	-0.43	1.50	-4.8	-4.0		
8,646.0	1.12	269.15	8,606.1	-229.1	503.9	0.46	-0.46	1.77	-5.1	-4.0		
8,660.0	0.97	327.40	8,620.1	-229.3	504.0	7.33	-1.07	416.07	-6.3	2.3		
8,674.0	0.93	330.61	8,634.1	-229.5	504.2	0.48	-0.29	22.93	-6.4	2.7		
8,687.0	0.90	334.06	8,647.1	-229.6	504.4	0.48	-0.23	26.54	-6.4	3.1		
8,701.0	0.87	337.78	8,661.1	-229.6	504.6	0.46	-0.21	26.57	-6.4	3.5		
8,715.0	0.84	341.74	8,675.1	-229.7	504.8	0.47	-0.21	28.29	-6.4	3.9		
8,729.0	0.81	345.94	8,689.1	-229.8	505.0	0.48	-0.21	30.00	-6.2	4.4		
8,742.0	0.79	350.36	8,702.1	-229.8	505.2	0.50	-0.15	34.00	-6.1	4.9		
8,756.0	0.78	354.95	8,716.1	-229.8	505.4	0.45	-0.07	32.79	-5.9	5.3		
8,770.0	0.79	355.96	8,730.1	-229.9	505.6	0.12	0.07	7.21	-6.0	5.4		
8,783.0	0.79	356.94	8,743.1	-229.9	505.7	0.10	0.00	7.54	-6.0	5.5		
8,797.0	0.80	357.90	8,757.1	-229.9	505.9	0.12	0.07	6.86	-6.1	5.7		
8,811.0	0.80	358.82	8,771.1	-229.9	506.1	0.09	0.00	6.57	-6.2	5.8		
8,825.0	0.81	359.72	8,785.1	-229.9	506.3	0.12	0.07	6.43	-6.3	5.8		
8,838.0	0.82	0.59	8,798.1	-229.9	506.5	0.12	0.08	6.69	-6.4	5.9		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
8,852.0	0.82	1.43	8,812.1	-229.9	506.7	0.09	0.00	6.00	-6.6	6.0		
8,866.0	0.80	1.53	8,826.1	-229.9	506.9	0.14	-0.14	0.71	-6.7	6.1		
8,879.0	0.78	1.63	8,839.1	-229.9	507.1	0.15	-0.15	0.77	-6.9	6.1		
8,893.0	0.76	1.71	8,853.1	-229.9	507.3	0.14	-0.14	0.57	-7.1	6.1		
8,906.0	0.74	1.79	8,866.1	-229.9	507.4	0.15	-0.15	0.62	-7.3	6.1		
8,920.0	0.72	1.86	8,880.1	-229.8	507.6	0.14	-0.14	0.50	-7.4	6.1		
8,933.0	0.70	1.91	8,893.1	-229.8	507.8	0.15	-0.15	0.38	-7.6	6.1		
8,947.0	0.68	1.95	8,907.1	-229.8	507.9	0.14	-0.14	0.29	-7.7	6.1		
8,961.0	0.57	1.95	8,921.1	-229.8	508.1	0.79	-0.79	0.00	-7.9	6.1		
8,974.0	0.47	1.93	8,934.1	-229.8	508.2	0.77	-0.77	-0.15	-8.0	6.1		
8,988.0	0.36	1.86	8,948.1	-229.8	508.3	0.79	-0.79	-0.50	-8.1	6.1		
9,002.0	0.26	1.70	8,962.1	-229.8	508.4	0.71	-0.71	-1.14	-8.2	6.1		
9,016.0	0.16	1.25	8,976.1	-229.8	508.4	0.71	-0.71	-3.21	-8.3	6.0		
9,029.0	0.05	358.78	8,989.1	-229.8	508.5	0.85	-0.85	-19.00	-8.6	5.6		
9,043.0	0.05	186.39	9,003.1	-229.8	508.5	0.71	0.00	-1,231.36	7.8	-6.7		
9,057.0	0.15	162.60	9,017.1	-229.8	508.4	0.76	0.71	-169.93	9.8	-3.0		
9,070.0	0.25	157.89	9,030.1	-229.8	508.4	0.78	0.77	-36.23	10.0	-2.2		
9,084.0	0.36	155.95	9,044.1	-229.8	508.3	0.79	0.79	-13.86	10.0	-1.9		
9,097.0	0.46	154.91	9,057.1	-229.7	508.3	0.77	0.77	-8.00	9.9	-1.7		
9,111.0	0.57	154.27	9,071.1	-229.7	508.1	0.79	0.79	-4.57	9.8	-1.6		
9,124.0	0.67	153.85	9,084.1	-229.6	508.0	0.77	0.77	-3.23	9.7	-1.5		
9,138.0	0.78	153.55	9,098.1	-229.5	507.9	0.79	0.79	-2.14	9.5	-1.5		
9,152.0	0.87	159.76	9,112.1	-229.5	507.7	0.91	0.64	44.36	9.1	-2.5		
9,165.0	0.97	164.72	9,125.1	-229.4	507.5	0.98	0.77	38.15	8.6	-3.2		
9,179.0	1.08	168.73	9,139.1	-229.3	507.2	0.94	0.79	28.64	8.1	-3.8		
9,192.0	1.19	172.02	9,152.1	-229.3	507.0	0.98	0.85	25.31	7.6	-4.3		
9,206.0	1.31	174.74	9,166.0	-229.3	506.7	0.96	0.86	19.43	7.1	-4.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
9,219.0	1.43	177.02	9,179.0	-229.2	506.4	1.01	0.92	17.54	6.6	-4.9		
9,233.0	1.55	178.96	9,193.0	-229.2	506.0	0.93	0.86	13.86	6.1	-5.1		
9,247.0	1.57	180.16	9,207.0	-229.2	505.6	0.27	0.14	8.57	5.6	-5.2		
9,260.0	1.60	181.48	9,220.0	-229.2	505.3	0.36	0.23	10.15	5.1	-5.4		
9,274.0	1.63	182.85	9,234.0	-229.2	504.9	0.35	0.21	9.79	4.6	-5.5		
9,288.0	1.66	184.26	9,248.0	-229.3	504.5	0.36	0.21	10.07	4.1	-5.6		
9,302.0	1.69	185.70	9,262.0	-229.3	504.1	0.37	0.21	10.29	3.5	-5.7		
9,315.0	1.71	187.19	9,275.0	-229.3	503.7	0.37	0.15	11.46	3.0	-5.8		
9,329.0	1.71	188.79	9,289.0	-229.4	503.3	0.34	0.00	11.43	2.4	-5.8		
9,343.0	1.68	190.47	9,303.0	-229.5	502.8	0.41	-0.21	12.00	1.8	-5.9		
9,356.0	1.64	192.22	9,316.0	-229.6	502.5	0.50	-0.31	13.46	1.2	-5.9		
9,370.0	1.59	194.01	9,330.0	-229.6	502.1	0.51	-0.36	12.79	0.7	-6.0		
9,383.0	1.54	195.81	9,343.0	-229.7	501.7	0.54	-0.38	13.85	0.1	-6.0		
9,397.0	1.50	197.49	9,357.0	-229.8	501.4	0.43	-0.29	12.00	-0.4	-6.0		
9,410.0	0.77	210.98	9,370.0	-229.9	501.2	5.94	-5.62	103.77	-2.1	-5.7		
9,424.0	0.31	214.96	9,384.0	-230.0	501.0	3.29	-3.29	28.43	-2.6	-5.5		
9,438.0	0.35	221.86	9,398.0	-230.1	501.0	0.40	0.29	49.29	-3.3	-5.2		
9,451.0	0.38	227.50	9,411.0	-230.1	500.9	0.36	0.23	43.38	-3.9	-4.8		
9,465.0	0.43	232.10	9,425.0	-230.2	500.9	0.43	0.36	32.86	-4.4	-4.5		
9,478.0	0.47	235.89	9,438.0	-230.3	500.8	0.38	0.31	29.15	-4.7	-4.2		
9,492.0	0.51	239.03	9,452.0	-230.4	500.7	0.34	0.29	22.43	-5.1	-3.9		
9,505.0	0.56	241.66	9,465.0	-230.5	500.7	0.43	0.38	20.23	-5.4	-3.7		
9,519.0	0.61	243.88	9,479.0	-230.6	500.6	0.39	0.36	15.86	-5.7	-3.5		
9,533.0	0.66	241.21	9,493.0	-230.7	500.5	0.41	0.36	-19.07	-5.6	-3.7		
9,546.0	0.71	238.94	9,506.0	-230.9	500.5	0.44	0.38	-17.46	-5.7	-3.9		
9,560.0	0.77	236.98	9,520.0	-231.0	500.4	0.47	0.43	-14.00	-5.7	-4.1		
9,573.0	0.82	235.29	9,533.0	-231.2	500.3	0.42	0.38	-13.00	-5.8	-4.3		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
9,587.0	0.88	233.81	9,547.0	-231.3	500.1	0.46	0.43	-10.57	-5.8	-4.5		
9,600.0	0.93	232.52	9,560.0	-231.5	500.0	0.42	0.38	-9.92	-5.9	-4.6		
9,614.0	0.99	231.37	9,574.0	-231.7	499.9	0.45	0.43	-8.21	-6.1	-4.7		
9,628.0	1.00	231.54	9,588.0	-231.9	499.7	0.07	0.07	1.21	-6.3	-4.7		
9,641.0	1.01	231.71	9,601.0	-232.1	499.6	0.08	0.08	1.31	-6.6	-4.7		
9,655.0	1.02	231.88	9,615.0	-232.3	499.4	0.07	0.07	1.21	-6.9	-4.7		
9,668.0	1.03	232.05	9,628.0	-232.4	499.3	0.08	0.08	1.31	-7.1	-4.6		
9,682.0	1.04	232.23	9,641.9	-232.6	499.1	0.08	0.07	1.29	-7.4	-4.6		
9,695.0	1.05	232.40	9,654.9	-232.8	499.0	0.08	0.08	1.31	-7.6	-4.6		
9,709.0	1.07	232.58	9,668.9	-233.0	498.8	0.14	0.14	1.29	-7.9	-4.6		
9,723.0	1.10	234.69	9,682.9	-233.3	498.7	0.36	0.21	15.07	-8.3	-4.3		
9,736.0	1.15	237.02	9,695.9	-233.5	498.5	0.52	0.38	17.92	-8.7	-3.9		
9,750.0	1.20	239.32	9,709.9	-233.7	498.4	0.49	0.36	16.43	-9.2	-3.6		
9,764.0	1.25	241.43	9,723.9	-234.0	498.2	0.48	0.36	15.07	-9.6	-3.2		
9,778.0	1.30	243.25	9,737.9	-234.2	498.1	0.46	0.36	13.00	-10.0	-2.9		
9,791.0	1.34	244.69	9,750.9	-234.5	498.0	0.40	0.31	11.08	-10.4	-2.6		
9,805.0	1.37	245.67	9,764.9	-234.8	497.8	0.27	0.21	7.00	-10.8	-2.5		
9,818.0	1.38	246.05	9,777.9	-235.1	497.7	0.10	0.08	2.92	-11.1	-2.4		
9,832.0	1.37	246.09	9,791.9	-235.4	497.5	0.07	-0.07	0.29	-11.4	-2.4		
9,845.0	1.35	246.09	9,804.9	-235.7	497.4	0.15	-0.15	0.00	-11.7	-2.4		
9,858.0	1.33	246.39	9,817.9	-236.0	497.3	0.16	-0.15	2.31	-12.0	-2.3		
9,872.0	1.28	247.70	9,831.9	-236.3	497.2	0.42	-0.36	9.36	-12.4	-2.0		
9,885.0	1.24	249.52	9,844.9	-236.5	497.1	0.44	-0.31	14.00	-12.8	-1.6		
9,899.0	1.19	251.48	9,858.9	-236.8	497.0	0.46	-0.36	14.00	-13.1	-1.2		
9,912.0	1.15	253.08	9,871.9	-237.1	496.9	0.38	-0.29	12.33	-13.4	-0.8		
KOP (MD=9912.0', TVD:9871.9')												
9,913.0	1.15	253.21	9,872.9	-237.1	496.9	0.38	-0.28	12.75	-13.4	-0.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
9,926.0	1.11	254.19	9,885.9	-237.3	496.8	0.34	-0.31	7.54	-13.7	-0.6	
9,940.0	2.33	210.59	9,899.9	-237.6	496.5	12.19	8.71	-311.43	-9.9	-9.9	
9,954.0	4.50	187.27	9,913.9	-237.8	495.7	18.10	15.50	-166.57	-5.9	-13.2	
9,967.0	7.13	179.44	9,926.8	-237.9	494.4	21.08	20.23	-60.23	-5.0	-13.9	
9,981.0	9.83	176.95	9,940.6	-237.8	492.4	19.46	19.29	-17.79	-5.7	-14.2	
9,995.0	12.56	176.54	9,954.4	-237.6	489.7	19.51	19.50	-2.93	-7.3	-14.2	
10,008.0	15.31	176.45	9,967.0	-237.4	486.5	21.15	21.15	-0.69	-9.1	-14.2	
10,022.0	18.08	175.35	9,980.4	-237.2	482.5	19.91	19.79	-7.86	-11.2	-14.4	
10,035.0	18.42	174.62	9,992.7	-236.8	478.5	3.15	2.62	-5.62	-13.2	-14.5	
10,049.0	20.22	171.75	10,006.0	-236.2	473.9	14.53	12.86	-20.50	-14.9	-15.0	
10,062.0	22.49	169.21	10,018.1	-235.5	469.2	18.85	17.46	-19.54	-16.5	-15.3	
10,076.0	24.98	169.20	10,030.9	-234.4	463.7	17.79	17.79	-0.07	-19.3	-14.9	
10,090.0	27.58	170.80	10,043.4	-233.3	457.6	19.25	18.57	11.43	-22.7	-14.0	
10,103.0	30.17	171.40	10,054.8	-232.4	451.4	20.05	19.92	4.62	-25.9	-13.4	
10,105.5	30.64	171.51	10,057.0	-232.2	450.1	18.97	18.85	4.25	-26.6	-13.3	
HL Crossing (MD:10105.5', TVD:10057.0', N/S:450.1', E/W:-232.2', INC:30.64)											
10,117.0	32.81	171.96	10,066.7	-231.3	444.1	18.97	18.86	3.94	-29.6	-12.8	
10,131.0	34.92	174.34	10,078.4	-230.4	436.4	17.80	15.07	17.00	-34.0	-11.2	
10,145.0	37.16	173.81	10,089.7	-229.5	428.2	16.15	16.00	-3.79	-37.9	-11.3	
10,158.0	39.59	172.65	10,099.9	-228.6	420.2	19.50	18.69	-8.92	-41.6	-11.7	
10,172.0	41.76	172.09	10,110.5	-227.4	411.1	15.72	15.50	-4.00	-45.9	-11.6	
10,186.0	42.43	171.97	10,120.9	-226.1	401.8	4.82	4.79	-0.86	-50.4	-11.1	
10,199.0	42.80	171.86	10,130.5	-224.8	393.1	2.90	2.85	-0.85	-54.3	-10.5	
10,213.0	43.15	171.73	10,140.7	-223.5	383.7	2.58	2.50	-0.93	-58.3	-9.9	
10,226.0	45.03	173.22	10,150.0	-222.3	374.7	16.51	14.46	11.46	-62.2	-7.9	
10,240.0	46.23	174.49	10,159.8	-221.2	364.8	10.75	8.57	9.07	-66.2	-6.0	
10,253.0	46.20	174.32	10,168.8	-220.3	355.4	0.97	-0.23	-1.31	-69.7	-5.7	



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
10,267.0	46.06	174.12	10,178.5	-219.3	345.4	1.44	-1.00	-1.43	-73.0	-5.4		
10,281.0	45.66	173.89	10,188.3	-218.2	335.4	3.09	-2.86	-1.64	-75.9	-5.0		
10,294.0	45.15	173.65	10,197.4	-217.2	326.2	4.14	-3.92	-1.85	-78.1	-4.7		
10,308.0	44.60	173.42	10,207.3	-216.1	316.4	4.10	-3.93	-1.64	-80.1	-4.2		
10,321.0	45.37	172.02	10,216.5	-214.9	307.3	9.65	5.92	-10.77	-81.5	-4.9		
10,335.0	46.57	171.81	10,226.2	-213.5	297.3	8.64	8.57	-1.50	-82.9	-4.1		
10,348.0	45.97	171.58	10,235.2	-212.2	288.0	4.79	-4.62	-1.77	-84.0	-3.2		
10,362.0	45.51	171.38	10,245.0	-210.7	278.1	3.44	-3.29	-1.43	-84.6	-2.2		
10,376.0	45.20	171.24	10,254.8	-209.2	268.2	2.33	-2.21	-1.00	-84.8	-1.1		
10,389.0	45.03	171.14	10,264.0	-207.8	259.1	1.42	-1.31	-0.77	-84.5	0.1		
10,403.0	44.97	171.07	10,273.9	-206.2	249.3	0.56	-0.43	-0.50	-83.8	1.4		
10,417.0	45.24	170.93	10,283.8	-204.7	239.6	2.05	1.93	-1.00	-82.7	2.7		
10,431.0	46.99	170.43	10,293.5	-203.1	229.6	12.76	12.50	-3.57	-81.5	3.8		
10,444.0	49.07	170.83	10,302.2	-201.5	220.1	16.16	16.00	3.08	-80.4	5.7		
10,458.0	51.18	171.67	10,311.2	-199.8	209.4	15.76	15.07	6.00	-79.3	7.8		
10,472.0	51.59	171.80	10,319.9	-198.3	198.6	3.02	2.93	0.93	-78.2	9.3		
10,485.0	51.57	171.72	10,328.0	-196.8	188.5	0.51	-0.15	-0.62	-76.8	10.6		
10,499.0	51.50	171.65	10,336.7	-195.2	177.7	0.64	-0.50	-0.50	-75.0	12.1		
10,512.0	53.36	172.64	10,344.6	-193.8	167.5	15.53	14.31	7.62	-73.0	13.9		
10,526.0	55.43	173.45	10,352.8	-192.4	156.2	15.52	14.79	5.79	-71.0	15.6		
10,539.0	57.60	174.15	10,359.9	-191.3	145.4	17.29	16.69	5.38	-69.2	16.9		
10,553.0	59.17	175.02	10,367.3	-190.2	133.5	12.40	11.21	6.21	-67.4	18.1		
10,566.0	59.17	174.98	10,373.9	-189.2	122.4	0.26	0.00	-0.31	-65.7	18.8		
10,580.0	58.99	174.95	10,381.1	-188.1	110.5	1.30	-1.29	-0.21	-63.4	19.5		
10,593.0	58.76	174.92	10,387.9	-187.1	99.4	1.78	-1.77	-0.23	-60.9	20.3		
10,607.0	60.08	175.33	10,395.0	-186.1	87.4	9.76	9.43	2.93	-57.9	21.1		
10,620.0	62.00	176.29	10,401.3	-185.3	76.0	16.12	14.77	7.38	-55.2	21.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
10,634.0	63.73	177.17	10,407.7	-184.6	63.6	13.56	12.36	6.29	-52.3	22.3		
10,647.0	63.53	177.12	10,413.4	-184.0	51.9	1.58	-1.54	-0.38	-49.6	22.5		
10,661.0	63.34	177.06	10,419.7	-183.4	39.4	1.41	-1.36	-0.43	-46.2	22.8		
10,674.0	63.08	177.00	10,425.6	-182.8	27.9	2.04	-2.00	-0.46	-42.7	23.1		
10,688.0	62.88	176.94	10,431.9	-182.1	15.4	1.48	-1.43	-0.43	-38.5	23.4		
10,701.0	63.66	177.16	10,437.8	-181.5	3.8	6.19	6.00	1.69	-34.4	23.6		
10,715.0	65.76	177.89	10,443.7	-181.0	-8.8	15.72	15.00	5.21	-30.0	23.6		
10,728.0	68.14	178.82	10,448.8	-180.6	-20.8	19.45	18.31	7.15	-26.2	23.4		
10,742.0	70.63	179.72	10,453.8	-180.5	-33.9	18.78	17.79	6.43	-22.3	22.9		
10,756.0	71.88	180.05	10,458.3	-180.4	-47.2	9.20	8.93	2.36	-18.6	22.4		
10,769.0	72.25	179.90	10,462.3	-180.4	-59.5	3.05	2.85	-1.15	-15.0	21.8		
10,783.0	72.66	179.74	10,466.5	-180.4	-72.9	3.12	2.93	-1.14	-10.9	21.2		
10,796.0	73.34	179.37	10,470.3	-180.3	-85.3	5.90	5.23	-2.85	-7.2	20.7		
10,810.0	75.27	178.30	10,474.1	-180.0	-98.8	15.63	13.79	-7.64	-3.7	20.5		
10,823.0	77.97	178.68	10,477.1	-179.7	-111.4	20.96	20.77	2.92	-0.8	20.6		
10,837.0	80.74	179.45	10,479.7	-179.4	-125.2	20.51	19.79	5.50	1.8	20.7		
10,851.0	83.48	179.98	10,481.6	-179.4	-139.0	19.93	19.57	3.79	3.8	20.7		
10,864.0	84.86	180.05	10,482.9	-179.4	-152.0	10.63	10.62	0.54	5.2	20.6		
10,878.0	85.36	179.81	10,484.1	-179.4	-165.9	3.96	3.57	-1.71	6.4	20.5		
10,891.0	85.77	179.57	10,485.1	-179.3	-178.9	3.65	3.15	-1.85	7.4	20.5		
10,905.0	86.09	179.35	10,486.1	-179.2	-192.9	2.77	2.29	-1.57	8.4	20.5		
10,918.0	87.46	179.93	10,486.8	-179.1	-205.8	11.44	10.54	4.46	9.2	20.5		
10,932.0	89.56	180.77	10,487.2	-179.2	-219.8	16.15	15.00	6.00	9.6	20.3		
10,946.0	89.97	180.78	10,487.3	-179.4	-233.8	2.93	2.93	0.07	9.7	20.1		
10,959.0	90.33	180.83	10,487.2	-179.5	-246.8	2.80	2.77	0.38	9.7	19.8		
10,973.0	90.64	180.90	10,487.1	-179.8	-260.8	2.27	2.21	0.50	9.7	19.5		
10,986.0	90.88	181.11	10,486.9	-180.0	-273.8	2.45	1.85	1.62	9.5	19.2		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
11,000.0	89.84	182.95	10,486.8	-180.5	-287.8	15.10	-7.43	13.14	9.5	18.6		
11,013.0	89.70	183.16	10,486.9	-181.2	-300.8	1.94	-1.08	1.62	9.6	17.8		
11,027.0	89.30	183.26	10,487.0	-182.0	-314.8	2.95	-2.86	0.71	9.7	16.9		
11,041.0	88.33	183.51	10,487.3	-182.8	-328.7	7.15	-6.93	1.79	10.1	16.0		
11,054.0	88.41	183.51	10,487.7	-183.6	-341.7	0.62	0.62	0.00	10.5	15.1		
11,068.0	88.59	183.49	10,488.0	-184.4	-355.7	1.29	1.29	-0.14	10.9	14.2		
11,082.0	88.91	183.45	10,488.3	-185.3	-369.6	2.30	2.29	-0.29	11.2	13.2		
11,096.0	89.33	183.38	10,488.6	-186.1	-383.6	3.04	3.00	-0.50	11.5	12.3		
11,109.0	89.83	183.29	10,488.7	-186.9	-396.6	3.91	3.85	-0.69	11.6	11.5		
11,123.0	90.36	183.16	10,488.6	-187.7	-410.6	3.90	3.79	-0.93	11.6	10.6		
11,137.0	90.78	182.97	10,488.5	-188.4	-424.6	3.29	3.00	-1.36	11.5	9.8		
11,150.0	91.15	182.74	10,488.3	-189.0	-437.5	3.35	2.85	-1.77	11.3	9.0		
11,164.0	91.53	182.49	10,487.9	-189.7	-451.5	3.25	2.71	-1.79	11.0	8.3		
11,177.0	91.93	182.24	10,487.6	-190.2	-464.5	3.63	3.08	-1.92	10.7	7.7		
11,191.0	92.33	181.98	10,487.0	-190.7	-478.5	3.41	2.86	-1.86	10.2	7.1		
11,204.0	92.78	181.74	10,486.5	-191.2	-491.5	3.92	3.46	-1.85	9.6	6.6		
11,218.0	93.17	181.53	10,485.7	-191.6	-505.4	3.16	2.79	-1.50	9.0	6.1		
11,232.0	93.40	181.38	10,484.9	-191.9	-519.4	1.96	1.64	-1.07	8.2	5.6		
11,245.0	92.47	181.00	10,484.3	-192.2	-532.4	7.73	-7.15	-2.92	7.6	5.3		
11,259.0	90.59	180.76	10,483.9	-192.4	-546.4	13.54	-13.43	-1.71	7.2	5.0		
11,272.0	90.21	180.77	10,483.8	-192.6	-559.4	2.92	-2.92	0.08	7.2	4.7		
11,286.0	90.03	180.72	10,483.8	-192.8	-573.4	1.33	-1.29	-0.36	7.2	4.4		
11,299.0	89.97	180.67	10,483.8	-192.9	-586.4	0.60	-0.46	-0.38	7.2	4.2		
11,313.0	90.00	180.63	10,483.8	-193.1	-600.4	0.36	0.21	-0.29	7.3	3.9		
11,327.0	90.19	180.56	10,483.7	-193.2	-614.4	1.45	1.36	-0.50	7.3	3.7		
11,340.0	90.07	180.63	10,483.7	-193.4	-627.4	1.07	-0.92	0.54	7.3	3.5		
11,354.0	88.02	181.46	10,483.9	-193.6	-641.4	15.80	-14.64	5.93	7.6	3.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
11,367.0	87.86	181.44	10,484.4	-193.9	-654.4	1.24	-1.23	-0.15	8.1	2.7		
11,381.0	87.69	181.37	10,485.0	-194.3	-668.3	1.31	-1.21	-0.50	8.7	2.3		
11,394.0	87.68	181.30	10,485.5	-194.6	-681.3	0.54	-0.08	-0.54	9.2	1.9		
11,408.0	87.84	181.23	10,486.0	-194.9	-695.3	1.25	1.14	-0.50	9.8	1.5		
11,422.0	88.09	181.15	10,486.5	-195.2	-709.3	1.87	1.79	-0.57	10.3	1.1		
11,435.0	88.39	181.07	10,486.9	-195.4	-722.3	2.39	2.31	-0.62	10.8	0.8		
11,449.0	88.69	180.99	10,487.3	-195.7	-736.3	2.22	2.14	-0.57	11.2	0.4		
11,462.0	88.91	180.91	10,487.6	-195.9	-749.3	1.80	1.69	-0.62	11.5	0.1		
11,476.0	89.08	180.85	10,487.8	-196.1	-763.3	1.29	1.21	-0.43	11.8	-0.2		
11,489.0	89.20	180.79	10,488.0	-196.3	-776.3	1.03	0.92	-0.46	12.0	-0.4		
11,503.0	89.28	180.76	10,488.2	-196.5	-790.3	0.61	0.57	-0.21	12.2	-0.7		
11,517.0	89.30	180.76	10,488.4	-196.7	-804.3	0.14	0.14	0.00	12.4	-1.0		
11,530.0	89.30	180.78	10,488.5	-196.9	-817.3	0.15	0.00	0.15	12.6	-1.3		
11,544.0	89.33	180.82	10,488.7	-197.0	-831.3	0.36	0.21	0.29	12.8	-1.5		
11,557.0	89.30	180.88	10,488.8	-197.2	-844.3	0.52	-0.23	0.46	13.0	-1.8		
11,571.0	89.31	180.95	10,489.0	-197.5	-858.3	0.51	0.07	0.50	13.2	-2.1		
11,584.0	88.19	181.40	10,489.3	-197.7	-871.3	9.28	-8.62	3.46	13.5	-2.5		
11,598.0	87.36	181.53	10,489.8	-198.1	-885.2	6.00	-5.93	0.93	14.1	-2.9		
11,612.0	87.13	181.69	10,490.5	-198.5	-899.2	2.00	-1.64	1.14	14.8	-3.4		
11,625.0	87.09	181.89	10,491.2	-198.9	-912.2	1.57	-0.31	1.54	15.5	-3.9		
11,639.0	87.12	182.09	10,491.9	-199.4	-926.2	1.44	0.21	1.43	16.3	-4.5		
11,653.0	87.17	182.30	10,492.6	-199.9	-940.1	1.54	0.36	1.50	17.0	-5.1		
11,667.0	87.21	182.50	10,493.3	-200.5	-954.1	1.46	0.29	1.43	17.7	-5.8		
11,680.0	87.26	182.67	10,493.9	-201.1	-967.1	1.36	0.38	1.31	18.4	-6.5		
11,694.0	87.31	182.80	10,494.5	-201.7	-981.1	0.99	0.36	0.93	19.1	-7.2		
11,708.0	87.27	182.87	10,495.2	-202.4	-995.0	0.58	-0.29	0.50	19.8	-8.0		
11,721.0	87.23	182.89	10,495.8	-203.1	-1,008.0	0.34	-0.31	0.15	20.5	-8.7		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
11,735.0	87.22	182.87	10,496.5	-203.8	-1,022.0	0.16	-0.07	-0.14	21.2	-9.5		
11,748.0	87.29	182.84	10,497.1	-204.4	-1,034.9	0.59	0.54	-0.23	21.8	-10.3		
11,762.0	87.56	182.69	10,497.8	-205.1	-1,048.9	2.21	1.93	-1.07	22.5	-11.0		
11,775.0	88.72	181.14	10,498.2	-205.5	-1,061.9	14.89	8.92	-11.92	23.0	-11.6		
11,789.0	90.07	180.37	10,498.3	-205.7	-1,075.9	11.10	9.64	-5.50	23.2	-11.8		
11,803.0	90.20	180.23	10,498.3	-205.8	-1,089.9	1.36	0.93	-1.00	23.2	-12.0		
11,816.0	90.30	180.05	10,498.2	-205.8	-1,102.9	1.58	0.77	-1.38	23.1	-12.1		
11,830.0	90.40	179.87	10,498.2	-205.8	-1,116.9	1.47	0.71	-1.29	23.1	-12.2		
11,843.0	90.45	179.67	10,498.1	-205.8	-1,129.9	1.59	0.38	-1.54	23.0	-12.2		
11,857.0	90.50	179.48	10,497.9	-205.7	-1,143.9	1.40	0.36	-1.36	23.0	-12.2		
11,870.0	90.48	179.29	10,497.8	-205.5	-1,156.9	1.47	-0.15	-1.46	22.9	-12.2		
11,884.0	90.38	179.11	10,497.7	-205.3	-1,170.9	1.47	-0.71	-1.29	22.8	-12.1		
11,898.0	90.34	178.96	10,497.6	-205.1	-1,184.9	1.11	-0.29	-1.07	22.8	-11.9		
11,911.0	90.40	178.82	10,497.6	-204.8	-1,197.9	1.17	0.46	-1.08	22.7	-11.7		
11,925.0	90.51	178.70	10,497.4	-204.5	-1,211.9	1.16	0.79	-0.86	22.6	-11.5		
11,938.0	90.61	178.58	10,497.3	-204.2	-1,224.9	1.20	0.77	-0.92	22.6	-11.3		
11,952.0	90.73	178.47	10,497.2	-203.9	-1,238.9	1.16	0.86	-0.79	22.4	-11.0		
11,965.0	90.87	178.36	10,497.0	-203.5	-1,251.8	1.37	1.08	-0.85	22.3	-10.8		
11,979.0	90.98	178.26	10,496.7	-203.1	-1,265.8	1.06	0.79	-0.71	22.1	-10.4		
11,993.0	90.98	178.15	10,496.5	-202.7	-1,279.8	0.79	0.00	-0.79	21.9	-10.1		
12,006.0	90.94	178.05	10,496.3	-202.2	-1,292.8	0.83	-0.31	-0.77	21.7	-9.8		
12,020.0	90.86	177.95	10,496.1	-201.7	-1,306.8	0.91	-0.57	-0.71	21.5	-9.4		
12,034.0	90.74	177.86	10,495.9	-201.2	-1,320.8	1.07	-0.86	-0.64	21.4	-8.9		
12,048.0	90.56	177.78	10,495.7	-200.7	-1,334.8	1.41	-1.29	-0.57	21.3	-8.5		
12,061.0	90.34	177.73	10,495.6	-200.2	-1,347.8	1.74	-1.69	-0.38	21.2	-8.1		
12,075.0	90.19	177.70	10,495.5	-199.6	-1,361.8	1.09	-1.07	-0.21	21.2	-7.6		
12,089.0	90.12	177.72	10,495.5	-199.1	-1,375.8	0.52	-0.50	0.14	21.2	-7.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
12,102.0	90.06	177.77	10,495.5	-198.6	-1,388.7	0.60	-0.46	0.38	21.2	-6.7		
12,116.0	89.99	177.83	10,495.5	-198.0	-1,402.7	0.66	-0.50	0.43	21.2	-6.3		
12,129.0	89.86	177.90	10,495.5	-197.5	-1,415.7	1.14	-1.00	0.54	21.3	-5.9		
12,143.0	89.71	177.98	10,495.6	-197.0	-1,429.7	1.21	-1.07	0.57	21.4	-5.4		
12,156.0	89.52	178.05	10,495.6	-196.6	-1,442.7	1.56	-1.46	0.54	21.5	-5.1		
12,170.0	89.31	178.11	10,495.8	-196.1	-1,456.7	1.56	-1.50	0.43	21.7	-4.7		
12,184.0	89.14	178.14	10,496.0	-195.7	-1,470.7	1.23	-1.21	0.21	21.9	-4.3		
12,197.0	89.04	178.16	10,496.2	-195.2	-1,483.7	0.78	-0.77	0.15	22.1	-4.0		
12,211.0	89.00	178.17	10,496.4	-194.8	-1,497.7	0.29	-0.29	0.07	22.4	-3.6		
12,224.0	89.04	178.18	10,496.6	-194.4	-1,510.7	0.32	0.31	0.08	22.7	-3.3		
12,238.0	89.28	178.14	10,496.8	-193.9	-1,524.7	1.74	1.71	-0.29	23.0	-3.0		
12,251.0	91.28	177.62	10,496.8	-193.4	-1,537.6	15.90	15.38	-4.00	23.1	-2.6		
12,265.0	91.82	177.67	10,496.4	-192.9	-1,551.6	3.87	3.86	0.36	22.9	-2.1		
12,278.0	92.07	177.66	10,496.0	-192.3	-1,564.6	1.92	1.92	-0.08	22.6	-1.6		
12,292.0	92.15	177.64	10,495.4	-191.8	-1,578.6	0.59	0.57	-0.14	22.2	-1.2		
12,305.0	92.13	177.62	10,495.0	-191.2	-1,591.6	0.22	-0.15	-0.15	21.8	-0.7		
12,319.0	92.06	177.60	10,494.4	-190.7	-1,605.6	0.52	-0.50	-0.14	21.5	-0.2		
12,332.0	91.97	177.59	10,494.0	-190.1	-1,618.5	0.70	-0.69	-0.08	21.2	0.3		
12,346.0	91.87	177.57	10,493.5	-189.5	-1,632.5	0.73	-0.71	-0.14	20.8	0.8		
12,359.0	91.74	177.55	10,493.1	-189.0	-1,645.5	1.01	-1.00	-0.15	20.6	1.2		
12,373.0	91.63	177.53	10,492.7	-188.4	-1,659.5	0.80	-0.79	-0.14	20.3	1.7		
12,386.0	91.56	177.52	10,492.3	-187.8	-1,672.5	0.54	-0.54	-0.08	20.1	2.2		
12,400.0	91.53	177.50	10,492.0	-187.2	-1,686.4	0.26	-0.21	-0.14	19.9	2.7		
12,413.0	91.55	177.49	10,491.6	-186.6	-1,699.4	0.17	0.15	-0.08	19.6	3.2		
12,427.0	91.58	177.47	10,491.2	-186.0	-1,713.4	0.26	0.21	-0.14	19.4	3.7		
12,440.0	91.56	177.45	10,490.9	-185.4	-1,726.4	0.22	-0.15	-0.15	19.2	4.2		
12,454.0	91.51	177.43	10,490.5	-184.8	-1,740.4	0.38	-0.36	-0.14	19.0	4.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
12,468.0	91.44	177.41	10,490.1	-184.2	-1,754.3	0.52	-0.50	-0.14	18.8	5.3		
12,481.0	91.39	177.39	10,489.8	-183.6	-1,767.3	0.41	-0.38	-0.15	18.6	5.8		
12,495.0	91.34	177.36	10,489.5	-182.9	-1,781.3	0.42	-0.36	-0.21	18.4	6.4		
12,508.0	91.27	177.33	10,489.2	-182.3	-1,794.3	0.59	-0.54	-0.23	18.2	6.9		
12,522.0	91.18	177.29	10,488.9	-181.7	-1,808.3	0.70	-0.64	-0.29	18.1	7.4		
12,535.0	91.07	177.24	10,488.6	-181.1	-1,821.3	0.93	-0.85	-0.38	18.0	8.0		
12,549.0	90.96	177.16	10,488.4	-180.4	-1,835.2	0.97	-0.79	-0.57	17.9	8.6		
12,563.0	90.86	177.06	10,488.2	-179.7	-1,849.2	1.01	-0.71	-0.71	17.8	9.2		
12,576.0	90.74	176.93	10,488.0	-179.0	-1,862.2	1.36	-0.92	-1.00	17.7	9.8		
12,590.0	90.63	176.79	10,487.8	-178.2	-1,876.2	1.27	-0.79	-1.00	17.7	10.5		
12,603.0	90.54	176.65	10,487.7	-177.5	-1,889.2	1.28	-0.69	-1.08	17.7	11.1		
12,617.0	90.47	176.50	10,487.6	-176.6	-1,903.1	1.18	-0.50	-1.07	17.8	11.9		
12,630.0	90.42	176.36	10,487.5	-175.8	-1,916.1	1.14	-0.38	-1.08	17.8	12.6		
12,644.0	90.37	176.22	10,487.4	-174.9	-1,930.1	1.06	-0.36	-1.00	17.9	13.4		
12,658.0	90.38	176.09	10,487.3	-174.0	-1,944.0	0.93	0.07	-0.93	17.9	14.2		
12,671.0	90.44	175.97	10,487.2	-173.1	-1,957.0	1.03	0.46	-0.92	18.0	15.1		
12,685.0	90.53	175.86	10,487.1	-172.1	-1,971.0	1.02	0.64	-0.79	18.0	16.0		
12,698.0	90.65	175.77	10,486.9	-171.1	-1,983.9	1.15	0.92	-0.69	18.0	16.8		
12,712.0	90.88	176.06	10,486.7	-170.2	-1,997.9	2.64	1.64	2.07	18.0	17.7		
12,725.0	91.25	177.19	10,486.5	-169.4	-2,010.9	9.14	2.85	8.69	17.9	18.4		
12,739.0	91.61	178.05	10,486.1	-168.8	-2,024.9	6.66	2.57	6.14	17.6	18.9		
12,753.0	91.75	178.09	10,485.7	-168.3	-2,038.8	1.04	1.00	0.29	17.4	19.3		
12,766.0	91.81	178.16	10,485.3	-167.9	-2,051.8	0.71	0.46	0.54	17.1	19.7		
12,780.0	91.82	178.24	10,484.9	-167.5	-2,065.8	0.58	0.07	0.57	16.8	20.0		
12,793.0	91.83	178.31	10,484.5	-167.1	-2,078.8	0.54	0.08	0.54	16.5	20.3		
12,807.0	91.83	178.37	10,484.0	-166.7	-2,092.8	0.43	0.00	0.43	16.2	20.6		
12,820.0	91.55	179.21	10,483.6	-166.4	-2,105.8	6.81	-2.15	6.46	16.0	20.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
12,834.0	91.04	181.18	10,483.3	-166.4	-2,119.8	14.53	-3.64	14.07	15.8	20.7		
12,848.0	90.92	181.12	10,483.1	-166.7	-2,133.8	0.96	-0.86	-0.43	15.7	20.3		
12,861.0	90.79	181.03	10,482.9	-167.0	-2,146.8	1.22	-1.00	-0.69	15.7	20.0		
12,875.0	90.68	180.93	10,482.7	-167.2	-2,160.8	1.06	-0.79	-0.71	15.6	19.7		
12,888.0	90.61	180.81	10,482.6	-167.4	-2,173.8	1.07	-0.54	-0.92	15.6	19.4		
12,902.0	90.56	180.68	10,482.4	-167.6	-2,187.8	0.99	-0.36	-0.93	15.6	19.1		
12,915.0	90.57	180.55	10,482.3	-167.7	-2,200.8	1.00	0.08	-1.00	15.6	18.9		
12,929.0	90.60	180.41	10,482.2	-167.8	-2,214.8	1.02	0.21	-1.00	15.7	18.7		
12,943.0	90.56	180.26	10,482.0	-167.9	-2,228.8	1.11	-0.29	-1.07	15.7	18.5		
12,956.0	90.44	180.12	10,481.9	-168.0	-2,241.8	1.42	-0.92	-1.08	15.7	18.4		
12,970.0	90.23	179.97	10,481.8	-168.0	-2,255.8	1.84	-1.50	-1.07	15.8	18.3		
12,984.0	90.00	179.82	10,481.8	-168.0	-2,269.8	1.96	-1.64	-1.07	15.9	18.2		
12,998.0	89.78	179.68	10,481.8	-167.9	-2,283.8	1.86	-1.57	-1.00	16.0	18.2		
13,011.0	89.57	179.54	10,481.9	-167.8	-2,296.8	1.94	-1.62	-1.08	16.3	18.2		
13,025.0	89.32	179.41	10,482.0	-167.7	-2,310.8	2.01	-1.79	-0.93	16.5	18.2		
13,038.0	89.12	179.29	10,482.2	-167.5	-2,323.8	1.79	-1.54	-0.92	16.9	18.3		
13,052.0	89.00	179.18	10,482.4	-167.3	-2,337.8	1.16	-0.86	-0.79	17.2	18.4		
13,065.0	88.95	179.08	10,482.7	-167.1	-2,350.8	0.86	-0.38	-0.77	17.6	18.5		
13,079.0	89.00	178.99	10,482.9	-166.9	-2,364.7	0.74	0.36	-0.64	18.0	18.7		
13,092.0	89.16	178.96	10,483.1	-166.7	-2,377.7	1.25	1.23	-0.23	18.4	18.8		
13,106.0	89.79	179.75	10,483.3	-166.5	-2,391.7	7.22	4.50	5.64	18.6	18.9		
13,119.0	90.39	180.28	10,483.2	-166.5	-2,404.7	6.16	4.62	4.08	18.8	18.8		
13,133.0	90.64	180.27	10,483.1	-166.6	-2,418.7	1.79	1.79	-0.07	18.8	18.6		
13,146.0	90.82	180.27	10,482.9	-166.7	-2,431.7	1.38	1.38	0.00	18.7	18.5		
13,160.0	90.95	180.29	10,482.7	-166.7	-2,445.7	0.94	0.93	0.14	18.7	18.3		
13,173.0	91.02	180.30	10,482.5	-166.8	-2,458.7	0.54	0.54	0.08	18.6	18.2		
13,187.0	91.09	180.31	10,482.2	-166.9	-2,472.7	0.51	0.50	0.07	18.5	18.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
13,200.0	91.20	180.31	10,482.0	-166.9	-2,485.7	0.85	0.85	0.00	18.4	17.9		
13,214.0	91.32	180.29	10,481.7	-167.0	-2,499.7	0.87	0.86	-0.14	18.2	17.7		
13,228.0	91.35	180.24	10,481.3	-167.1	-2,513.7	0.42	0.21	-0.36	18.0	17.5		
13,241.0	91.31	180.16	10,481.0	-167.1	-2,526.7	0.69	-0.31	-0.62	17.9	17.4		
13,255.0	91.18	180.08	10,480.7	-167.1	-2,540.7	1.09	-0.93	-0.57	17.7	17.3		
13,268.0	91.02	179.99	10,480.5	-167.2	-2,553.7	1.41	-1.23	-0.69	17.6	17.2		
13,282.0	90.88	179.90	10,480.3	-167.1	-2,567.7	1.19	-1.00	-0.64	17.5	17.1		
13,295.0	90.79	179.81	10,480.1	-167.1	-2,580.7	0.98	-0.69	-0.69	17.5	17.1		
13,309.0	90.74	179.73	10,479.9	-167.1	-2,594.7	0.67	-0.36	-0.57	17.4	17.0		
13,323.0	90.71	179.66	10,479.7	-167.0	-2,608.7	0.54	-0.21	-0.50	17.4	17.0		
13,336.0	90.69	179.60	10,479.5	-166.9	-2,621.7	0.49	-0.15	-0.46	17.4	17.0		
13,350.0	90.62	179.54	10,479.4	-166.8	-2,635.7	0.66	-0.50	-0.43	17.4	17.0		
13,363.0	90.51	179.48	10,479.3	-166.7	-2,648.7	0.96	-0.85	-0.46	17.4	17.1		
13,377.0	90.43	179.41	10,479.1	-166.5	-2,662.7	0.76	-0.57	-0.50	17.4	17.1		
13,390.0	90.43	179.33	10,479.0	-166.4	-2,675.7	0.62	0.00	-0.62	17.4	17.2		
13,404.0	90.49	179.22	10,478.9	-166.2	-2,689.7	0.89	0.43	-0.79	17.5	17.2		
13,418.0	90.60	179.08	10,478.8	-166.0	-2,703.7	1.27	0.79	-1.00	17.5	17.4		
13,431.0	90.73	178.90	10,478.7	-165.8	-2,716.7	1.71	1.00	-1.38	17.5	17.5		
13,445.0	90.83	178.72	10,478.5	-165.5	-2,730.7	1.47	0.71	-1.29	17.4	17.7		
13,458.0	90.91	178.53	10,478.3	-165.2	-2,743.7	1.59	0.62	-1.46	17.4	17.9		
13,472.0	91.00	178.35	10,478.0	-164.8	-2,757.7	1.44	0.64	-1.29	17.3	18.2		
13,485.0	91.07	178.17	10,477.8	-164.4	-2,770.7	1.49	0.54	-1.38	17.2	18.5		
13,499.0	91.13	178.02	10,477.5	-163.9	-2,784.7	1.15	0.43	-1.07	17.1	18.9		
13,513.0	91.19	177.91	10,477.2	-163.4	-2,798.6	0.89	0.43	-0.79	17.0	19.3		
13,526.0	91.21	177.82	10,477.0	-163.0	-2,811.6	0.71	0.15	-0.69	16.8	19.7		
13,540.0	91.19	177.76	10,476.7	-162.4	-2,825.6	0.45	-0.14	-0.43	16.7	20.2		
13,554.0	91.22	177.73	10,476.4	-161.9	-2,839.6	0.30	0.21	-0.21	16.5	20.6		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
13,568.0	91.32	177.73	10,476.1	-161.3	-2,853.6	0.71	0.71	0.00	16.4	21.1		
13,581.0	91.15	177.99	10,475.8	-160.8	-2,866.6	2.39	-1.31	2.00	16.2	21.5		
13,595.0	90.84	178.37	10,475.5	-160.4	-2,880.6	3.50	-2.21	2.71	16.1	21.9		
13,609.0	90.85	178.56	10,475.3	-160.0	-2,894.6	1.36	0.07	1.36	16.1	22.1		
13,622.0	90.90	178.79	10,475.1	-159.7	-2,907.6	1.81	0.38	1.77	16.0	22.4		
13,636.0	90.97	179.03	10,474.9	-159.4	-2,921.6	1.79	0.50	1.71	15.9	22.5		
13,649.0	91.10	179.25	10,474.7	-159.2	-2,934.6	1.97	1.00	1.69	15.8	22.6		
13,663.0	91.12	179.58	10,474.4	-159.1	-2,948.6	2.36	0.14	2.36	15.7	22.7		
13,676.0	90.03	180.79	10,474.3	-159.1	-2,961.5	12.53	-8.38	9.31	15.7	22.6		
13,690.0	90.05	182.37	10,474.3	-159.5	-2,975.5	11.29	0.14	11.29	15.9	22.1		
13,704.0	90.26	182.29	10,474.2	-160.1	-2,989.5	1.61	1.50	-0.57	16.0	21.4		
13,717.0	90.46	182.15	10,474.1	-160.6	-3,002.5	1.88	1.54	-1.08	16.0	20.9		
13,731.0	90.65	181.99	10,474.0	-161.1	-3,016.5	1.77	1.36	-1.14	16.0	20.3		
13,744.0	90.78	181.80	10,473.9	-161.5	-3,029.5	1.77	1.00	-1.46	16.0	19.7		
13,758.0	90.88	181.59	10,473.6	-162.0	-3,043.5	1.66	0.71	-1.50	16.0	19.2		
13,771.0	90.98	181.38	10,473.4	-162.3	-3,056.5	1.79	0.77	-1.62	15.9	18.8		
13,785.0	91.04	181.17	10,473.2	-162.6	-3,070.5	1.56	0.43	-1.50	15.8	18.4		
13,799.0	91.10	180.97	10,472.9	-162.9	-3,084.5	1.49	0.43	-1.43	15.7	18.1		
13,812.0	91.18	180.77	10,472.7	-163.1	-3,097.5	1.66	0.62	-1.54	15.5	17.8		
13,826.0	91.27	180.58	10,472.4	-163.2	-3,111.5	1.50	0.64	-1.36	15.4	17.5		
13,839.0	91.34	180.41	10,472.1	-163.3	-3,124.5	1.41	0.54	-1.31	15.2	17.3		
13,853.0	91.42	180.25	10,471.7	-163.4	-3,138.5	1.28	0.57	-1.14	15.1	17.2		
13,866.0	91.55	180.12	10,471.4	-163.5	-3,151.5	1.41	1.00	-1.00	14.9	17.0		
13,880.0	91.67	180.03	10,471.0	-163.5	-3,165.5	1.07	0.86	-0.64	14.6	16.9		
13,894.0	91.73	180.00	10,470.6	-163.5	-3,179.4	0.48	0.43	-0.21	14.3	16.8		
13,907.0	91.75	180.01	10,470.2	-163.5	-3,192.4	0.17	0.15	0.08	14.1	16.8		
13,921.0	91.77	180.04	10,469.8	-163.5	-3,206.4	0.26	0.14	0.21	13.8	16.7		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey													
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)			
13,934.0	91.81	180.08	10,469.4	-163.5	-3,219.4	0.44	0.31	0.31	13.5	16.6			
13,948.0	91.89	180.12	10,468.9	-163.5	-3,233.4	0.64	0.57	0.29	13.2	16.4			
13,961.0	90.62	181.34	10,468.6	-163.7	-3,246.4	13.54	-9.77	9.38	13.1	16.2			
13,975.0	89.67	181.97	10,468.6	-164.1	-3,260.4	8.14	-6.79	4.50	13.2	15.7			
13,989.0	89.53	182.00	10,468.7	-164.6	-3,274.4	1.02	-1.00	0.21	13.5	15.1			
14,002.0	89.50	182.03	10,468.8	-165.0	-3,287.4	0.33	-0.23	0.23	13.7	14.6			
14,016.0	89.60	182.05	10,468.9	-165.5	-3,301.4	0.73	0.71	0.14	14.0	14.0			
14,030.0	89.78	182.07	10,469.0	-166.0	-3,315.4	1.29	1.29	0.14	14.2	13.4			
14,044.0	89.99	182.07	10,469.0	-166.5	-3,329.4	1.50	1.50	0.00	14.4	12.8			
14,057.0	90.17	182.07	10,469.0	-167.0	-3,342.4	1.38	1.38	0.00	14.5	12.3			
14,071.0	90.30	182.05	10,468.9	-167.5	-3,356.3	0.94	0.93	-0.14	14.6	11.7			
14,085.0	90.40	181.99	10,468.9	-168.0	-3,370.3	0.83	0.71	-0.43	14.6	11.1			
14,098.0	90.48	181.92	10,468.8	-168.5	-3,383.3	0.82	0.62	-0.54	14.7	10.6			
14,112.0	90.54	181.83	10,468.6	-168.9	-3,397.3	0.77	0.43	-0.64	14.7	10.0			
14,125.0	90.53	181.74	10,468.5	-169.3	-3,410.3	0.70	-0.08	-0.69	14.7	9.5			
14,139.0	90.47	181.65	10,468.4	-169.7	-3,424.3	0.77	-0.43	-0.64	14.7	9.0			
14,152.0	90.35	181.56	10,468.3	-170.1	-3,437.3	1.15	-0.92	-0.69	14.8	8.6			
14,166.0	90.24	181.48	10,468.2	-170.5	-3,451.3	0.97	-0.79	-0.57	14.9	8.1			
14,180.0	90.18	181.42	10,468.2	-170.8	-3,465.3	0.61	-0.43	-0.43	15.0	7.7			
14,193.0	90.17	181.36	10,468.1	-171.1	-3,478.3	0.47	-0.08	-0.46	15.1	7.3			
14,207.0	90.18	181.31	10,468.1	-171.5	-3,492.3	0.36	0.07	-0.36	15.2	6.8			
14,220.0	90.20	181.25	10,468.0	-171.8	-3,505.3	0.49	0.15	-0.46	15.3	6.5			
14,234.0	90.23	181.19	10,468.0	-172.1	-3,519.3	0.48	0.21	-0.43	15.3	6.1			
14,247.0	90.28	181.11	10,467.9	-172.3	-3,532.3	0.73	0.38	-0.62	15.4	5.7			
14,261.0	90.34	181.01	10,467.9	-172.6	-3,546.3	0.83	0.43	-0.71	15.5	5.4			
14,275.0	90.41	180.88	10,467.8	-172.8	-3,560.3	1.05	0.50	-0.93	15.6	5.1			
14,288.0	90.46	180.72	10,467.7	-173.0	-3,573.3	1.29	0.38	-1.23	15.6	4.8			



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
14,302.0	90.47	180.55	10,467.6	-173.1	-3,587.3	1.22	0.07	-1.21	15.6	4.6		
14,315.0	90.48	180.37	10,467.4	-173.2	-3,600.3	1.39	0.08	-1.38	15.7	4.4		
14,329.0	90.49	180.20	10,467.3	-173.3	-3,614.3	1.22	0.07	-1.21	15.7	4.2		
14,342.0	90.51	180.05	10,467.2	-173.3	-3,627.3	1.16	0.15	-1.15	15.7	4.1		
14,356.0	90.54	179.93	10,467.1	-173.3	-3,641.3	0.88	0.21	-0.86	15.7	4.0		
14,370.0	90.58	179.85	10,466.9	-173.3	-3,655.3	0.64	0.29	-0.57	15.8	3.9		
14,383.0	90.64	179.79	10,466.8	-173.3	-3,668.3	0.65	0.46	-0.46	15.8	3.9		
14,397.0	90.72	179.76	10,466.6	-173.2	-3,682.3	0.61	0.57	-0.21	15.7	3.9		
14,411.0	90.78	179.72	10,466.5	-173.2	-3,696.3	0.52	0.43	-0.29	15.7	3.8		
14,425.0	90.78	179.69	10,466.3	-173.1	-3,710.3	0.21	0.00	-0.21	15.7	3.8		
14,438.0	90.73	179.64	10,466.1	-173.0	-3,723.3	0.54	-0.38	-0.38	15.6	3.8		
14,452.0	90.65	179.57	10,465.9	-172.9	-3,737.3	0.76	-0.57	-0.50	15.6	3.8		
14,465.0	90.58	179.46	10,465.8	-172.8	-3,750.3	1.00	-0.54	-0.85	15.6	3.8		
14,479.0	90.54	179.34	10,465.7	-172.7	-3,764.3	0.90	-0.29	-0.86	15.6	3.9		
14,492.0	90.50	179.19	10,465.5	-172.5	-3,777.3	1.19	-0.31	-1.15	15.6	4.0		
14,506.0	90.47	179.03	10,465.4	-172.3	-3,791.3	1.16	-0.21	-1.14	15.7	4.1		
14,519.0	90.48	178.87	10,465.3	-172.0	-3,804.2	1.23	0.08	-1.23	15.7	4.3		
14,533.0	90.52	178.70	10,465.2	-171.7	-3,818.2	1.25	0.29	-1.21	15.7	4.5		
14,546.0	90.50	178.53	10,465.1	-171.4	-3,831.2	1.32	-0.15	-1.31	15.7	4.7		
14,560.0	90.47	178.35	10,465.0	-171.0	-3,845.2	1.30	-0.21	-1.29	15.8	5.0		
14,573.0	90.50	178.17	10,464.8	-170.6	-3,858.2	1.40	0.23	-1.38	15.8	5.3		
14,587.0	90.57	178.00	10,464.7	-170.2	-3,872.2	1.31	0.50	-1.21	15.8	5.7		
14,600.0	90.65	177.84	10,464.6	-169.7	-3,885.2	1.38	0.62	-1.23	15.8	6.1		
14,614.0	90.73	177.69	10,464.4	-169.2	-3,899.2	1.21	0.57	-1.07	15.8	6.5		
14,627.0	90.81	177.57	10,464.2	-168.6	-3,912.2	1.11	0.62	-0.92	15.8	7.0		
14,641.0	90.88	177.49	10,464.0	-168.0	-3,926.2	0.76	0.50	-0.57	15.7	7.5		
14,655.0	90.90	177.47	10,463.8	-167.4	-3,940.2	0.20	0.14	-0.14	15.6	8.0		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
14,668.0	90.90	177.49	10,463.6	-166.8	-3,953.1	0.15	0.00	0.15	15.6	8.5		
14,682.0	90.91	177.53	10,463.4	-166.2	-3,967.1	0.29	0.07	0.29	15.5	9.0		
14,696.0	90.93	177.57	10,463.2	-165.6	-3,981.1	0.32	0.14	0.29	15.4	9.5		
14,710.0	90.70	178.38	10,463.0	-165.1	-3,995.1	6.01	-1.64	5.79	15.4	9.9		
14,723.0	90.21	179.53	10,462.9	-164.9	-4,008.1	9.62	-3.77	8.85	15.4	10.1		
14,737.0	90.02	179.53	10,462.8	-164.8	-4,022.1	1.36	-1.36	0.00	15.5	10.1		
14,751.0	89.88	179.50	10,462.8	-164.7	-4,036.1	1.02	-1.00	-0.21	15.7	10.1		
14,764.0	89.75	179.44	10,462.9	-164.5	-4,049.1	1.10	-1.00	-0.46	15.9	10.2		
14,778.0	89.59	179.37	10,463.0	-164.4	-4,063.1	1.25	-1.14	-0.50	16.1	10.2		
14,791.0	89.39	179.28	10,463.1	-164.2	-4,076.1	1.69	-1.54	-0.69	16.4	10.3		
14,805.0	89.17	179.19	10,463.2	-164.1	-4,090.1	1.70	-1.57	-0.64	16.7	10.4		
14,818.0	88.95	179.10	10,463.5	-163.9	-4,103.1	1.83	-1.69	-0.69	17.0	10.5		
14,832.0	88.80	178.99	10,463.7	-163.6	-4,117.1	1.33	-1.07	-0.79	17.5	10.7		
14,846.0	88.65	178.88	10,464.0	-163.4	-4,131.1	1.33	-1.07	-0.79	17.9	10.8		
14,859.0	88.49	178.76	10,464.4	-163.1	-4,144.1	1.54	-1.23	-0.92	18.4	11.0		
14,873.0	88.31	178.64	10,464.8	-162.8	-4,158.1	1.55	-1.29	-0.86	18.9	11.2		
14,886.0	88.10	178.53	10,465.2	-162.5	-4,171.1	1.82	-1.62	-0.85	19.5	11.5		
14,900.0	87.94	178.45	10,465.7	-162.1	-4,185.0	1.28	-1.14	-0.57	20.1	11.8		
14,913.0	87.83	178.38	10,466.1	-161.7	-4,198.0	1.00	-0.85	-0.54	20.7	12.0		
14,927.0	87.71	178.37	10,466.7	-161.3	-4,212.0	0.86	-0.86	-0.07	21.4	12.3		
14,941.0	87.57	178.42	10,467.3	-160.9	-4,226.0	1.06	-1.00	0.36	22.1	12.7		
14,954.0	87.45	178.50	10,467.8	-160.6	-4,239.0	1.11	-0.92	0.62	22.8	12.9		
14,968.0	87.33	178.58	10,468.5	-160.2	-4,253.0	1.03	-0.86	0.57	23.6	13.2		
14,981.0	87.29	178.66	10,469.1	-159.9	-4,265.9	0.69	-0.31	0.62	24.4	13.4		
14,995.0	88.65	178.70	10,469.6	-159.6	-4,279.9	9.72	9.71	0.29	25.0	13.6		
15,008.0	90.03	178.73	10,469.7	-159.3	-4,292.9	10.62	10.62	0.23	25.3	13.8		
15,022.0	90.41	178.71	10,469.7	-159.0	-4,306.9	2.72	2.71	-0.14	25.4	14.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
15,036.0	90.65	178.60	10,469.5	-158.7	-4,320.9	1.89	1.71	-0.79	25.4	14.3		
15,049.0	90.80	178.46	10,469.4	-158.3	-4,333.9	1.58	1.15	-1.08	25.4	14.5		
15,063.0	90.86	178.29	10,469.2	-157.9	-4,347.9	1.29	0.43	-1.21	25.3	14.9		
15,077.0	90.84	178.11	10,469.0	-157.5	-4,361.9	1.29	-0.14	-1.29	25.2	15.2		
15,091.0	90.78	177.95	10,468.8	-157.0	-4,375.9	1.22	-0.43	-1.14	25.1	15.6		
15,104.0	90.69	177.80	10,468.6	-156.5	-4,388.9	1.35	-0.69	-1.15	25.0	16.0		
15,118.0	90.58	177.70	10,468.4	-156.0	-4,402.9	1.06	-0.79	-0.71	24.9	16.4		
15,132.0	90.54	177.66	10,468.3	-155.4	-4,416.8	0.40	-0.29	-0.29	24.9	16.9		
15,145.0	90.49	177.66	10,468.2	-154.9	-4,429.8	0.38	-0.38	0.00	24.8	17.4		
15,159.0	90.45	177.69	10,468.1	-154.3	-4,443.8	0.36	-0.29	0.21	24.8	17.8		
15,172.0	90.44	177.74	10,468.0	-153.8	-4,456.8	0.39	-0.08	0.38	24.8	18.3		
15,186.0	90.52	177.79	10,467.8	-153.3	-4,470.8	0.67	0.57	0.36	24.7	18.7		
15,199.0	90.80	178.71	10,467.7	-152.9	-4,483.8	7.40	2.15	7.08	24.7	19.1		
15,213.0	91.31	180.34	10,467.4	-152.7	-4,497.8	12.20	3.64	11.64	24.5	19.1		
15,227.0	91.59	180.64	10,467.1	-152.9	-4,511.8	2.93	2.00	2.14	24.2	18.9		
15,240.0	91.73	180.73	10,466.7	-153.0	-4,524.8	1.28	1.08	0.69	23.9	18.6		
15,254.0	91.79	180.83	10,466.3	-153.2	-4,538.8	0.83	0.43	0.71	23.6	18.4		
15,267.0	91.85	180.91	10,465.9	-153.4	-4,551.8	0.77	0.46	0.62	23.2	18.1		
15,281.0	91.96	180.99	10,465.4	-153.6	-4,565.8	0.97	0.79	0.57	22.9	17.8		
15,294.0	92.13	181.04	10,464.9	-153.9	-4,578.7	1.36	1.31	0.38	22.5	17.5		
15,308.0	92.36	181.06	10,464.4	-154.1	-4,592.7	1.65	1.64	0.14	22.0	17.1		
15,322.0	92.55	181.01	10,463.8	-154.4	-4,606.7	1.40	1.36	-0.36	21.5	16.8		
15,335.0	92.62	180.92	10,463.2	-154.6	-4,619.7	0.88	0.54	-0.69	21.0	16.5		
15,349.0	92.64	180.83	10,462.6	-154.8	-4,633.7	0.66	0.14	-0.64	20.4	16.2		
15,362.0	92.59	180.76	10,462.0	-155.0	-4,646.7	0.66	-0.38	-0.54	19.9	15.9		
15,376.0	90.98	181.08	10,461.5	-155.2	-4,660.7	11.72	-11.50	2.29	19.6	15.6		
15,389.0	91.13	181.02	10,461.3	-155.5	-4,673.7	1.24	1.15	-0.46	19.4	15.3		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey													
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)			
15,403.0	91.30	180.99	10,461.0	-155.7	-4,687.7	1.23	1.21	-0.21	19.2	14.9			
15,417.0	91.51	181.04	10,460.7	-155.9	-4,701.6	1.54	1.50	0.36	19.0	14.6			
15,430.0	91.57	181.12	10,460.3	-156.2	-4,714.6	0.77	0.46	0.62	18.7	14.3			
15,444.0	91.54	181.22	10,459.9	-156.5	-4,728.6	0.75	-0.21	0.71	18.4	13.9			
15,458.0	91.47	181.33	10,459.6	-156.8	-4,742.6	0.93	-0.50	0.79	18.1	13.5			
15,472.0	91.41	181.43	10,459.2	-157.1	-4,756.6	0.83	-0.43	0.71	17.8	13.0			
15,485.0	91.39	181.52	10,458.9	-157.5	-4,769.6	0.71	-0.15	0.69	17.6	12.6			
15,499.0	91.39	181.57	10,458.5	-157.8	-4,783.6	0.36	0.00	0.36	17.4	12.2			
15,513.0	91.38	181.56	10,458.2	-158.2	-4,797.6	0.10	-0.07	-0.07	17.1	11.7			
15,526.0	91.29	181.51	10,457.9	-158.6	-4,810.6	0.79	-0.69	-0.38	16.9	11.3			
15,540.0	91.21	181.44	10,457.6	-158.9	-4,824.6	0.76	-0.57	-0.50	16.7	10.8			
15,553.0	91.11	181.35	10,457.3	-159.2	-4,837.6	1.03	-0.77	-0.69	16.5	10.4			
15,567.0	91.06	181.24	10,457.1	-159.6	-4,851.6	0.86	-0.36	-0.79	16.3	10.0			
15,580.0	91.02	181.12	10,456.8	-159.8	-4,864.6	0.97	-0.31	-0.92	16.1	9.6			
15,594.0	90.99	181.00	10,456.6	-160.1	-4,878.6	0.88	-0.21	-0.86	16.0	9.3			
15,608.0	90.96	180.86	10,456.4	-160.3	-4,892.5	1.02	-0.21	-1.00	15.8	9.0			
15,621.0	90.92	180.71	10,456.1	-160.5	-4,905.5	1.19	-0.31	-1.15	15.7	8.7			
15,635.0	90.85	180.56	10,455.9	-160.7	-4,919.5	1.18	-0.50	-1.07	15.6	8.5			
15,648.0	90.80	180.40	10,455.7	-160.8	-4,932.5	1.29	-0.38	-1.23	15.5	8.3			
15,662.0	90.72	180.23	10,455.6	-160.8	-4,946.5	1.34	-0.57	-1.21	15.4	8.1			
15,675.0	90.66	180.04	10,455.4	-160.9	-4,959.5	1.53	-0.46	-1.46	15.3	8.0			
15,689.0	90.58	179.83	10,455.2	-160.9	-4,973.5	1.61	-0.57	-1.50	15.2	7.9			
15,703.0	90.48	179.60	10,455.1	-160.8	-4,987.5	1.79	-0.71	-1.64	15.2	7.9			
15,716.0	90.39	179.34	10,455.0	-160.7	-5,000.5	2.12	-0.69	-2.00	15.2	7.9			
15,730.0	90.28	179.08	10,454.9	-160.5	-5,014.5	2.02	-0.79	-1.86	15.2	8.0			
15,743.0	90.14	178.82	10,454.9	-160.2	-5,027.5	2.27	-1.08	-2.00	15.2	8.2			
15,757.0	89.96	178.57	10,454.9	-159.9	-5,041.5	2.20	-1.29	-1.79	15.3	8.4			



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
15,770.0	89.71	178.34	10,454.9	-159.6	-5,054.5	2.61	-1.92	-1.77	15.4	8.7		
15,784.0	89.38	178.13	10,455.0	-159.1	-5,068.5	2.79	-2.36	-1.50	15.6	9.0		
15,798.0	89.02	177.97	10,455.2	-158.7	-5,082.5	2.81	-2.57	-1.14	15.9	9.4		
15,811.0	88.63	177.84	10,455.5	-158.2	-5,095.5	3.16	-3.00	-1.00	16.2	9.8		
15,825.0	88.32	177.74	10,455.9	-157.6	-5,109.5	2.33	-2.21	-0.71	16.7	10.3		
15,838.0	88.12	177.65	10,456.3	-157.1	-5,122.5	1.69	-1.54	-0.69	17.1	10.7		
15,852.0	88.00	177.61	10,456.7	-156.5	-5,136.4	0.90	-0.86	-0.29	17.7	11.2		
15,865.0	89.52	178.00	10,457.0	-156.0	-5,149.4	12.07	11.69	3.00	18.1	11.6		
15,879.0	90.50	179.43	10,457.0	-155.7	-5,163.4	12.38	7.00	10.21	18.2	11.8		
15,893.0	90.63	179.42	10,456.9	-155.6	-5,177.4	0.93	0.93	-0.07	18.1	11.9		
15,906.0	90.76	179.44	10,456.7	-155.5	-5,190.4	1.01	1.00	0.15	18.0	11.9		
15,920.0	90.88	179.46	10,456.5	-155.3	-5,204.4	0.87	0.86	0.14	17.9	12.0		
15,933.0	90.95	179.47	10,456.3	-155.2	-5,217.4	0.54	0.54	0.08	17.8	12.0		
15,947.0	90.93	179.45	10,456.1	-155.1	-5,231.4	0.20	-0.14	-0.14	17.6	12.0		
15,960.0	90.84	179.38	10,455.9	-154.9	-5,244.4	0.88	-0.69	-0.54	17.5	12.1		
15,974.0	90.75	179.25	10,455.7	-154.8	-5,258.4	1.13	-0.64	-0.93	17.4	12.2		
15,988.0	90.67	179.00	10,455.5	-154.6	-5,272.4	1.87	-0.57	-1.79	17.3	12.3		
16,001.0	90.55	178.68	10,455.4	-154.3	-5,285.4	2.63	-0.92	-2.46	17.3	12.5		
16,015.0	90.37	178.33	10,455.3	-153.9	-5,299.4	2.81	-1.29	-2.50	17.2	12.7		
16,028.0	90.11	177.96	10,455.2	-153.5	-5,312.4	3.48	-2.00	-2.85	17.3	13.1		
16,042.0	89.73	177.60	10,455.2	-153.0	-5,326.4	3.74	-2.71	-2.57	17.4	13.5		
16,055.0	89.32	177.28	10,455.3	-152.4	-5,339.4	4.00	-3.15	-2.46	17.6	14.0		
16,069.0	88.97	177.01	10,455.5	-151.7	-5,353.3	3.16	-2.50	-1.93	17.9	14.6		
16,083.0	88.80	176.85	10,455.8	-150.9	-5,367.3	1.67	-1.21	-1.14	18.2	15.3		
16,096.0	88.78	176.74	10,456.1	-150.2	-5,380.3	0.86	-0.15	-0.85	18.6	15.9		
16,110.0	88.85	176.67	10,456.4	-149.4	-5,394.3	0.71	0.50	-0.50	18.9	16.7		
16,123.0	88.89	176.58	10,456.6	-148.6	-5,407.3	0.76	0.31	-0.69	19.3	17.3		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
16,137.0	89.62	177.36	10,456.8	-147.9	-5,421.2	7.63	5.21	5.57	19.6	18.0		
16,150.0	91.04	179.50	10,456.7	-147.5	-5,434.2	19.76	10.92	16.46	19.5	18.3		
16,164.0	92.06	181.96	10,456.4	-147.7	-5,448.2	19.02	7.29	17.57	19.2	18.0		
16,178.0	92.13	182.25	10,455.9	-148.2	-5,462.2	2.13	0.50	2.07	18.8	17.4		
16,191.0	91.98	181.90	10,455.4	-148.7	-5,475.2	2.93	-1.15	-2.69	18.4	16.9		
16,205.0	91.73	181.51	10,454.9	-149.1	-5,489.2	3.31	-1.79	-2.79	18.1	16.3		
16,218.0	91.48	181.12	10,454.6	-149.4	-5,502.2	3.56	-1.92	-3.00	17.8	16.0		
16,232.0	91.29	180.73	10,454.2	-149.6	-5,516.2	3.10	-1.36	-2.79	17.5	15.6		
16,245.0	91.07	180.36	10,454.0	-149.8	-5,529.1	3.31	-1.69	-2.85	17.4	15.4		
16,259.0	90.82	180.04	10,453.7	-149.8	-5,543.1	2.90	-1.79	-2.29	17.2	15.3		
16,273.0	90.55	179.78	10,453.6	-149.8	-5,557.1	2.68	-1.93	-1.86	17.1	15.2		
16,286.0	90.32	179.57	10,453.5	-149.7	-5,570.1	2.40	-1.77	-1.62	17.1	15.2		
16,300.0	90.12	179.39	10,453.4	-149.6	-5,584.1	1.92	-1.43	-1.29	17.1	15.3		
16,313.0	90.01	179.24	10,453.4	-149.4	-5,597.1	1.43	-0.85	-1.15	17.2	15.3		
16,327.0	89.91	179.10	10,453.4	-149.2	-5,611.1	1.23	-0.71	-1.00	17.3	15.4		
16,340.0	89.75	178.99	10,453.4	-149.0	-5,624.1	1.49	-1.23	-0.85	17.4	15.6		
16,354.0	89.62	178.89	10,453.5	-148.8	-5,638.1	1.17	-0.93	-0.71	17.6	15.7		
16,368.0	89.58	178.82	10,453.6	-148.5	-5,652.1	0.58	-0.29	-0.50	17.8	15.9		
16,381.0	89.60	178.77	10,453.7	-148.2	-5,665.1	0.41	0.15	-0.38	17.9	16.1		
16,395.0	89.66	178.71	10,453.8	-147.9	-5,679.1	0.61	0.43	-0.43	18.1	16.3		
16,409.0	89.72	178.65	10,453.9	-147.6	-5,693.1	0.61	0.43	-0.43	18.3	16.6		
16,423.0	90.60	179.67	10,453.8	-147.4	-5,707.1	9.62	6.29	7.29	18.3	16.7		
16,436.0	91.41	181.74	10,453.6	-147.5	-5,720.1	17.10	6.23	15.92	18.2	16.4		
16,450.0	91.47	181.60	10,453.3	-147.9	-5,734.1	1.09	0.43	-1.00	17.9	15.9		
16,464.0	91.51	181.40	10,452.9	-148.3	-5,748.1	1.46	0.29	-1.43	17.6	15.5		
16,477.0	91.56	181.17	10,452.5	-148.6	-5,761.1	1.81	0.38	-1.77	17.4	15.1		
16,491.0	91.63	180.93	10,452.2	-148.9	-5,775.1	1.79	0.50	-1.71	17.1	14.8		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
16,504.0	91.75	180.69	10,451.8	-149.0	-5,788.1	2.06	0.92	-1.85	16.8	14.5		
16,518.0	91.94	180.45	10,451.3	-149.2	-5,802.1	2.19	1.36	-1.71	16.4	14.3		
16,531.0	92.08	180.23	10,450.9	-149.3	-5,815.1	2.01	1.08	-1.69	16.0	14.1		
16,545.0	92.20	180.05	10,450.3	-149.3	-5,829.1	1.54	0.86	-1.29	15.6	14.0		
16,559.0	92.27	179.93	10,449.8	-149.3	-5,843.0	0.99	0.50	-0.86	15.1	13.9		
16,572.0	92.30	179.84	10,449.3	-149.3	-5,856.0	0.73	0.23	-0.69	14.7	13.8		
16,586.0	92.25	179.78	10,448.7	-149.2	-5,870.0	0.56	-0.36	-0.43	14.2	13.8		
16,600.0	92.09	179.75	10,448.2	-149.2	-5,884.0	1.16	-1.14	-0.21	13.8	13.8		
16,614.0	91.92	179.72	10,447.7	-149.1	-5,898.0	1.23	-1.21	-0.21	13.4	13.7		
16,627.0	91.76	179.70	10,447.3	-149.0	-5,911.0	1.24	-1.23	-0.15	13.0	13.7		
16,641.0	91.59	179.69	10,446.9	-149.0	-5,925.0	1.22	-1.21	-0.07	12.7	13.7		
16,655.0	91.28	179.67	10,446.5	-148.9	-5,939.0	2.22	-2.21	-0.14	12.4	13.7		
16,668.0	90.96	179.66	10,446.3	-148.8	-5,952.0	2.46	-2.46	-0.08	12.3	13.7		
16,682.0	90.66	179.66	10,446.1	-148.7	-5,966.0	2.14	-2.14	0.00	12.2	13.7		
16,695.0	90.56	179.66	10,445.9	-148.6	-5,979.0	0.77	-0.77	0.00	12.1	13.7		
16,709.0	90.56	179.69	10,445.8	-148.6	-5,993.0	0.21	0.00	0.21	12.0	13.7		
16,722.0	90.57	179.73	10,445.7	-148.5	-6,006.0	0.32	0.08	0.31	12.0	13.6		
16,736.0	89.75	180.92	10,445.6	-148.6	-6,020.0	10.32	-5.86	8.50	12.0	13.5		
16,750.0	89.69	181.15	10,445.7	-148.8	-6,034.0	1.70	-0.43	1.64	12.2	13.1		
16,763.0	89.68	181.31	10,445.8	-149.1	-6,047.0	1.23	-0.08	1.23	12.4	12.8		
16,777.0	89.61	181.48	10,445.9	-149.4	-6,061.0	1.31	-0.50	1.21	12.5	12.3		
16,790.0	89.52	181.65	10,446.0	-149.8	-6,074.0	1.48	-0.69	1.31	12.7	11.9		
16,804.0	89.55	181.82	10,446.1	-150.2	-6,088.0	1.23	0.21	1.21	12.9	11.4		
16,817.0	89.70	181.96	10,446.2	-150.7	-6,100.9	1.58	1.15	1.08	13.1	10.9		
16,831.0	89.90	182.05	10,446.2	-151.1	-6,114.9	1.57	1.43	0.64	13.2	10.3		
16,845.0	90.04	182.08	10,446.2	-151.6	-6,128.9	1.02	1.00	0.21	13.3	9.7		
16,858.0	90.03	182.05	10,446.2	-152.1	-6,141.9	0.24	-0.08	-0.23	13.4	9.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
16,872.0	89.88	182.00	10,446.2	-152.6	-6,155.9	1.13	-1.07	-0.36	13.5	8.6		
16,885.0	89.72	181.94	10,446.3	-153.1	-6,168.9	1.31	-1.23	-0.46	13.6	8.0		
16,899.0	89.68	181.87	10,446.3	-153.5	-6,182.9	0.58	-0.29	-0.50	13.7	7.5		
16,912.0	89.64	181.80	10,446.4	-153.9	-6,195.9	0.62	-0.31	-0.54	13.9	7.0		
16,926.0	89.62	181.74	10,446.5	-154.4	-6,209.9	0.45	-0.14	-0.43	14.1	6.4		
16,940.0	89.64	181.71	10,446.6	-154.8	-6,223.9	0.26	0.14	-0.21	14.3	5.9		
16,953.0	89.57	181.69	10,446.7	-155.2	-6,236.9	0.56	-0.54	-0.15	14.4	5.5		
16,967.0	89.44	181.67	10,446.8	-155.6	-6,250.9	0.94	-0.93	-0.14	14.6	5.0		
16,980.0	89.29	181.65	10,446.9	-156.0	-6,263.9	1.16	-1.15	-0.15	14.9	4.5		
16,994.0	89.11	181.61	10,447.1	-156.4	-6,277.8	1.32	-1.29	-0.29	15.1	4.0		
17,007.0	88.97	181.54	10,447.4	-156.7	-6,290.8	1.20	-1.08	-0.54	15.4	3.6		
17,021.0	88.86	181.42	10,447.6	-157.1	-6,304.8	1.16	-0.79	-0.86	15.8	3.1		
17,035.0	88.82	181.23	10,447.9	-157.4	-6,318.8	1.39	-0.29	-1.36	16.2	2.7		
17,048.0	88.78	180.99	10,448.2	-157.7	-6,331.8	1.87	-0.31	-1.85	16.5	2.4		
17,062.0	88.75	180.74	10,448.5	-157.9	-6,345.8	1.80	-0.21	-1.79	16.9	2.1		
17,075.0	88.79	180.48	10,448.8	-158.0	-6,358.8	2.02	0.31	-2.00	17.3	1.9		
17,089.0	88.88	180.23	10,449.0	-158.1	-6,372.8	1.90	0.64	-1.79	17.6	1.7		
17,102.0	90.62	179.29	10,449.1	-158.0	-6,385.8	15.21	13.38	-7.23	17.8	1.6		
17,116.0	91.17	179.02	10,448.9	-157.8	-6,399.8	4.38	3.93	-1.93	17.6	1.8		
17,130.0	91.35	178.84	10,448.6	-157.6	-6,413.8	1.82	1.29	-1.29	17.4	1.9		
17,143.0	91.42	178.68	10,448.3	-157.3	-6,426.8	1.34	0.54	-1.23	17.2	2.1		
17,157.0	91.41	178.53	10,447.9	-156.9	-6,440.8	1.07	-0.07	-1.07	16.9	2.4		
17,170.0	91.31	178.39	10,447.6	-156.6	-6,453.8	1.32	-0.77	-1.08	16.7	2.6		
17,184.0	91.21	178.25	10,447.3	-156.2	-6,467.8	1.23	-0.71	-1.00	16.5	3.0		
17,197.0	91.08	178.12	10,447.0	-155.8	-6,480.8	1.41	-1.00	-1.00	16.3	3.3		
17,211.0	90.95	178.00	10,446.8	-155.3	-6,494.7	1.26	-0.93	-0.86	16.1	3.7		
17,225.0	90.95	177.87	10,446.6	-154.8	-6,508.7	0.93	0.00	-0.93	16.0	4.1		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
17,238.0	91.09	177.75	10,446.3	-154.3	-6,521.7	1.42	1.08	-0.92	15.8	4.5		
17,252.0	91.27	177.64	10,446.0	-153.7	-6,535.7	1.51	1.29	-0.79	15.6	5.0		
17,265.0	91.43	177.53	10,445.7	-153.2	-6,548.7	1.49	1.23	-0.85	15.4	5.4		
17,279.0	91.62	177.43	10,445.4	-152.6	-6,562.7	1.53	1.36	-0.71	15.1	6.0		
17,292.0	91.84	177.34	10,445.0	-152.0	-6,575.7	1.83	1.69	-0.69	14.8	6.5		
17,306.0	92.04	177.27	10,444.5	-151.3	-6,589.6	1.51	1.43	-0.50	14.4	7.0		
17,320.0	92.15	177.22	10,444.0	-150.7	-6,603.6	0.86	0.79	-0.36	14.0	7.6		
17,333.0	92.21	177.19	10,443.5	-150.0	-6,616.6	0.52	0.46	-0.23	13.6	8.2		
17,347.0	92.20	177.16	10,443.0	-149.3	-6,630.6	0.23	-0.07	-0.21	13.1	8.8		
17,360.0	92.16	177.13	10,442.5	-148.7	-6,643.5	0.38	-0.31	-0.23	12.7	9.3		
17,374.0	92.15	177.10	10,441.9	-148.0	-6,657.5	0.23	-0.07	-0.21	12.3	9.9		
17,387.0	92.19	177.04	10,441.4	-147.3	-6,670.5	0.55	0.31	-0.46	11.9	10.5		
17,401.0	92.18	176.96	10,440.9	-146.6	-6,684.4	0.58	-0.07	-0.57	11.4	11.2		
17,414.0	92.13	176.83	10,440.4	-145.9	-6,697.4	1.07	-0.38	-1.00	11.0	11.8		
17,428.0	92.05	176.67	10,439.9	-145.1	-6,711.4	1.28	-0.57	-1.14	10.6	12.5		
17,441.0	92.00	176.50	10,439.4	-144.3	-6,724.4	1.36	-0.38	-1.31	10.2	13.2		
17,455.0	91.99	176.33	10,439.0	-143.4	-6,738.3	1.22	-0.07	-1.21	9.8	14.0		
17,468.0	91.74	176.82	10,438.5	-142.7	-6,751.3	4.23	-1.92	3.77	9.5	14.7		
17,482.0	91.14	177.70	10,438.2	-142.0	-6,765.3	7.61	-4.29	6.29	9.2	15.2		
17,495.0	90.92	177.58	10,437.9	-141.5	-6,778.3	1.93	-1.69	-0.92	9.0	15.7		
17,509.0	90.79	177.48	10,437.7	-140.9	-6,792.2	1.17	-0.93	-0.71	8.9	16.2		
17,522.0	90.77	177.42	10,437.6	-140.3	-6,805.2	0.49	-0.15	-0.46	8.8	16.7		
17,536.0	90.87	177.37	10,437.4	-139.6	-6,819.2	0.80	0.71	-0.36	8.7	17.3		
17,549.0	91.19	177.34	10,437.1	-139.0	-6,832.2	2.47	2.46	-0.23	8.6	17.8		
17,563.0	91.75	177.43	10,436.8	-138.4	-6,846.2	4.05	4.00	0.64	8.3	18.3		
17,576.0	92.31	178.96	10,436.3	-138.0	-6,859.2	12.53	4.31	11.77	7.9	18.6		
17,590.0	92.55	179.60	10,435.7	-137.8	-6,873.1	4.88	1.71	4.57	7.4	18.7		



Final PVA

Company: Midland
Project: Lea County, NM (NAD 83 NME)
Site: Inga 33 Fed Com
Well: #512H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #512H
TVD Reference: KB = 26' @ 3688.0usft (H&P 653)
MD Reference: KB = 26' @ 3688.0usft (H&P 653)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: PEDMB

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
17,604.0	92.87	179.71	10,435.1	-137.7	-6,887.1	2.42	2.29	0.79	6.8	18.7		
17,617.0	93.00	179.84	10,434.4	-137.7	-6,900.1	1.41	1.00	1.00	6.2	18.7		
17,631.0	93.06	179.97	10,433.6	-137.7	-6,914.1	1.02	0.43	0.93	5.5	18.6		
17,645.0	93.12	180.09	10,432.9	-137.7	-6,928.1	0.96	0.43	0.86	4.9	18.5		
17,659.0	91.71	180.62	10,432.3	-137.8	-6,942.1	10.76	-10.07	3.79	4.4	18.4		
17,672.0	89.93	181.31	10,432.1	-138.0	-6,955.1	14.68	-13.69	5.31	4.3	18.1		
17,686.0	89.05	181.68	10,432.2	-138.3	-6,969.1	6.82	-6.29	2.64	4.5	17.6		
17,700.0	88.97	181.63	10,432.5	-138.7	-6,983.0	0.67	-0.57	-0.36	4.8	17.1		
17,713.0	88.97	181.56	10,432.7	-139.1	-6,996.0	0.54	0.00	-0.54	5.1	16.7		
17,727.0	88.96	181.47	10,433.0	-139.5	-7,010.0	0.65	-0.07	-0.64	5.5	16.2		
17,740.0	88.81	181.38	10,433.2	-139.8	-7,023.0	1.35	-1.15	-0.69	5.8	15.8		
17,754.0	88.57	181.29	10,433.5	-140.1	-7,037.0	1.83	-1.71	-0.64	6.2	15.4		
17,767.0	88.38	181.20	10,433.9	-140.4	-7,050.0	1.62	-1.46	-0.69	6.6	15.0		
17,781.0	88.20	181.15	10,434.3	-140.7	-7,064.0	1.33	-1.29	-0.36	7.1	14.6		
17,795.0	88.04	181.13	10,434.8	-141.0	-7,078.0	1.15	-1.14	-0.14	7.7	14.3		
17,808.0	87.90	181.14	10,435.2	-141.2	-7,091.0	1.08	-1.08	0.08	8.2	13.9		
17,822.0	87.81	181.15	10,435.8	-141.5	-7,105.0	0.65	-0.64	0.07	8.8	13.5		
17,836.0	87.80	181.18	10,436.3	-141.8	-7,119.0	0.23	-0.07	0.21	9.5	13.2		
17,850.0	87.89	181.20	10,436.8	-142.1	-7,132.9	0.66	0.64	0.14	10.1	12.8		
17,863.0	88.05	181.20	10,437.3	-142.4	-7,145.9	1.23	1.23	0.00	10.6	12.4		
17,877.0	88.18	181.19	10,437.7	-142.6	-7,159.9	0.93	0.93	-0.07	11.2	12.1		
17,891.0	88.27	181.13	10,438.2	-142.9	-7,173.9	0.77	0.64	-0.43	11.7	11.7		
17,904.0	88.30	181.06	10,438.6	-143.2	-7,186.9	0.59	0.23	-0.54	12.1	11.4		
17,918.0	88.29	180.98	10,439.0	-143.4	-7,200.9	0.58	-0.07	-0.57	12.6	11.0		
17,931.0	88.31	180.96	10,439.4	-143.6	-7,213.9	0.22	0.15	-0.15	13.1	10.7		
17,944.0	88.32	180.94	10,439.7	-143.9	-7,226.9	0.17	0.08	-0.15	13.6	10.4		



Final PVA

Company:	Midland	Local Co-ordinate Reference:	Well #512H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Site:	Inga 33 Fed Com	MD Reference:	KB = 26' @ 3688.0usft (H&P 653)
Well:	#512H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	PEDMB

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	E/W (usft)	N/S (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,957.0	88.33	180.92	10,440.1	-144.1	-7,239.9	0.17	0.08	-0.15	14.0	10.1	
Final MWD Survey (MD=17957.0')											
17,970.0	88.33	180.92	10,440.5	-144.3	-7,252.9	0.00	0.00	0.00	14.5	9.8	
Final Projection to Bit (MD=17970.0')											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
9,912.0	9,871.9	496.9	-237.1	KOP (MD=9912.0', TVD:9871.9')	
10,105.5	10,057.0	450.1	-232.2	HL Crossing (MD:10105.5', TVD:10057.0', N/S:450.1', E/W:-232.2', INC:30.64)	
17,957.0	10,440.1	-7,239.9	-144.1	Final MWD Survey (MD=17957.0')	
17,970.0	10,440.5	-7,252.9	-144.3	Final Projection to Bit (MD=17970.0')	

Checked By: _____ Approved By: _____ Date: _____

C-105 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION
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WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Section 1 - Operator and Well Information

Submittal Type: <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Workover <input type="checkbox"/> Deepening <input type="checkbox"/> Plugback <input type="checkbox"/> Different Reservoir <input type="checkbox"/> C-144 Closure Attachment <input type="checkbox"/> Other	
Operator Name: EOG Resources, INC	OGRID: 7377
Property Name and Well Number: Inga 33 FED COM 512H	Property Code: 334073
Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	API Number: 30-025-51724
Pool Name: MESA VERDE; BONE SPRING	Pool Code: 96229

Section 2 – Well Location

	UI or lot no.	Section	Township	Range	Lot Id	Feet from	N/S Line	Feet from	E/W Line	County
SHL:	I	33	23S	32E		2089'	S	459'	E	LEA
BHL	P	4	24S	32E		111'	S	650'	E	LEA

Section 3 – Completion Information

Date T.D. Reached 04/05/2024	Total Measured Depth of Well 17,970'	Acid Volume (bbls) 58	<input checked="" type="checkbox"/> Directional Survey Submitted <input type="checkbox"/> Deviation Survey Submitted
Date Rig Released 4/6/2024	Plug-Back Measured Depth 17,941'	Completion Fluid Used (bbls) 299,121	Were Logs Ran (Y/N) Y
Completion Date 8/15/2024	Perforations (MD and TVD) 10,740'MD-17,941'MD 10,450'TVD-10,439'TVD	Completion Proppant Used (lbs) 16,174,120	List Type of Logs Ran if applicable: MWD, PVA

Section 4 – Action IDs for Submissions and Order Numbers

Surface Casing Action ID: 332793	UIC Permit/Order (UIC wells only) <input type="checkbox"/> Yes <input type="checkbox"/> No, Order No. N/A
Intermediate 1 Casing Action ID: 332793	NOI Recomplete Action ID (if applicable): N/A
Intermediate 2 Casing Action ID:	NOI Plugback Action ID (if applicable): N/A
Production Casing Action ID: 332793	Cement Squeeze Action ID (if applicable): N/A
Tubing Action ID: 418637	All casing was pressure tested in accordance with NMAC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Liner 1 Action ID: N/A	Casing was installed prior to Action ID system (Y/N): N

Section 5 – Test Data

Date First Production 8/15/2024	Production Method FLOWS FROM WELL	Well Status PRODUCING	Gas – Oil Ratio 2176
Date of Test 08/25/2024	Choke Size	Flowing Tubing Pressure	Casing Pressure 493
24 hr Oil (bbls) 1298	24 hr Gas (MCF) 2824	24 hr Water (bbls) 6778	Oil Gravity - API 48
Disposition of Gas: SOLD			

Section 6 – Pits

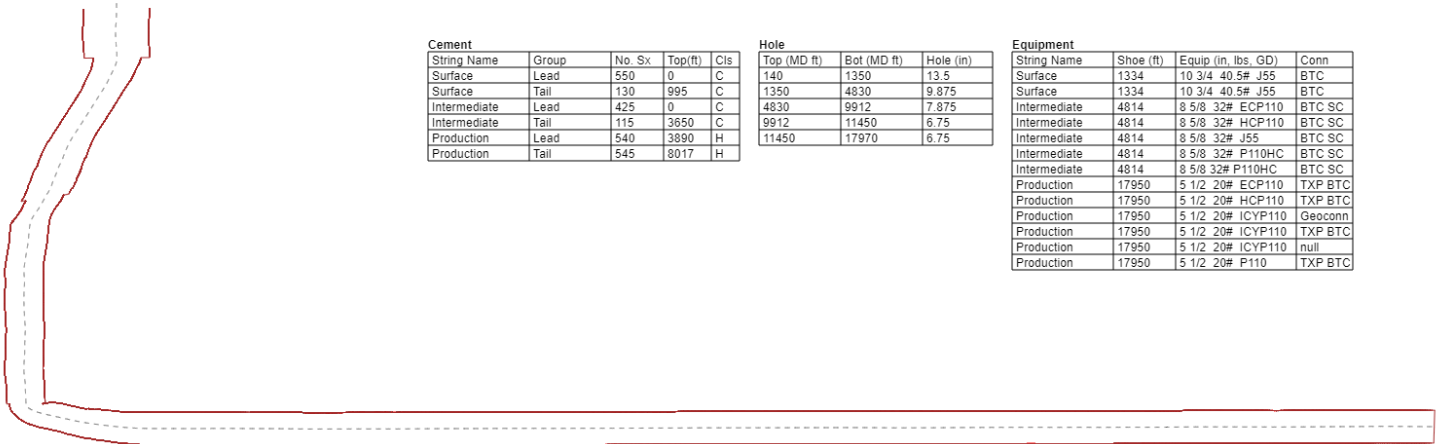
<input type="checkbox"/> A temporary pit was used at the well. If so, attach a plat with the location of the temporary pit. <input checked="" type="checkbox"/> A Closed Loop System was used. <input type="checkbox"/> If an on-site burial was used at the well, report the exact location of the on-site burial: LAT: _____ LONG: _____

Section 7 - Operator Signature and Certification

<input checked="" type="checkbox"/> I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
<input checked="" type="checkbox"/> I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
<input checked="" type="checkbox"/> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Kristina Agee	
Title REGULATORY SPECIALIST	Date 9/20/2024

South Formations				North Formations			
Formation/Zone	MD	TVD	W/O/G	Formation/Zone	MD	TVD	W/O/G
T. Anhy	1189	1189		T. San Jose			
T. Salt	1499	1499'		T. Nacimiento			
B. Salt	4618'	4582'		T. Ojo Alamo			
T. Yates				T. Kirtland			
T. 7 Rivers				T. Fruitland			
T. Queen				T. Pictured Cliffs			
T. Grayburg				T. Lewis Shale			
T. San Andres				T. Chacra			
T. Glorieta				T. Cliff House			
T. Yeso				T. Menefee			
T. Paddock				T. Point Lookout			
T. Blinebry				T. Mancos			
T. Tubb				T. Gallup			
T. Drinkard				T. Greenhorn			
T. Abo				T. Graneros			
T. Wolfcamp				T. Dakota			
T. Penn				T. Morrison			
T. Cisco				T. Bluff			
T. Canyon				T. Todilto			
T. Strawn				T. Entrada			
T. Atoka				T. Wingate			
T. Morrow				T. Chinle			
T. Barnett Shale				T. Permian			
T. Miss				T. Penn A"			
T. Woodford Shale				T. Penn. "B"			
T. Devonian				T. Penn. "C"			
T. Silurian				T. Penn. "D"			
T. Fusselman				T. Leadville			
T. Montoya				T. Madison			
T. Simpson				T. Elbert			
T. McKee				T. McCracken			
T. Waddell				T. Ignacio Otzte			
T. Connel				T. Granite			
T. Ellenburger				T. Hermosa			
T. Gr. Wash				T. De Chelly			
T. Delaware Sand				T. Pinkerton			
T. Lamar Lime							
T. Bell Canyon	4885	4846					
T. Cherry Canyon	5753	5698					
T. Brushy Canyon	7086	7015					
T. Bone Springs							
T. 1st BS Sand	9909	9836					
T. 2nd BS Carbonate							
T. 2nd BS Sand							
T. 3rd BS Carbonate							
T. 3rd BS Sand							

Well Name				Rig Name		API #		County		State		Rig Release	
INGA 33 FED COM #512H				H&P 653		30025517240000		LEA		NEW MEXICO		2024-04-06T00:00:00	
Top Perf		Bottom Perf		Sec.		Blk		Range/Survey		Latitude		Longitude	
10740		17941		33		23S		32E		32.2594224		-103.6720512	
GL (ft)		KB (ft)		CTOP (ft)		MD (ft)		TVD (ft)		KOP (ft)		Spud Date	
3662		3688		8017		17970		10439.85		9912		2024-03-23T00:00:00	



Cement

String Name	Group	No. Sx	Top(ft)	Cls
Surface	Lead	550	0	C
Surface	Tail	130	995	C
Intermediate	Lead	425	0	C
Intermediate	Tail	115	3650	C
Production	Lead	540	3890	H
Production	Tail	545	8017	H

Hole

Top (MD ft)	Bot (MD ft)	Hole (in)
140	1350	13.5
1350	4830	9.875
4830	9912	7.875
9912	11450	6.75
11450	17970	6.75

Equipment

String Name	Shoe (ft)	Equip (in. lbs. GD)	Conn
Surface	1334	10 3/4 40.5# J55	BTC
Surface	1334	10 3/4 40.5# J55	BTC
Intermediate	4814	8 5/8 32# ECP110	BTC SC
Intermediate	4814	8 5/8 32# HCP110	BTC SC
Intermediate	4814	8 5/8 32# J55	BTC SC
Intermediate	4814	8 5/8 32# P110HC	BTC SC
Intermediate	4814	8 5/8 32# P110HC	BTC SC
Production	17950	5 1/2 20# ECP110	TXP BTC
Production	17950	5 1/2 20# HCP110	TXP BTC
Production	17950	5 1/2 20# ICYP110	Geoconn
Production	17950	5 1/2 20# ICYP110	TXP BTC
Production	17950	5 1/2 20# ICYP110	null
Production	17950	5 1/2 20# P110	TXP BTC

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Name: INGA 33 FED COM	Well Location: T23S / R32E / SEC 33 / SESE / 32.2544701 / -103.6744537	County or Parish/State: LEA / NM
Well Number: 512H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number:	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551724	Operator: EOG RESOURCES INCORPORATED	

Notification

Sundry ID: 2811285

Type of Submission: Notification **Type of Action:** First Production

Date Sundry Submitted: Sep 12, 2024 **Time Sundry Submitted:** 2:20:10 PM

	Wellbore Code	Completion Code
First Production Date: Aug 15, 2024	00	S1

US Well Number: 3002551724

First Production Remarks: Pending COM Agreement NMNM106319243
 04/06/2024 Rig released.
 04/29/2024 Test void to 5000 psi, seals & flanges to 8500 psi
 06/01/2024 Tested Prod csg to 11,400 psi for 30 minutes. Good test.
 07/14/2024 Begin perf & frac.
 07/23/2024 Finish 28 stages perf & frac, 10,740'-17,941', 1986 3 1/8" shots 16,174,120 lbs proppant + 299,121 bbls load fluid
 07/25/2024 Drilled out plugs and clean out wellbore.
 08/15/2024 Opened well to flowback - Date of First Production

This sundry is to replace Sundry ID 2811123. Correcting one of the dates in the first production remarks.

Disposition: Accepted

Accepted Date: 09/16/2024

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2		5. Lease Serial No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)	Title
Signature	Date

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
	Office	

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: SESE / 2089 FSL / 459 FEL / TWSP: 23S / RANGE: 32E / SECTION: 33 / LAT: 32.2544701 / LONG: -103.6744537 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 830 FEL / TWSP: 23S / RANGE: 32E / SECTION: 33 / LAT: 32.2540757 / LONG: -103.6737358 (TVD: 12061 feet, MD: 12077 feet)

BHL: NENE / 100 FSL / 660 FEL / TWSP: 23S / RANGE: 32E / SECTION: 28 / LAT: 32.28258 / LONG: -103.6737328 (TVD: 12326 feet, MD: 22549 feet)

CONFIDENTIAL

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

ACKNOWLEDGMENTS

Action 574660

ACKNOWLEDGMENTS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 574660
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
<input checked="" type="checkbox"/>	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.
<input checked="" type="checkbox"/>	I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Sante Fe Main Office
Phone: (505) 476-3441

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

CONDITIONS

Action 574660

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 574660
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 within 10 days of BLM Approval.	4/13/2026