

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 <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No. NMNM0629320
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. LOS VAQUEROS FED/122H
2. Name of Operator EARTHSTONE OPERATING LLC		9. API Well No. 3002549573
3a. Address 1400 WOODLOCH FOREST DRIVE SUITE 300,	3b. Phone No. (include area code) (281) 298-4240	10. Field and Pool or Exploratory Area WC-025 G-08 S263412K;/BONE SPRING
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 30/T26S/R35E/NMP		11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 recompleate 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 perfonned 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 recompleation 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 detennined that the site is ready for final inspection.)

API: 30-025-49573
Well Name Change
From: Los Vaqueros Fed 122H
To: Los Vaqueros Fed 522H
Pool Change
From: (96672) WC-025 G08 S263412K; Bone Spring
To:(96776) Jabalina; Wolfcamp, Southwest
Surface Hole Location
From: C-30-26S-35E; 211' FNL, 2021' FWL
To: C-30-26S-35E; 211' FNL, 2011' FWL
First Take Point
From: C-30-26S-35E; 100 FNL, 1914 FWL
Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) JENNIFER ELROD / Ph: (817) 953-3728	Title Senior Regulatory Technician
Signature	Date 04/18/2023

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 08/30/2023
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 CARLSBAD	

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

Additional Remarks

To: C-30-26S-35E; 100 FNL, 1750 FWL

BHL Change

From: Lot 3-31-26S-35E; 10' FSL & 1914' FWL, Lea County, NM To: 1023'FSL, 50' FWL; Sect. 25, Loving County, TX

Depth Changes

From: 18,308'MD/10,830'TVD

To: 23,756'MD/13,111' TVD

Drilling Plan revised to support Depth Changes

Location of Well

0. SHL: NENW / 211 FNL / 2021 FWL / TWSP: 26S / RANGE: 35E / SECTION: 30 / LAT: 32.0209796 / LONG: -103.4085987 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 1914 FWL / TWSP: 26S / RANGE: 35E / SECTION: 30 / LAT: 32.0212865 / LONG: -103.4089436 (TVD: 10564 feet, MD: 10575 feet)

BHL: LOT 3 / 10 FSL / 1914 FWL / TWSP: 26S / RANGE: 35E / SECTION: 31 / LAT: 32.0003168 / LONG: -103.4089432 (TVD: 10830 feet, MD: 18308 feet)

CONFIDENTIAL

District I

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

District II

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

District III

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

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☒ AMENDED REPORTWELL NUMBER, POOL, SHL,
FTP, SLC

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-025-49573	2 Pool Code 96776	3 Pool Name JABALINA; WOLFCAMP, SOUTHWEST
4 Property Code 331213	5 Property Name LOS VAQUEROS FED	6 Well Number 522H
7 OGRID No. 331165	8 Operator Name EARTHSTONE OPERATING LLC	9 Elevation 3183.31'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	30	26-S	35-E		211'	NORTH	2011'	WEST	LEA

¹¹ State Line Crossing If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	31	26-S	35-E		0	SOUTH	1750'	WEST	LEA

12 Dedicated Acres 240 243.28	13 Joint or Infill Y	14 Consolidation Code	15 Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

***BHL & LTP WILL BE IN TEXAS**

	SURFACE HOLE LOCATION (SHL) KICK OFF POINT (KOP) NEW MEXICO EAST - NAD 83 X=827924.37 LAT.= 32.02098043° N Y=372597.84 LONG.= 103.40863106° W NEW MEXICO EAST - NAD 27 X=786736.05 LAT.= 32.02085410° N Y=372540.73 LONG.= 103.40817073° W 211' FNL, 2011' FWL - SECTION 30 211' FNL, 670' FEL - LEASE	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature Date JENNIFER ELROD Printed Name JELROD@EARTHSTONENERGY.COM E-mail Address	
	FIRST TAKE POINT (FTP) NEW MEXICO EAST - NAD 83 X=827662.53 LAT.= 32.02128743° N Y=372707.30 LONG.= 103.40947279° W NEW MEXICO EAST - NAD 27 X=786474.22 LAT.= 32.02116112° N Y=372650.18 LONG.= 103.40901242° W 100' FNL, 1750' FWL - SECTION 30 100' FNL, 393' FWL - LEASE		18 SURVEYOR 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. Date of Survey Signature and Seal of Professional Surveyor Certificate Number
	STATE LINE CROSSING (SLC) NEW MEXICO EAST - NAD 83 X=827727.99 LAT.= 32.00028930° N Y=365068.40 LONG.= 103.40947228° W NEW MEXICO EAST - NAD 27 X=786539.33 LAT.= 32.00016287° N Y=365011.49 LONG.= 103.40901313° W 0' FSL, 1750' FWL - SECTION 31 0' FSL, 416' FWL - LEASE		TEXAS TAKE POINT (LTP) TEXAS CENTRAL - NAD 83 X=1342939.21 LAT.= 31.99198689° N Y=10701447.81 LONG.= 103.40947267° W TEXAS CENTRAL - NAD 27 X=1046476.52 LAT.= 31.99186039° N Y=858868.91 LONG.= 103.40901373° W 1179' FSL, 100' FWL - SECTION 25 1179' FSL, 100' FWL - LEASE

API: 30-025-49573

Well Name Change

From: Los Vaqueros Fed 122H

To: Los Vaqueros Fed 522H

Pool Change

From: (96672) WC-025 G08 S263412K; Bone Spring

To: (96776) Jabalina; Wolfcamp, Southwest

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Drilling Plan revised to support Depth Changes

Connection Data Sheet

OD (in.)	WEIGHT (lbs./ft.)	WALL (in.)	GRADE	DRIFT (in.)	RBW%	CONNECTION
5.000	Nominal: 18.00 Plain End: 17.95	0.362	VST P110 EC	4.151	87.5	DWC/C-IS PLUS

PIPE PROPERTIES

Nominal OD	5.000	in.
Nominal ID	4.276	in.
Nominal Area	5.275	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	659	klb
Ultimate Strength	712	klb
Min. Internal Yield	15,840	psi
High Collapse	14,820	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium T&C
Connection OD (nom)	5.800 in.
Connection ID (nom)	4.276 in.
Make-Up Loss	4.063 in.
Coupling Length	9.125 in.
Critical Cross Section	5.275 sq.in.
Tension Efficiency	100.0% of pipe
Compression Efficiency	100.0% of pipe
Internal Pressure Efficiency	100.0% of pipe
External Pressure Efficiency	100.0% of pipe

CONNECTION PERFORMANCES

Yield Strength	659	klb
Parting Load	712	klb
Compression Rating	659	klb
Min. Internal Yield	15,840	psi
High Collapse	14,820	psi
Maximum Uniaxial Bend Rating	114.6	°/100 ft
Ref String Length w 1.4 Design Factor	26,150	ft

FIELD TORQUE VALUES

Min. Make-up Torque	14,500	ft.lbs
Opti. Make-up Torque	15,500	ft.lbs
Max. Make-up Torque	16,500	ft.lbs
Min. Shoulder Torque	1,450	ft.lbs
Max. Shoulder Torque	11,600	ft.lbs
Max. Delta Turn	0.200	Turns
Max Operational Torque	18,600	ft.lbs
Maximum Torsional Value (MTV)	20,460	ft.lbs

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

06/18/2021 11:13 AM



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Houston, TX 77042
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VAM USA Sales E-mail: VAMUSAsales@vam-usa.com
Tech Support E-mail: tech.support@vam-usa.com

DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.
12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

06/18/2021 11:13 AM

Earthstone Operating LLC - Los Vaqueros Fed 522H

1. Geologic Formations

TVD of target	13,111' EOL	Kick Off Point	12,556'
MD at TD:	23,756'	Deepest expected fresh water:	400'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1040	Water	
Top of Salt	1500	Salt	
Base of Salt	5009	Salt	
Lamar	5334	Salt Water	
Delaware	5378	Water	
Bone Spring Lime	9274	Oil/Gas	
1st BSPG Ss	10600	Oil/Gas	
2nd BSPG Ss	11062	Oil/Gas	
3rd BSPG Ss	12142	Oil/Gas	
Wolfcamp	12520	Oil/Gas	
Wolfcamp X Sand	12554	Oil/Gas	
Wolfcamp Y Sand	12627	Oil/Gas	
Wolfcamp A	12659	Oil/Gas	
Wolfcamp B	12976	Target Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body Tension	SF Joint Tension
	From	To								
14.5"	0	1090	10.75"	45.5	J55	BTC	6.15	9.18	14.42	16.05
9.875"	0	12000	7.625"	29.7	L80 HC	BTC	1.49	1.65	1.92	1.92
7.875"	0	11500	5.5"	23	P110 HC	GBCD	2.38	1.93	2.76	2.87
6.75"	11500	23,756	5."	18	P110 EC	DWC/C-IS Plus	1.68	2.10	2.41	2.79
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5-1/2" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for cement bond tie in.

Earthstone Operating LLC - Los Vaqueros Fed 522H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Earthstone Operating LLC - Los Vaqueros Fed 522H

3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	290	12.5	1.83	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	290	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Intermediate	990	10.3	3.65	9.6	16	Lead: 35:65:6 C Blend
	130	16.4	1.27	6.34	8	Tail: Class H
Production	320	12.7	2.13	19	72	Lead: 50:50:10 H Blend
	2770	14.5	1.24	5.7	19	Tail: 50:50:2 Class H Blend

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime Top, cement will be adjusted accordingly if this contingency is necessary.

Casing String	TOC Tail	TOC Lead	% Excess
Surface	590	0	50%
1 st Intermediate	11500	0'	50%
Production	12,000'	4,834'	35% OH in Lateral (KOP to EOL) – 40% OH in Vertical

Earthstone Operating LLC - Los Vaqueros Fed 522H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9.875	11"	3M	Annular	x	2000 psi
			Blind Ram	x	3M
			Pipe Ram	x	
			Double Ram		
			Other*		
6-3/4"	11"	10M	Annular	x	5000 psi
			Blind Ram	x	10M
			Pipe Ram	x	
			Double Ram		
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Earthstone Operating LLC - Los Vaqueros Fed 522H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
Surface	10-3/4" Shoe	FW Gel	8.6 - 8.8	28-34	N/C
10-3/4" Shoe	7-5/8" Int shoe	Saturated Brine	8.8 - 9.5	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	12.5 - 13	45 - 65	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

Earthstone Operating LLC - Los Vaqueros Fed 522H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	8865 psi at 13111' TVD
Abnormal Temperature	NO 185 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
Y	Is casing pre-set?

x	H ₂ S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 99,999.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	4/13/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	23,756.58	Plan #1 (OH)	OWSG_Rev2_MWD+HRGM	OWSG MWD + HRGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Los Vaqueros Fed Pad						
Los Vaqueros Fed 301H - OH - Plan #1	2,600.00	2,599.87	50.00	31.82	2.750	CC
Los Vaqueros Fed 301H - OH - Plan #1	3,200.00	3,194.50	53.31	30.98	2.388	ES
Los Vaqueros Fed 301H - OH - Plan #1	3,300.00	3,294.29	54.72	31.66	2.373	SF
Los Vaqueros Fed 302H - OH - Plan #1	2,600.00	2,599.87	25.00	6.82	1.375	Level 3, CC, ES, SF
Los Vaqueros Fed 442H - OH - Plan #1	2,516.59	2,516.81	25.00	7.41	1.422	Level 3, CC
Los Vaqueros Fed 442H - OH - Plan #1	2,800.00	2,798.65	25.61	6.06	1.310	Level 3, ES
Los Vaqueros Fed 442H - OH - Plan #1	2,900.00	2,897.86	26.43	6.21	1.307	Level 3, SF
Los Vaqueros Fed 462H - OH - Plan #1	2,600.00	2,599.98	50.00	31.82	2.750	CC, ES
Los Vaqueros Fed 462H - OH - Plan #1	23,757.21	23,445.33	639.98	345.91	2.176	SF

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1											Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM											Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-90.42	-0.37	-50.00	50.00			
100.00	100.00	99.87	99.87	0.13	0.13	-90.42	-0.37	-50.00	50.00	49.74	0.26	192.518
200.00	200.00	199.87	199.87	0.49	0.49	-90.42	-0.37	-50.00	50.00	49.03	0.98	51.212
300.00	300.00	299.87	299.87	0.85	0.85	-90.42	-0.37	-50.00	50.00	48.31	1.69	29.529
400.00	400.00	399.87	399.87	1.21	1.20	-90.42	-0.37	-50.00	50.00	47.59	2.41	20.745
500.00	500.00	499.87	499.87	1.56	1.56	-90.42	-0.37	-50.00	50.00	46.87	3.13	15.989
600.00	600.00	599.87	599.87	1.92	1.92	-90.42	-0.37	-50.00	50.00	46.16	3.84	13.007
700.00	700.00	699.87	699.87	2.28	2.28	-90.42	-0.37	-50.00	50.00	45.44	4.56	10.963
800.00	800.00	799.87	799.87	2.64	2.64	-90.42	-0.37	-50.00	50.00	44.72	5.28	9.473
900.00	900.00	899.87	899.87	3.00	3.00	-90.42	-0.37	-50.00	50.00	44.01	5.99	8.341
1,000.00	1,000.00	999.87	999.87	3.36	3.36	-90.42	-0.37	-50.00	50.00	43.29	6.71	7.450
1,100.00	1,100.00	1,099.87	1,099.87	3.71	3.71	-90.42	-0.37	-50.00	50.00	42.57	7.43	6.731
1,200.00	1,200.00	1,199.87	1,199.87	4.07	4.07	-90.42	-0.37	-50.00	50.00	41.86	8.15	6.138
1,300.00	1,300.00	1,299.87	1,299.87	4.43	4.43	-90.42	-0.37	-50.00	50.00	41.14	8.86	5.642
1,400.00	1,400.00	1,399.87	1,399.87	4.79	4.79	-90.42	-0.37	-50.00	50.00	40.42	9.58	5.220
1,500.00	1,500.00	1,499.87	1,499.87	5.15	5.15	-90.42	-0.37	-50.00	50.00	39.70	10.30	4.856
1,600.00	1,600.00	1,599.87	1,599.87	5.51	5.51	-90.42	-0.37	-50.00	50.00	38.99	11.01	4.540
1,700.00	1,700.00	1,699.87	1,699.87	5.87	5.87	-90.42	-0.37	-50.00	50.00	38.27	11.73	4.263

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
1,800.00	1,800.00	1,799.87	1,799.87	6.22	6.22	-90.42	-0.37	-50.00	50.00	37.55	12.45	4.017		
1,900.00	1,900.00	1,899.87	1,899.87	6.58	6.58	-90.42	-0.37	-50.00	50.00	36.84	13.16	3.798		
2,000.00	2,000.00	1,999.87	1,999.87	6.94	6.94	-90.42	-0.37	-50.00	50.00	36.12	13.88	3.602		
2,100.00	2,100.00	2,099.87	2,099.87	7.30	7.30	-90.42	-0.37	-50.00	50.00	35.40	14.60	3.425		
2,200.00	2,200.00	2,199.87	2,199.87	7.66	7.66	-90.42	-0.37	-50.00	50.00	34.69	15.32	3.265		
2,300.00	2,300.00	2,299.87	2,299.87	8.02	8.02	-90.42	-0.37	-50.00	50.00	33.97	16.03	3.119		
2,400.00	2,400.00	2,399.87	2,399.87	8.37	8.37	-90.42	-0.37	-50.00	50.00	33.25	16.75	2.985		
2,500.00	2,500.00	2,499.87	2,499.87	8.73	8.73	-90.42	-0.37	-50.00	50.00	32.54	17.47	2.863		
2,600.00	2,600.00	2,599.87	2,599.87	9.09	9.09	-90.42	-0.37	-50.00	50.00	31.82	18.18	2.750 CC		
2,700.00	2,699.98	2,698.18	2,698.17	9.45	9.44	-36.52	-0.05	-51.65	50.27	31.39	18.87	2.663		
2,800.00	2,799.84	2,796.47	2,796.31	9.80	9.78	-38.76	0.90	-56.61	51.13	31.59	19.54	2.617		
2,900.00	2,899.45	2,895.09	2,894.58	10.15	10.12	-42.35	2.47	-64.82	52.65	32.46	20.19	2.607		
3,000.24	2,998.94	2,995.18	2,994.22	10.51	10.47	-48.11	4.26	-74.14	52.92	32.02	20.90	2.532		
3,076.48	3,074.43	3,071.25	3,069.95	10.78	10.74	-53.57	5.61	-81.22	52.68	31.24	21.44	2.457		
3,100.00	3,097.73	3,094.72	3,093.31	10.87	10.82	-55.26	6.03	-83.41	52.70	31.10	21.61	2.439		
3,200.00	3,196.75	3,194.50	3,192.64	11.23	11.18	-62.36	7.81	-92.69	53.31	30.98	22.33	2.388 ES		
3,300.00	3,295.78	3,294.29	3,291.98	11.60	11.53	-69.21	9.59	-101.98	54.72	31.66	23.06	2.373 SF		
3,400.00	3,394.80	3,394.07	3,391.31	11.96	11.89	-75.63	11.37	-111.27	56.86	33.07	23.79	2.390		
3,500.00	3,493.83	3,493.85	3,490.64	12.33	12.25	-81.51	13.15	-120.56	59.67	35.13	24.53	2.432		
3,600.00	3,592.86	3,593.63	3,589.97	12.71	12.61	-86.82	14.93	-129.85	63.04	37.77	25.27	2.494		
3,700.00	3,691.88	3,693.41	3,689.30	13.08	12.97	-91.56	16.71	-139.14	66.90	40.89	26.02	2.571		
3,800.00	3,790.91	3,793.19	3,788.64	13.46	13.33	-95.75	18.49	-148.42	71.17	44.41	26.76	2.659		
3,900.00	3,889.93	3,892.97	3,887.97	13.83	13.69	-99.46	20.27	-157.71	75.77	48.27	27.51	2.755		
4,000.00	3,988.96	3,992.75	3,987.30	14.21	14.06	-102.73	22.05	-167.00	80.66	52.41	28.25	2.855		
4,100.00	4,087.98	4,092.53	4,086.63	14.59	14.42	-105.61	23.83	-176.29	85.78	56.78	29.00	2.958		
4,200.00	4,187.01	4,192.32	4,185.96	14.97	14.79	-108.17	25.61	-185.58	91.09	61.34	29.74	3.062		
4,300.00	4,286.04	4,292.10	4,285.30	15.36	15.15	-110.44	27.39	-194.87	96.56	66.07	30.49	3.167		
4,400.00	4,385.06	4,391.88	4,384.63	15.74	15.52	-112.47	29.17	-204.16	102.16	70.93	31.24	3.271		
4,500.00	4,484.09	4,491.66	4,483.96	16.13	15.89	-114.28	30.95	-213.44	107.88	75.90	31.98	3.373		
4,579.75	4,563.06	4,571.24	4,563.18	16.43	16.18	-115.60	32.37	-220.85	112.51	79.94	32.58	3.454		
4,600.00	4,583.12	4,591.44	4,583.29	16.51	16.26	-115.90	32.73	-222.73	113.67	80.94	32.73	3.473		
4,700.00	4,682.45	4,691.32	4,682.72	16.89	16.63	-116.40	34.51	-232.03	118.46	84.99	33.47	3.539		
4,800.00	4,782.13	4,791.24	4,782.19	17.26	17.00	-115.38	36.29	-241.33	121.72	87.51	34.22	3.558		
4,900.00	4,882.02	4,891.07	4,881.57	17.62	17.37	-112.92	38.07	-250.62	123.63	88.68	34.95	3.537		
4,979.99	4,962.00	4,970.79	4,960.93	17.90	17.66	-164.60	39.50	-258.05	124.45	88.91	35.53	3.502		
5,000.00	4,982.01	4,990.71	4,980.76	17.97	17.73	-163.74	39.85	-259.90	124.61	88.93	35.68	3.493		
5,100.00	5,082.01	5,090.26	5,079.86	18.32	18.10	-159.45	41.63	-269.17	125.87	89.47	36.40	3.458		
5,200.00	5,182.01	5,189.80	5,178.96	18.67	18.47	-155.28	43.40	-278.43	127.81	90.70	37.11	3.444		
5,300.00	5,282.01	5,289.35	5,278.06	19.02	18.85	-151.25	45.18	-287.70	130.42	92.61	37.81	3.449		
5,400.00	5,382.01	5,388.90	5,377.17	19.37	19.22	-147.40	46.95	-296.97	133.65	95.14	38.51	3.470		
5,500.00	5,482.01	5,488.45	5,476.27	19.72	19.59	-143.74	48.73	-306.23	137.46	98.25	39.21	3.506		
5,600.00	5,582.01	5,588.00	5,575.37	20.07	19.96	-140.29	50.50	-315.50	141.80	101.90	39.90	3.554		
5,700.00	5,682.01	5,687.55	5,674.47	20.42	20.33	-137.05	52.28	-324.77	146.62	106.03	40.59	3.612		
5,800.00	5,782.01	5,787.10	5,773.57	20.77	20.70	-134.03	54.06	-334.04	151.89	110.61	41.28	3.680		
5,900.00	5,882.01	5,886.65	5,872.67	21.13	21.07	-131.22	55.83	-343.30	157.55	115.58	41.97	3.754		
6,000.00	5,982.01	5,986.20	5,971.77	21.48	21.45	-128.61	57.61	-352.57	163.56	120.90	42.66	3.834		
6,100.00	6,082.01	6,085.75	6,070.88	21.83	21.82	-126.18	59.38	-361.84	169.89	126.54	43.35	3.919		
6,200.00	6,182.01	6,185.30	6,169.98	22.18	22.19	-123.94	61.16	-371.10	176.50	132.47	44.04	4.008		
6,300.00	6,282.01	6,284.85	6,269.08	22.53	22.57	-121.85	62.93	-380.37	183.37	138.64	44.73	4.100		
6,400.00	6,382.01	6,384.40	6,368.18	22.89	22.94	-119.92	64.71	-389.64	190.45	145.03	45.42	4.193		
6,500.00	6,482.01	6,483.95	6,467.28	23.24	23.31	-118.13	66.49	-398.90	197.74	151.63	46.11	4.288		
6,600.00	6,582.01	6,583.50	6,566.38	23.59	23.69	-116.47	68.26	-408.17	205.21	158.40	46.81	4.384		

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

Anticollision Report

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Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,700.00	6,682.01	6,683.05	6,665.49	23.95	24.06	-114.93	70.04	-417.44	212.84	165.33	47.51	4.480		
6,800.00	6,782.01	6,782.60	6,764.59	24.30	24.43	-113.49	71.81	-426.70	220.61	172.40	48.20	4.576		
6,900.00	6,882.01	6,882.15	6,863.69	24.65	24.81	-112.15	73.59	-435.97	228.51	179.60	48.90	4.673		
7,000.00	6,982.01	6,981.70	6,962.79	25.01	25.18	-110.90	75.36	-445.24	236.52	186.92	49.60	4.768		
7,100.00	7,082.01	7,081.25	7,061.89	25.36	25.56	-109.73	77.14	-454.51	244.64	194.34	50.31	4.863		
7,200.00	7,182.01	7,180.80	7,160.99	25.71	25.93	-108.64	78.92	-463.77	252.86	201.85	51.01	4.957		
7,300.00	7,282.01	7,280.35	7,260.10	26.07	26.31	-107.62	80.69	-473.04	261.16	209.45	51.71	5.050		
7,400.00	7,382.01	7,379.90	7,359.20	26.42	26.68	-106.66	82.47	-482.31	269.54	217.12	52.42	5.142		
7,500.00	7,482.01	7,479.45	7,458.30	26.78	27.06	-105.76	84.24	-491.57	277.99	224.86	53.12	5.233		
7,600.00	7,582.01	7,579.00	7,557.40	27.13	27.43	-104.91	86.02	-500.84	286.50	232.67	53.83	5.322		
7,700.00	7,682.01	7,678.55	7,656.50	27.48	27.81	-104.11	87.79	-510.11	295.07	240.54	54.54	5.411		
7,800.00	7,782.01	7,778.10	7,755.60	27.84	28.18	-103.36	89.57	-519.37	303.70	248.46	55.24	5.497		
7,900.00	7,882.01	7,877.65	7,854.71	28.19	28.56	-102.65	91.35	-528.64	312.37	256.42	55.95	5.583		
8,000.00	7,982.01	7,977.20	7,953.81	28.55	28.94	-101.97	93.12	-537.91	321.09	264.43	56.66	5.667		
8,100.00	8,082.01	8,076.75	8,052.91	28.90	29.31	-101.33	94.90	-547.18	329.86	272.49	57.37	5.750		
8,200.00	8,182.01	8,176.30	8,152.01	29.26	29.69	-100.73	96.67	-556.44	338.66	280.58	58.08	5.831		
8,300.00	8,282.01	8,275.85	8,251.11	29.61	30.06	-100.15	98.45	-565.71	347.50	288.71	58.79	5.911		
8,400.00	8,382.01	8,375.40	8,350.21	29.97	30.44	-99.61	100.22	-574.98	356.36	296.86	59.50	5.989		
8,500.00	8,482.01	8,474.95	8,449.32	30.32	30.81	-99.09	102.00	-584.24	365.27	305.05	60.21	6.066		
8,600.00	8,582.01	8,574.50	8,548.42	30.68	31.19	-98.59	103.78	-593.51	374.19	313.27	60.92	6.142		
8,700.00	8,682.01	8,674.05	8,647.52	31.03	31.57	-98.12	105.55	-602.78	383.15	321.51	61.64	6.216		
8,800.00	8,782.01	8,773.60	8,746.62	31.39	31.94	-97.67	107.33	-612.04	392.13	329.78	62.35	6.289		
8,900.00	8,882.01	8,873.15	8,845.72	31.74	32.32	-97.24	109.10	-621.31	401.13	338.07	63.06	6.361		
9,000.00	8,982.01	8,972.70	8,944.82	32.10	32.70	-96.83	110.88	-630.58	410.16	346.38	63.77	6.431		
9,100.00	9,082.01	9,072.25	9,043.93	32.46	33.07	-96.44	112.65	-639.84	419.20	354.71	64.49	6.500		
9,200.00	9,182.01	9,171.80	9,143.03	32.81	33.45	-96.06	114.43	-649.11	428.26	363.06	65.20	6.568		
9,300.00	9,282.01	9,271.35	9,242.13	33.17	33.83	-95.70	116.21	-658.38	437.34	371.43	65.92	6.635		
9,400.00	9,382.01	9,370.90	9,341.23	33.52	34.20	-95.35	117.98	-667.65	446.44	379.81	66.63	6.700		
9,500.00	9,482.01	9,470.45	9,440.33	33.88	34.58	-95.02	119.76	-676.91	455.55	388.21	67.34	6.765		
9,600.00	9,582.01	9,570.00	9,539.43	34.23	34.96	-94.70	121.53	-686.18	464.68	396.62	68.06	6.828		
9,700.00	9,682.01	9,669.55	9,638.54	34.59	35.33	-94.40	123.31	-695.45	473.82	405.05	68.77	6.890		
9,800.00	9,782.01	9,769.10	9,737.64	34.95	35.71	-94.10	125.08	-704.71	482.97	413.49	69.49	6.950		
9,900.00	9,882.01	9,868.65	9,836.74	35.30	36.09	-93.82	126.86	-713.98	492.14	421.94	70.20	7.010		
10,000.00	9,982.01	9,968.20	9,935.84	35.66	36.46	-93.54	128.64	-723.25	501.32	430.40	70.92	7.069		
10,100.00	10,082.01	10,067.75	10,034.94	36.01	36.84	-93.28	130.41	-732.51	510.51	438.87	71.64	7.126		
10,200.00	10,182.01	10,167.30	10,134.04	36.37	37.22	-93.02	132.19	-741.78	519.71	447.36	72.35	7.183		
10,300.00	10,282.01	10,266.85	10,233.15	36.73	37.60	-92.78	133.96	-751.05	528.92	455.85	73.07	7.239		
10,400.00	10,382.01	10,366.39	10,332.25	37.08	37.97	-92.54	135.74	-760.32	538.13	464.35	73.78	7.293		
10,500.00	10,482.01	10,465.94	10,431.35	37.44	38.35	-92.31	137.51	-769.58	547.36	472.86	74.50	7.347		
10,600.00	10,582.01	10,565.49	10,530.45	37.80	38.73	-92.09	139.29	-778.85	556.60	481.38	75.22	7.400		
10,700.00	10,682.01	10,665.04	10,629.55	38.15	39.10	-91.87	141.07	-788.12	565.84	489.91	75.93	7.452		
10,800.00	10,782.01	10,764.59	10,728.65	38.51	39.48	-91.66	142.84	-797.38	575.09	498.44	76.65	7.503		
10,900.00	10,882.01	10,864.14	10,827.76	38.86	39.86	-91.46	144.62	-806.65	584.35	506.98	77.37	7.553		
11,000.00	10,982.01	10,963.69	10,926.86	39.22	40.24	-91.27	146.39	-815.92	593.62	515.53	78.08	7.602		
11,100.00	11,082.01	11,063.24	11,025.96	39.58	40.61	-91.08	148.17	-825.18	602.89	524.09	78.80	7.651		
11,200.00	11,182.01	11,162.79	11,125.06	39.93	40.99	-90.90	149.94	-834.45	612.17	532.65	79.52	7.698		
11,300.00	11,282.01	11,262.34	11,224.16	40.29	41.37	-90.72	151.72	-843.72	621.45	541.22	80.24	7.745		
11,400.00	11,382.01	11,361.89	11,323.26	40.65	41.75	-90.55	153.50	-852.98	630.74	549.79	80.95	7.791		
11,500.00	11,482.01	11,461.46	11,422.37	41.00	42.12	-90.52	153.68	-862.24	640.04	558.37	81.67	7.837		
11,600.00	11,582.01	11,558.91	11,518.32	41.36	42.46	-91.73	139.94	-871.08	649.49	567.14	82.35	7.887		
11,700.00	11,682.01	11,650.00	11,604.73	41.72	42.75	-94.11	112.51	-878.91	660.12	577.18	82.94	7.959		
11,800.00	11,782.01	11,729.63	11,675.91	42.07	42.97	-97.07	77.53	-885.26	673.71	590.37	83.34	8.084		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
11,900.00	11,882.01	11,800.00	11,734.28	42.43	43.15	-100.29	38.63	-890.37	692.18	608.72	83.46	8.293		
12,000.00	11,982.01	11,857.34	11,778.05	42.79	43.28	-103.26	1.81	-894.14	717.05	633.90	83.15	8.623		
12,100.00	12,082.01	11,900.00	11,808.11	43.14	43.36	-105.62	-28.33	-896.69	749.26	666.95	82.30	9.104		
12,200.00	12,182.01	11,950.00	11,840.40	43.50	43.45	-108.52	-66.39	-899.38	788.93	707.57	81.36	9.697		
12,300.00	12,282.01	11,983.07	11,859.88	43.86	43.51	-110.48	-93.05	-900.97	835.93	756.00	79.93	10.458		
12,400.00	12,382.01	12,012.82	11,876.08	44.22	43.56	-112.28	-117.97	-902.27	889.66	811.28	78.38	11.350		
12,500.00	12,482.01	12,050.00	11,894.48	44.57	43.62	-114.53	-150.24	-903.71	949.53	872.50	77.03	12.326		
12,556.03	12,538.04	12,050.00	11,894.48	44.77	43.62	-114.53	-150.24	-903.71	985.18	909.29	75.89	12.981		
12,600.00	12,581.97	12,050.00	11,894.48	44.92	43.62	59.32	-150.24	-903.71	1,013.84	938.83	75.01	13.516		
12,650.00	12,631.59	12,073.07	11,904.83	45.08	43.65	54.64	-170.84	-904.50	1,045.60	971.13	74.47	14.041		
12,700.00	12,680.50	12,100.00	11,915.86	45.23	43.69	50.34	-195.39	-905.32	1,076.84	1,002.86	73.99	14.554		
12,750.00	12,728.32	12,100.00	11,915.86	45.38	43.69	47.55	-195.39	-905.32	1,106.55	1,033.53	73.02	15.155		
12,800.00	12,774.70	12,100.00	11,915.86	45.51	43.69	45.01	-195.39	-905.32	1,135.36	1,063.28	72.08	15.750		
12,850.00	12,819.28	12,128.59	11,926.30	45.64	43.73	41.96	-221.99	-906.07	1,162.23	1,090.57	71.67	16.217		
12,900.00	12,861.72	12,150.00	11,933.25	45.76	43.77	39.53	-242.24	-906.55	1,187.66	1,116.53	71.14	16.695		
12,950.00	12,901.69	12,150.00	11,933.25	45.86	43.77	37.85	-242.24	-906.55	1,211.26	1,140.94	70.33	17.223		
13,000.00	12,938.90	12,175.28	11,940.47	45.95	43.80	35.96	-266.46	-907.01	1,232.74	1,162.82	69.92	17.631		
13,050.00	12,973.05	12,200.00	11,946.50	46.03	43.84	34.37	-290.43	-907.37	1,252.29	1,182.76	69.53	18.012		
13,100.00	13,003.89	12,200.00	11,946.50	46.10	43.84	33.35	-290.43	-907.37	1,269.55	1,200.65	68.90	18.426		
13,150.00	13,031.19	12,224.63	11,951.48	46.18	43.88	32.22	-314.54	-907.63	1,284.47	1,215.87	68.60	18.724		
13,200.00	13,054.74	12,250.00	11,955.52	46.28	43.93	31.30	-339.59	-907.79	1,297.18	1,228.84	68.34	18.981		
13,250.00	13,074.35	12,250.00	11,955.52	46.39	43.93	30.77	-339.59	-907.79	1,307.38	1,239.42	67.96	19.237		
13,300.00	13,089.88	12,275.56	11,958.48	46.49	43.98	30.20	-364.98	-907.85	1,315.04	1,247.21	67.83	19.388		
13,350.00	13,101.21	12,300.00	11,960.25	46.59	44.02	29.81	-389.35	-907.81	1,320.32	1,252.58	67.74	19.491		
13,400.00	13,108.26	12,309.97	11,960.67	46.69	44.04	29.65	-399.31	-907.76	1,322.95	1,255.27	67.67	19.549		
13,450.00	13,110.97	12,329.46	11,961.00	46.79	44.08	29.59	-418.79	-907.63	1,323.09	1,255.37	67.71	19.539		
13,456.03	13,111.00	12,329.46	11,961.00	46.80	44.08	29.59	-418.79	-907.63	1,322.92	1,255.20	67.72	19.534		
13,500.00	13,111.00	12,372.95	11,961.00	46.88	44.17	29.53	-462.28	-907.26	1,321.83	1,253.99	67.83	19.486		
13,600.00	13,111.00	12,472.91	11,961.00	47.11	44.42	29.45	-562.24	-906.40	1,320.57	1,252.39	68.18	19.369		
13,623.03	13,111.00	12,495.94	11,961.00	47.17	44.48	29.45	-585.27	-906.20	1,320.53	1,252.25	68.28	19.341		
13,623.18	13,111.00	12,496.09	11,961.00	47.17	44.48	29.45	-585.42	-906.20	1,320.53	1,252.25	68.28	19.341		
13,700.00	13,111.00	12,572.91	11,961.00	47.38	44.71	29.45	-662.24	-905.54	1,320.53	1,251.89	68.63	19.240		
13,800.00	13,111.00	12,672.91	11,961.00	47.69	45.05	29.45	-762.23	-904.69	1,320.53	1,251.38	69.15	19.098		
13,900.00	13,111.00	12,772.91	11,961.00	48.04	45.43	29.45	-862.23	-903.83	1,320.53	1,250.83	69.71	18.944		
14,000.00	13,111.00	12,872.91	11,961.00	48.43	45.86	29.45	-962.23	-902.98	1,320.53	1,250.22	70.32	18.779		
14,100.00	13,111.00	12,972.91	11,961.00	48.85	46.32	29.45	-1,062.22	-902.12	1,320.54	1,249.56	70.98	18.604		
14,200.00	13,111.00	13,072.91	11,961.00	49.32	46.82	29.45	-1,162.22	-901.27	1,320.54	1,248.85	71.69	18.420		
14,300.00	13,111.00	13,172.91	11,961.00	49.82	47.37	29.45	-1,262.22	-900.41	1,320.54	1,248.10	72.45	18.228		
14,400.00	13,111.00	13,272.91	11,961.00	50.36	47.94	29.45	-1,362.21	-899.56	1,320.55	1,247.30	73.25	18.029		
14,500.00	13,111.00	13,372.91	11,961.00	50.93	48.56	29.45	-1,462.21	-898.70	1,320.55	1,246.46	74.09	17.824		
14,600.00	13,111.00	13,472.91	11,961.00	51.53	49.21	29.45	-1,562.21	-897.85	1,320.55	1,245.58	74.97	17.613		
14,700.00	13,111.00	13,572.91	11,961.00	52.17	49.89	29.45	-1,662.20	-896.99	1,320.55	1,244.65	75.90	17.398		
14,800.00	13,111.00	13,672.91	11,961.00	52.84	50.60	29.45	-1,762.20	-896.14	1,320.56	1,243.69	76.87	17.180		
14,900.00	13,111.00	13,772.91	11,961.00	53.54	51.34	29.45	-1,862.19	-895.28	1,320.56	1,242.69	77.87	16.959		
15,000.00	13,111.00	13,872.91	11,961.00	54.27	52.11	29.45	-1,962.19	-894.43	1,320.56	1,241.65	78.91	16.736		
15,100.00	13,111.00	13,972.91	11,961.00	55.02	52.91	29.46	-2,062.19	-893.57	1,320.56	1,240.58	79.98	16.511		
15,200.00	13,111.00	14,072.91	11,961.00	55.81	53.74	29.46	-2,162.18	-892.72	1,320.57	1,239.48	81.09	16.286		
15,300.00	13,111.00	14,172.91	11,961.00	56.61	54.59	29.46	-2,262.18	-891.86	1,320.57	1,238.34	82.22	16.061		
15,400.00	13,111.00	14,272.91	11,961.00	57.45	55.46	29.46	-2,362.18	-891.01	1,320.57	1,237.18	83.39	15.836		
15,500.00	13,111.00	14,372.91	11,961.00	58.30	56.36	29.46	-2,462.17	-890.15	1,320.57	1,235.98	84.59	15.611		
15,600.00	13,111.00	14,472.91	11,961.00	59.18	57.28	29.46	-2,562.17	-889.30	1,320.58	1,234.76	85.82	15.388		
15,700.00	13,111.00	14,572.91	11,961.00	60.08	58.22	29.46	-2,662.17	-888.44	1,320.58	1,233.51	87.07	15.167		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,800.00	13,111.00	14,672.91	11,961.00	61.00	59.18	29.46	-2,762.16	-887.59	1,320.58	1,232.23	88.35	14.947		
15,900.00	13,111.00	14,772.91	11,961.00	61.94	60.16	29.46	-2,862.16	-886.73	1,320.58	1,230.93	89.66	14.730		
16,000.00	13,111.00	14,872.91	11,961.00	62.90	61.15	29.46	-2,962.15	-885.88	1,320.59	1,229.60	90.98	14.515		
16,100.00	13,111.00	14,972.91	11,961.00	63.88	62.17	29.46	-3,062.15	-885.02	1,320.59	1,228.26	92.33	14.302		
16,200.00	13,111.00	15,072.91	11,961.00	64.87	63.20	29.46	-3,162.15	-884.16	1,320.59	1,226.89	93.71	14.093		
16,300.00	13,111.00	15,172.91	11,961.00	65.88	64.24	29.46	-3,262.14	-883.31	1,320.59	1,225.50	95.10	13.887		
16,400.00	13,111.00	15,272.91	11,961.00	66.91	65.31	29.46	-3,362.14	-882.45	1,320.60	1,224.09	96.51	13.683		
16,500.00	13,111.00	15,372.91	11,961.00	67.95	66.38	29.46	-3,462.14	-881.60	1,320.60	1,222.66	97.94	13.483		
16,600.00	13,111.00	15,472.91	11,961.00	69.00	67.47	29.46	-3,562.13	-880.74	1,320.60	1,221.21	99.39	13.287		
16,700.00	13,111.00	15,572.91	11,961.00	70.07	68.57	29.46	-3,662.13	-879.89	1,320.60	1,219.74	100.86	13.093		
16,800.00	13,111.00	15,672.91	11,961.00	71.15	69.68	29.46	-3,762.12	-879.03	1,320.61	1,218.26	102.34	12.904		
16,900.00	13,111.00	15,772.91	11,961.00	72.25	70.81	29.46	-3,862.12	-878.18	1,320.61	1,216.77	103.84	12.717		
17,000.00	13,111.00	15,872.91	11,961.00	73.35	71.94	29.46	-3,962.12	-877.32	1,320.61	1,215.25	105.36	12.534		
17,100.00	13,111.00	15,972.91	11,961.00	74.47	73.09	29.46	-4,062.11	-876.47	1,320.62	1,213.73	106.89	12.355		
17,200.00	13,111.00	16,072.91	11,961.00	75.60	74.25	29.46	-4,162.11	-875.61	1,320.62	1,212.18	108.43	12.179		
17,300.00	13,111.00	16,172.91	11,961.00	76.73	75.41	29.46	-4,262.11	-874.76	1,320.62	1,210.63	109.99	12.007		
17,400.00	13,111.00	16,272.91	11,961.00	77.88	76.59	29.46	-4,362.10	-873.90	1,320.62	1,209.06	111.56	11.838		
17,500.00	13,111.00	16,372.91	11,961.00	79.04	77.77	29.46	-4,462.10	-873.05	1,320.63	1,207.48	113.14	11.672		
17,600.00	13,111.00	16,472.91	11,961.00	80.20	78.97	29.46	-4,562.10	-872.19	1,320.63	1,205.89	114.74	11.510		
17,700.00	13,111.00	16,572.91	11,961.00	81.38	80.17	29.46	-4,662.09	-871.34	1,320.63	1,204.29	116.34	11.351		
17,800.00	13,111.00	16,672.91	11,961.00	82.56	81.37	29.46	-4,762.09	-870.48	1,320.63	1,202.67	117.96	11.196		
17,900.00	13,111.00	16,772.91	11,961.00	83.75	82.59	29.46	-4,862.08	-869.63	1,320.64	1,201.05	119.59	11.043		
18,000.00	13,111.00	16,872.91	11,961.00	84.95	83.81	29.46	-4,962.08	-868.77	1,320.64	1,199.42	121.22	10.894		
18,100.00	13,111.00	16,972.91	11,961.00	86.16	85.04	29.46	-5,062.08	-867.92	1,320.64	1,197.77	122.87	10.748		
18,200.00	13,111.00	17,072.91	11,961.00	87.37	86.28	29.46	-5,162.07	-867.06	1,320.64	1,196.12	124.53	10.605		
18,300.00	13,111.00	17,172.91	11,961.00	88.59	87.52	29.46	-5,262.07	-866.21	1,320.65	1,194.46	126.19	10.466		
18,400.00	13,111.00	17,272.91	11,961.00	89.82	88.77	29.46	-5,362.07	-865.35	1,320.65	1,192.79	127.86	10.329		
18,500.00	13,111.00	17,372.91	11,961.00	91.05	90.02	29.46	-5,462.06	-864.50	1,320.65	1,191.11	129.54	10.195		
18,600.00	13,111.00	17,472.91	11,961.00	92.28	91.28	29.46	-5,562.06	-863.64	1,320.65	1,189.42	131.23	10.063		
18,700.00	13,111.00	17,572.91	11,961.00	93.53	92.54	29.46	-5,662.06	-862.78	1,320.66	1,187.73	132.93	9.935		
18,800.00	13,111.00	17,672.91	11,961.00	94.78	93.81	29.46	-5,762.05	-861.93	1,320.66	1,186.03	134.63	9.809		
18,900.00	13,111.00	17,772.91	11,961.00	96.03	95.08	29.46	-5,862.05	-861.07	1,320.66	1,184.32	136.34	9.686		
19,000.00	13,111.00	17,872.91	11,961.00	97.29	96.36	29.46	-5,962.04	-860.22	1,320.66	1,182.60	138.06	9.566		
19,100.00	13,111.00	17,972.91	11,961.00	98.56	97.64	29.46	-6,062.04	-859.36	1,320.67	1,180.88	139.79	9.448		
19,200.00	13,111.00	18,072.91	11,961.00	99.82	98.93	29.46	-6,162.04	-858.51	1,320.67	1,179.15	141.52	9.332		
19,300.00	13,111.00	18,172.91	11,961.00	101.10	100.22	29.46	-6,262.03	-857.65	1,320.67	1,177.42	143.25	9.219		
19,400.00	13,111.00	18,272.91	11,961.00	102.37	101.51	29.46	-6,362.03	-856.80	1,320.67	1,175.68	145.00	9.108		
19,500.00	13,111.00	18,372.91	11,961.00	103.66	102.81	29.46	-6,462.03	-855.94	1,320.68	1,173.93	146.74	9.000		
19,600.00	13,111.00	18,472.91	11,961.00	104.94	104.11	29.46	-6,562.02	-855.09	1,320.68	1,172.18	148.50	8.894		
19,700.00	13,111.00	18,572.91	11,961.00	106.23	105.42	29.46	-6,662.02	-854.23	1,320.68	1,170.43	150.26	8.790		
19,800.00	13,111.00	18,672.91	11,961.00	107.52	106.73	29.46	-6,762.02	-853.38	1,320.69	1,168.66	152.02	8.688		
19,900.00	13,111.00	18,772.91	11,961.00	108.82	108.04	29.46	-6,862.01	-852.52	1,320.69	1,166.90	153.79	8.588		
20,000.00	13,111.00	18,872.91	11,961.00	110.12	109.36	29.46	-6,962.01	-851.67	1,320.69	1,165.13	155.56	8.490		
20,100.00	13,111.00	18,972.91	11,961.00	111.43	110.67	29.47	-7,062.00	-850.81	1,320.69	1,163.35	157.34	8.394		
20,200.00	13,111.00	19,072.91	11,961.00	112.73	111.99	29.47	-7,162.00	-849.96	1,320.70	1,161.57	159.12	8.300		
20,300.00	13,111.00	19,172.91	11,961.00	114.04	113.32	29.47	-7,262.00	-849.10	1,320.70	1,159.79	160.91	8.208		
20,400.00	13,111.00	19,272.91	11,961.00	115.36	114.64	29.47	-7,361.99	-848.25	1,320.70	1,158.00	162.70	8.117		
20,500.00	13,111.00	19,372.91	11,961.00	116.67	115.97	29.47	-7,461.99	-847.39	1,320.70	1,156.21	164.49	8.029		
20,600.00	13,111.00	19,472.91	11,961.00	117.99	117.31	29.47	-7,561.99	-846.54	1,320.71	1,154.41	166.29	7.942		
20,700.00	13,111.00	19,572.91	11,961.00	119.31	118.64	29.47	-7,661.98	-845.68	1,320.71	1,152.61	168.10	7.857		
20,800.00	13,111.00	19,672.91	11,961.00	120.64	119.98	29.47	-7,761.98	-844.83	1,320.71	1,150.81	169.90	7.773		
20,900.00	13,111.00	19,772.91	11,961.00	121.96	121.31	29.47	-7,861.97	-843.97	1,320.71	1,149.00	171.71	7.692		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 301H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,000.00	13,111.00	19,872.91	11,961.00	123.29	122.66	29.47	-7,961.97	-843.12	1,320.72	1,147.19	173.52	7.611		
21,100.00	13,111.00	19,972.91	11,961.00	124.62	124.00	29.47	-8,061.97	-842.26	1,320.72	1,145.38	175.34	7.532		
21,200.00	13,111.00	20,072.91	11,961.00	125.96	125.34	29.47	-8,161.96	-841.40	1,320.72	1,143.56	177.16	7.455		
21,300.00	13,111.00	20,172.91	11,961.00	127.29	126.69	29.47	-8,261.96	-840.55	1,320.72	1,141.74	178.98	7.379		
21,400.00	13,111.00	20,272.91	11,961.00	128.63	128.04	29.47	-8,361.96	-839.69	1,320.73	1,139.92	180.81	7.305		
21,500.00	13,111.00	20,372.91	11,961.00	129.97	129.39	29.47	-8,461.95	-838.84	1,320.73	1,138.09	182.63	7.232		
21,600.00	13,111.00	20,472.91	11,961.00	131.31	130.74	29.47	-8,561.95	-837.98	1,320.73	1,136.27	184.47	7.160		
21,700.00	13,111.00	20,572.91	11,961.00	132.66	132.10	29.47	-8,661.95	-837.13	1,320.73	1,134.44	186.30	7.089		
21,800.00	13,111.00	20,606.46	11,961.00	134.00	132.55	29.47	-8,695.49	-836.84	1,322.41	1,134.23	188.18	7.027		
21,900.00	13,111.00	20,606.46	11,961.00	135.35	132.55	29.47	-8,695.49	-836.84	1,331.19	1,141.77	189.41	7.028		
22,000.00	13,111.00	20,606.46	11,961.00	136.70	132.55	29.47	-8,695.49	-836.84	1,347.35	1,157.49	189.86	7.097		
22,100.00	13,111.00	20,606.46	11,961.00	138.05	132.55	29.47	-8,695.49	-836.84	1,370.64	1,181.08	189.56	7.231		
22,200.00	13,111.00	20,606.46	11,961.00	139.41	132.55	29.47	-8,695.49	-836.84	1,400.70	1,212.10	188.60	7.427		
22,300.00	13,111.00	20,606.46	11,961.00	140.76	132.55	29.47	-8,695.49	-836.84	1,437.10	1,250.03	187.07	7.682		
22,400.00	13,111.00	20,606.46	11,961.00	142.12	132.55	29.47	-8,695.49	-836.84	1,479.38	1,294.29	185.09	7.993		
22,500.00	13,111.00	20,606.46	11,961.00	143.47	132.55	29.47	-8,695.49	-836.84	1,527.04	1,344.28	182.76	8.355		
22,600.00	13,111.00	20,606.46	11,961.00	144.83	132.55	29.47	-8,695.49	-836.84	1,579.60	1,399.41	180.19	8.766		
22,700.00	13,111.00	20,606.46	11,961.00	146.19	132.55	29.47	-8,695.49	-836.84	1,636.60	1,459.12	177.47	9.222		
22,800.00	13,111.00	20,606.46	11,961.00	147.56	132.55	29.47	-8,695.49	-836.84	1,697.57	1,522.90	174.67	9.719		
22,900.00	13,111.00	20,606.46	11,961.00	148.92	132.55	29.47	-8,695.49	-836.84	1,762.11	1,590.26	171.85	10.254		
23,000.00	13,111.00	20,606.46	11,961.00	150.29	132.55	29.47	-8,695.49	-836.84	1,829.85	1,660.79	169.06	10.824		
23,100.00	13,111.00	20,606.46	11,961.00	151.65	132.55	29.47	-8,695.49	-836.84	1,900.43	1,734.10	166.33	11.426		
23,200.00	13,111.00	20,606.46	11,961.00	153.02	132.55	29.47	-8,695.49	-836.84	1,973.56	1,809.87	163.69	12.057		
23,300.00	13,111.00	20,606.46	11,961.00	154.39	132.55	29.47	-8,695.49	-836.84	2,048.96	1,887.81	161.15	12.714		
23,400.00	13,111.00	20,606.46	11,961.00	155.76	132.55	29.47	-8,695.49	-836.84	2,126.39	1,967.66	158.73	13.396		
23,500.00	13,111.00	20,606.46	11,961.00	157.13	132.55	29.47	-8,695.49	-836.84	2,205.64	2,049.21	156.43	14.100		
23,600.00	13,111.00	20,606.46	11,961.00	158.50	132.55	29.47	-8,695.49	-836.84	2,286.51	2,132.27	154.24	14.824		
23,700.00	13,111.00	20,606.46	11,961.00	159.88	132.55	29.47	-8,695.49	-836.84	2,368.85	2,216.66	152.18	15.566		
23,756.58	13,111.00	20,606.46	11,961.00	160.65	132.55	29.47	-8,695.49	-836.84	2,416.02	2,264.95	151.07	15.993		
23,757.21	13,111.00	20,606.46	11,961.00	160.66	132.55	29.47	-8,695.49	-836.84	2,416.54	2,264.01	152.53	15.843		

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 302H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	89.56	0.19	25.00	25.00				
100.00	100.00	99.87	99.87	0.13	0.13	89.56	0.19	25.00	25.00	24.74	0.26	96.259	
200.00	200.00	199.87	199.87	0.49	0.49	89.56	0.19	25.00	25.00	24.02	0.98	25.606	
300.00	300.00	299.87	299.87	0.85	0.85	89.56	0.19	25.00	25.00	23.31	1.69	14.764	
400.00	400.00	399.87	399.87	1.21	1.20	89.56	0.19	25.00	25.00	22.59	2.41	10.373	
500.00	500.00	499.87	499.87	1.56	1.56	89.56	0.19	25.00	25.00	21.87	3.13	7.995	
600.00	600.00	599.87	599.87	1.92	1.92	89.56	0.19	25.00	25.00	21.16	3.84	6.504	
700.00	700.00	699.87	699.87	2.28	2.28	89.56	0.19	25.00	25.00	20.44	4.56	5.481	
800.00	800.00	799.87	799.87	2.64	2.64	89.56	0.19	25.00	25.00	19.72	5.28	4.737	
900.00	900.00	899.87	899.87	3.00	3.00	89.56	0.19	25.00	25.00	19.01	5.99	4.170	
1,000.00	1,000.00	999.87	999.87	3.36	3.36	89.56	0.19	25.00	25.00	18.29	6.71	3.725	
1,100.00	1,100.00	1,099.87	1,099.87	3.71	3.71	89.56	0.19	25.00	25.00	17.57	7.43	3.365	
1,200.00	1,200.00	1,199.87	1,199.87	4.07	4.07	89.56	0.19	25.00	25.00	16.85	8.15	3.069	
1,300.00	1,300.00	1,299.87	1,299.87	4.43	4.43	89.56	0.19	25.00	25.00	16.14	8.86	2.821	
1,400.00	1,400.00	1,399.87	1,399.87	4.79	4.79	89.56	0.19	25.00	25.00	15.42	9.58	2.610	
1,500.00	1,500.00	1,499.87	1,499.87	5.15	5.15	89.56	0.19	25.00	25.00	14.70	10.30	2.428	
1,600.00	1,600.00	1,599.87	1,599.87	5.51	5.51	89.56	0.19	25.00	25.00	13.99	11.01	2.270	
1,700.00	1,700.00	1,699.87	1,699.87	5.87	5.87	89.56	0.19	25.00	25.00	13.27	11.73	2.131	
1,800.00	1,800.00	1,799.87	1,799.87	6.22	6.22	89.56	0.19	25.00	25.00	12.55	12.45	2.009	
1,900.00	1,900.00	1,899.87	1,899.87	6.58	6.58	89.56	0.19	25.00	25.00	11.84	13.16	1.899	
2,000.00	2,000.00	1,999.87	1,999.87	6.94	6.94	89.56	0.19	25.00	25.00	11.12	13.88	1.801	
2,100.00	2,100.00	2,099.87	2,099.87	7.30	7.30	89.56	0.19	25.00	25.00	10.40	14.60	1.713	
2,200.00	2,200.00	2,199.87	2,199.87	7.66	7.66	89.56	0.19	25.00	25.00	9.69	15.32	1.632	
2,300.00	2,300.00	2,299.87	2,299.87	8.02	8.02	89.56	0.19	25.00	25.00	8.97	16.03	1.559	
2,400.00	2,400.00	2,399.87	2,399.87	8.37	8.37	89.56	0.19	25.00	25.00	8.25	16.75	1.493 Level 3	
2,500.00	2,500.00	2,499.87	2,499.87	8.73	8.73	89.56	0.19	25.00	25.00	7.53	17.47	1.431 Level 3	
2,600.00	2,600.00	2,599.87	2,599.87	9.09	9.09	89.56	0.19	25.00	25.00	6.82	18.18	1.375 Level 3, CC, ES, SF	
2,700.00	2,699.98	2,699.09	2,699.07	9.45	9.43	148.59	-0.91	26.31	27.81	8.94	18.87	1.474 Level 3	
2,800.00	2,799.84	2,798.14	2,798.01	9.80	9.76	157.19	-3.95	29.94	36.56	17.02	19.54	1.871	
2,900.00	2,899.45	2,897.17	2,896.90	10.15	10.09	163.81	-7.28	33.91	49.55	29.34	20.21	2.451	
3,000.24	2,998.94	2,995.88	2,995.47	10.51	10.42	168.28	-10.61	37.87	66.36	45.47	20.89	3.176	
3,100.00	3,097.73	3,093.59	3,093.05	10.87	10.75	170.94	-13.62	41.98	85.08	63.51	21.56	3.945	
3,200.00	3,196.75	3,191.18	3,190.47	11.23	11.09	171.07	-14.36	47.74	104.38	82.14	22.24	4.693	
3,300.00	3,295.78	3,288.46	3,287.42	11.60	11.43	169.63	-12.42	55.42	124.27	101.36	22.92	5.422	
3,400.00	3,394.80	3,385.20	3,383.57	11.96	11.78	167.29	-7.83	64.96	144.94	121.35	23.59	6.144	
3,500.00	3,493.83	3,481.99	3,479.46	12.33	12.13	164.57	-0.97	76.15	166.54	142.27	24.27	6.863	
3,600.00	3,592.86	3,579.31	3,575.83	12.71	12.48	162.35	6.24	87.62	188.54	163.58	24.95	7.555	
3,700.00	3,691.88	3,676.63	3,672.21	13.08	12.83	160.59	13.45	99.09	210.75	185.10	25.65	8.218	
3,800.00	3,790.91	3,773.95	3,768.58	13.46	13.19	159.17	20.66	110.56	233.11	206.77	26.34	8.850	
3,900.00	3,889.93	3,871.27	3,864.95	13.83	13.55	158.00	27.87	122.02	255.59	228.55	27.04	9.452	
4,000.00	3,988.96	3,968.59	3,961.32	14.21	13.91	157.01	35.08	133.49	278.15	250.41	27.74	10.027	
4,100.00	4,087.98	4,065.90	4,057.69	14.59	14.27	156.18	42.29	144.96	300.78	272.33	28.44	10.574	
4,200.00	4,187.01	4,163.22	4,154.07	14.97	14.63	155.46	49.50	156.43	323.46	294.31	29.15	11.096	
4,300.00	4,286.04	4,260.54	4,250.44	15.36	15.00	154.83	56.71	167.90	346.18	316.32	29.86	11.594	
4,400.00	4,385.06	4,357.86	4,346.81	15.74	15.36	154.29	63.92	179.36	368.94	338.37	30.57	12.069	
4,500.00	4,484.09	4,455.18	4,443.18	16.13	15.73	153.80	71.13	190.83	391.72	360.44	31.28	12.523	
4,579.75	4,563.06	4,532.80	4,520.04	16.43	16.03	153.45	76.88	199.98	409.91	378.06	31.85	12.870	
4,600.00	4,583.12	4,552.51	4,539.57	16.51	16.10	153.41	78.34	202.30	414.47	382.47	31.99	12.955	
4,700.00	4,682.45	4,650.27	4,636.37	16.89	16.47	153.06	85.58	213.82	435.16	402.45	32.71	13.305	
4,800.00	4,782.13	4,748.54	4,733.69	17.26	16.85	152.54	92.86	225.40	452.85	419.43	33.42	13.550	
4,900.00	4,882.02	4,847.22	4,831.40	17.62	17.22	151.83	100.17	237.03	467.57	433.43	34.14	13.698	
4,979.99	4,962.00	4,926.36	4,909.78	17.90	17.53	96.47	106.03	246.36	477.23	442.52	34.71	13.751	

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 302H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,982.01	4,946.18	4,929.40	17.97	17.60	96.26	107.50	248.69	479.42	444.57	34.85	13.758		
5,100.00	5,082.01	5,045.20	5,027.46	18.32	17.98	95.25	114.84	260.36	490.44	454.88	35.56	13.792		
5,200.00	5,182.01	5,144.23	5,125.52	18.67	18.36	94.29	122.17	272.03	501.60	465.33	36.27	13.828		
5,300.00	5,282.01	5,243.26	5,223.58	19.02	18.75	93.37	129.51	283.70	512.91	475.92	36.99	13.867		
5,400.00	5,382.01	5,342.28	5,321.65	19.37	19.13	92.49	136.84	295.37	524.33	486.63	37.70	13.907		
5,500.00	5,482.01	5,441.31	5,419.71	19.72	19.51	91.65	144.18	307.04	535.88	497.46	38.42	13.949		
5,600.00	5,582.01	5,547.79	5,525.20	20.07	19.92	90.80	151.87	319.27	547.27	508.06	39.21	13.959		
5,700.00	5,682.01	5,666.56	5,643.34	20.42	20.37	90.12	158.35	329.58	555.92	515.84	40.08	13.869		
5,800.00	5,782.01	5,786.15	5,762.70	20.77	20.81	89.72	162.24	335.77	561.10	520.18	40.92	13.712		
5,900.00	5,882.01	5,906.14	5,882.66	21.13	21.23	89.59	163.47	337.73	562.75	521.03	41.71	13.491		
5,904.59	5,886.60	5,911.65	5,888.17	21.14	21.25	89.59	163.46	337.72	562.74	520.99	41.75	13.480		
6,000.00	5,982.01	6,005.36	5,981.88	21.48	21.58	89.59	163.47	337.73	562.75	520.33	42.41	13.268		
6,100.00	6,082.01	6,105.36	6,081.88	21.83	21.92	89.59	163.47	337.73	562.75	519.63	43.12	13.051		
6,200.00	6,182.01	6,205.36	6,181.88	22.18	22.27	89.59	163.47	337.73	562.75	518.92	43.82	12.841		
6,300.00	6,282.01	6,305.36	6,281.88	22.53	22.62	89.59	163.47	337.73	562.75	518.22	44.53	12.637		
6,400.00	6,382.01	6,405.36	6,381.88	22.89	22.97	89.59	163.47	337.73	562.75	517.51	45.24	12.440		
6,500.00	6,482.01	6,505.36	6,481.88	23.24	23.32	89.59	163.47	337.73	562.75	516.81	45.94	12.249		
6,600.00	6,582.01	6,605.36	6,581.88	23.59	23.66	89.59	163.47	337.73	562.75	516.10	46.65	12.063		
6,700.00	6,682.01	6,705.36	6,681.88	23.95	24.01	89.59	163.47	337.73	562.75	515.39	47.36	11.883		
6,800.00	6,782.01	6,805.36	6,781.88	24.30	24.36	89.59	163.47	337.73	562.75	514.68	48.06	11.708		
6,900.00	6,882.01	6,905.36	6,881.88	24.65	24.71	89.59	163.47	337.73	562.75	513.98	48.77	11.538		
7,000.00	6,982.01	7,005.36	6,981.88	25.01	25.06	89.59	163.47	337.73	562.75	513.27	49.48	11.373		
7,100.00	7,082.01	7,105.36	7,081.88	25.36	25.41	89.59	163.47	337.73	562.75	512.56	50.19	11.213		
7,200.00	7,182.01	7,205.36	7,181.88	25.71	25.76	89.59	163.47	337.73	562.75	511.85	50.90	11.057		
7,300.00	7,282.01	7,305.36	7,281.88	26.07	26.11	89.59	163.47	337.73	562.75	511.14	51.61	10.905		
7,400.00	7,382.01	7,405.36	7,381.88	26.42	26.46	89.59	163.47	337.73	562.75	510.43	52.31	10.757		
7,500.00	7,482.01	7,505.36	7,481.88	26.78	26.81	89.59	163.47	337.73	562.75	509.72	53.02	10.613		
7,600.00	7,582.01	7,605.36	7,581.88	27.13	27.16	89.59	163.47	337.73	562.75	509.02	53.73	10.473		
7,700.00	7,682.01	7,705.36	7,681.88	27.48	27.52	89.59	163.47	337.73	562.75	508.31	54.44	10.337		
7,800.00	7,782.01	7,805.36	7,781.88	27.84	27.87	89.59	163.47	337.73	562.75	507.60	55.15	10.204		
7,900.00	7,882.01	7,905.36	7,881.88	28.19	28.22	89.59	163.47	337.73	562.75	506.89	55.86	10.074		
8,000.00	7,982.01	8,005.36	7,981.88	28.55	28.57	89.59	163.47	337.73	562.75	506.18	56.57	9.947		
8,100.00	8,082.01	8,105.36	8,081.88	28.90	28.92	89.59	163.47	337.73	562.75	505.47	57.28	9.824		
8,200.00	8,182.01	8,205.36	8,181.88	29.26	29.28	89.59	163.47	337.73	562.75	504.76	57.99	9.704		
8,300.00	8,282.01	8,305.36	8,281.88	29.61	29.63	89.59	163.47	337.73	562.75	504.04	58.70	9.586		
8,400.00	8,382.01	8,405.36	8,381.88	29.97	29.98	89.59	163.47	337.73	562.75	503.33	59.41	9.472		
8,500.00	8,482.01	8,505.36	8,481.88	30.32	30.33	89.59	163.47	337.73	562.75	502.62	60.13	9.360		
8,600.00	8,582.01	8,605.36	8,581.88	30.68	30.68	89.59	163.47	337.73	562.75	501.91	60.84	9.250		
8,700.00	8,682.01	8,705.36	8,681.88	31.03	31.04	89.59	163.47	337.73	562.75	501.20	61.55	9.143		
8,800.00	8,782.01	8,805.36	8,781.88	31.39	31.39	89.59	163.47	337.73	562.75	500.49	62.26	9.039		
8,900.00	8,882.01	8,905.36	8,881.88	31.74	31.74	89.59	163.47	337.73	562.75	499.78	62.97	8.937		
9,000.00	8,982.01	9,005.36	8,981.88	32.10	32.10	89.59	163.47	337.73	562.75	499.07	63.68	8.837		
9,100.00	9,082.01	9,105.36	9,081.88	32.46	32.45	89.59	163.47	337.73	562.75	498.35	64.39	8.739		
9,200.00	9,182.01	9,205.36	9,181.88	32.81	32.80	89.59	163.47	337.73	562.75	497.64	65.11	8.644		
9,300.00	9,282.01	9,305.36	9,281.88	33.17	33.16	89.59	163.47	337.73	562.75	496.93	65.82	8.550		
9,400.00	9,382.01	9,405.36	9,381.88	33.52	33.51	89.59	163.47	337.73	562.75	496.22	66.53	8.459		
9,500.00	9,482.01	9,505.36	9,481.88	33.88	33.86	89.59	163.47	337.73	562.75	495.51	67.24	8.369		
9,600.00	9,582.01	9,605.36	9,581.88	34.23	34.22	89.59	163.47	337.73	562.75	494.79	67.95	8.281		
9,700.00	9,682.01	9,705.36	9,681.88	34.59	34.57	89.59	163.47	337.73	562.75	494.08	68.67	8.195		
9,800.00	9,782.01	9,805.36	9,781.88	34.95	34.93	89.59	163.47	337.73	562.75	493.37	69.38	8.111		
9,900.00	9,882.01	9,905.36	9,881.88	35.30	35.28	89.59	163.47	337.73	562.75	492.66	70.09	8.029		
10,000.00	9,982.01	10,005.36	9,981.88	35.66	35.63	89.59	163.47	337.73	562.75	491.94	70.80	7.948		

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

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Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 302H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,082.01	10,105.36	10,081.88	36.01	35.99	89.59	163.47	337.73	562.75	491.23	71.52	7.869		
10,200.00	10,182.01	10,205.36	10,181.88	36.37	36.34	89.59	163.47	337.73	562.75	490.52	72.23	7.791		
10,300.00	10,282.01	10,305.36	10,281.88	36.73	36.70	89.59	163.47	337.73	562.75	489.81	72.94	7.715		
10,400.00	10,382.01	10,405.36	10,381.88	37.08	37.05	89.59	163.47	337.73	562.75	489.09	73.65	7.640		
10,500.00	10,482.01	10,505.36	10,481.88	37.44	37.41	89.59	163.47	337.73	562.75	488.38	74.37	7.567		
10,600.00	10,582.01	10,605.36	10,581.88	37.80	37.76	89.59	163.47	337.73	562.75	487.67	75.08	7.495		
10,700.00	10,682.01	10,705.36	10,681.88	38.15	38.12	89.59	163.47	337.73	562.75	486.95	75.79	7.425		
10,800.00	10,782.01	10,805.36	10,781.88	38.51	38.47	89.59	163.47	337.73	562.75	486.24	76.51	7.356		
10,900.00	10,882.01	10,905.36	10,881.88	38.86	38.83	89.59	163.47	337.73	562.75	485.53	77.22	7.288		
11,000.00	10,982.01	11,005.36	10,981.88	39.22	39.18	89.59	163.47	337.73	562.75	484.81	77.93	7.221		
11,100.00	11,082.01	11,105.36	11,081.88	39.58	39.54	89.59	163.47	337.73	562.75	484.10	78.65	7.155		
11,200.00	11,182.01	11,205.36	11,181.88	39.93	39.89	89.59	163.47	337.73	562.75	483.39	79.36	7.091		
11,300.00	11,282.01	11,305.36	11,281.88	40.29	40.25	89.59	163.47	337.73	562.75	482.67	80.07	7.028		
11,400.00	11,382.01	11,405.36	11,381.88	40.65	40.60	89.59	163.47	337.73	562.75	481.96	80.79	6.966		
11,407.18	11,389.19	11,412.54	11,389.06	40.67	40.63	89.59	163.47	337.73	562.75	481.91	80.84	6.961		
11,500.00	11,482.01	11,504.66	11,480.88	41.00	40.93	90.21	157.45	337.78	562.79	481.32	81.47	6.908		
11,600.00	11,582.01	11,600.00	11,573.64	41.36	41.22	92.40	135.90	337.97	563.52	481.40	82.12	6.862		
11,700.00	11,682.01	11,684.75	11,652.10	41.72	41.45	95.62	104.07	338.24	566.74	484.09	82.65	6.857		
11,800.00	11,782.01	11,759.35	11,716.63	42.07	41.62	99.34	66.73	338.56	574.85	491.91	82.94	6.931		
11,900.00	11,882.01	11,822.94	11,767.41	42.43	41.76	103.07	28.52	338.88	590.10	507.31	82.79	7.128		
12,000.00	11,982.01	11,876.52	11,806.70	42.79	41.85	106.52	-7.88	339.19	614.01	531.94	82.07	7.482		
12,100.00	12,082.01	11,921.56	11,836.97	43.14	41.92	109.57	-41.21	339.47	647.21	566.42	80.80	8.011		
12,200.00	12,182.01	11,950.00	11,854.71	43.50	41.96	111.54	-63.44	339.66	689.62	610.76	78.86	8.744		
12,300.00	12,282.01	12,000.00	11,883.13	43.86	42.02	115.05	-104.56	340.01	740.24	662.85	77.39	9.565		
12,400.00	12,382.01	12,019.03	11,892.99	44.22	42.04	116.38	-120.84	340.15	798.11	722.92	75.20	10.613		
12,500.00	12,482.01	12,050.00	11,907.86	44.57	42.09	118.54	-148.00	340.38	862.38	788.90	73.48	11.736		
12,556.03	12,538.04	12,050.00	11,907.86	44.77	42.09	118.54	-148.00	340.38	900.65	828.44	72.20	12.474		
12,600.00	12,581.97	12,050.00	11,907.86	44.92	42.09	-60.50	-148.00	340.38	931.40	860.16	71.24	13.073		
12,650.00	12,631.59	12,075.00	11,918.78	45.08	42.14	-55.06	-170.48	340.57	965.44	894.70	70.74	13.647		
12,700.00	12,680.50	12,100.00	11,928.70	45.23	42.20	-50.31	-193.42	340.77	999.14	928.90	70.24	14.224		
12,750.00	12,728.32	12,100.00	11,928.70	45.38	42.20	-47.13	-193.42	340.77	1,031.40	962.16	69.24	14.896		
12,800.00	12,774.70	12,100.00	11,928.70	45.51	42.20	-44.25	-193.42	340.77	1,062.80	994.51	68.30	15.562		
12,850.00	12,819.28	12,127.65	11,938.51	45.64	42.26	-40.95	-219.28	340.99	1,092.29	1,024.38	67.91	16.083		
12,900.00	12,861.72	12,150.00	11,945.51	45.76	42.31	-38.30	-240.50	341.17	1,120.42	1,052.97	67.45	16.611		
12,950.00	12,901.69	12,150.00	11,945.51	45.86	42.31	-36.43	-240.50	341.17	1,146.65	1,079.98	66.67	17.200		
13,000.00	12,938.90	12,172.35	11,951.69	45.95	42.36	-34.47	-261.98	341.35	1,170.88	1,104.60	66.28	17.665		
13,050.00	12,973.05	12,200.00	11,958.16	46.03	42.42	-32.78	-288.85	341.58	1,193.26	1,127.27	66.00	18.081		
13,100.00	13,003.89	12,200.00	11,958.16	46.10	42.42	-31.63	-288.85	341.58	1,213.14	1,147.72	65.42	18.543		
13,150.00	13,031.19	12,219.82	11,962.00	46.18	42.46	-30.50	-308.30	341.75	1,230.88	1,165.73	65.15	18.894		
13,200.00	13,054.74	12,250.00	11,966.54	46.28	42.53	-29.53	-338.13	342.00	1,246.51	1,181.50	65.01	19.174		
13,250.00	13,074.35	12,250.00	11,966.54	46.39	42.53	-28.89	-338.13	342.00	1,259.28	1,194.58	64.70	19.465		
13,300.00	13,089.88	12,268.97	11,968.59	46.49	42.57	-28.33	-356.99	342.16	1,269.79	1,205.19	64.60	19.655		
13,350.00	13,101.21	12,300.00	11,970.59	46.59	42.64	-27.93	-387.94	342.42	1,278.04	1,213.41	64.63	19.775		
13,400.00	13,108.26	12,300.00	11,970.59	46.69	42.64	-27.68	-387.94	342.42	1,283.26	1,218.65	64.61	19.862		
13,450.00	13,110.97	12,321.52	11,971.00	46.79	42.69	-27.58	-409.46	342.61	1,286.16	1,221.42	64.74	19.866		
13,456.03	13,111.00	12,321.52	11,971.00	46.80	42.69	-27.57	-409.46	342.61	1,286.33	1,221.57	64.76	19.863		
13,500.00	13,111.00	12,363.68	11,971.00	46.88	42.79	-27.67	-451.62	342.97	1,287.36	1,222.43	64.93	19.826		
13,600.00	13,111.00	12,463.65	11,971.00	47.11	43.05	-27.79	-551.58	343.82	1,288.54	1,223.23	65.31	19.729		
13,623.18	13,111.00	12,486.83	11,971.00	47.17	43.11	-27.80	-574.76	344.01	1,288.59	1,223.19	65.40	19.704		
13,700.00	13,111.00	12,563.64	11,971.00	47.38	43.35	-27.80	-651.57	344.67	1,288.58	1,222.89	65.69	19.615		
13,800.00	13,111.00	12,663.64	11,971.00	47.69	43.70	-27.80	-751.57	345.52	1,288.58	1,222.45	66.12	19.487		
13,900.00	13,111.00	12,763.64	11,971.00	48.04	44.09	-27.80	-851.57	346.37	1,288.57	1,221.97	66.61	19.345		

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

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Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,000.00	13,111.00	12,863.64	11,971.00	48.43	44.52	-27.80	-951.56	347.22	1,288.57	1,221.42	67.15	19.191		
14,100.00	13,111.00	12,963.64	11,971.00	48.85	45.00	-27.80	-1,051.56	348.07	1,288.57	1,220.83	67.73	19.024		
14,200.00	13,111.00	13,063.64	11,971.00	49.32	45.51	-27.80	-1,151.56	348.92	1,288.56	1,220.19	68.37	18.847		
14,300.00	13,111.00	13,163.64	11,971.00	49.82	46.06	-27.80	-1,251.55	349.77	1,288.56	1,219.50	69.06	18.660		
14,400.00	13,111.00	13,263.64	11,971.00	50.36	46.65	-27.80	-1,351.55	350.62	1,288.55	1,218.76	69.79	18.464		
14,500.00	13,111.00	13,363.64	11,971.00	50.93	47.27	-27.80	-1,451.55	351.47	1,288.55	1,217.98	70.56	18.261		
14,600.00	13,111.00	13,463.64	11,971.00	51.53	47.93	-27.80	-1,551.54	352.32	1,288.54	1,217.16	71.38	18.051		
14,700.00	13,111.00	13,563.64	11,971.00	52.17	48.63	-27.79	-1,651.54	353.17	1,288.54	1,216.29	72.25	17.835		
14,800.00	13,111.00	13,663.64	11,971.00	52.84	49.35	-27.79	-1,751.53	354.02	1,288.53	1,215.38	73.15	17.615		
14,900.00	13,111.00	13,763.64	11,971.00	53.54	50.11	-27.79	-1,851.53	354.87	1,288.53	1,214.44	74.09	17.391		
15,000.00	13,111.00	13,863.64	11,971.00	54.27	50.89	-27.79	-1,951.53	355.72	1,288.52	1,213.45	75.07	17.164		
15,100.00	13,111.00	13,963.64	11,971.00	55.02	51.70	-27.79	-2,051.52	356.57	1,288.52	1,212.43	76.09	16.934		
15,200.00	13,111.00	14,063.64	11,971.00	55.81	52.54	-27.79	-2,151.52	357.42	1,288.51	1,211.37	77.14	16.704		
15,300.00	13,111.00	14,163.64	11,971.00	56.61	53.41	-27.79	-2,251.52	358.27	1,288.51	1,210.29	78.22	16.472		
15,400.00	13,111.00	14,263.64	11,971.00	57.45	54.30	-27.79	-2,351.51	359.13	1,288.51	1,209.16	79.34	16.240		
15,500.00	13,111.00	14,363.64	11,971.00	58.30	55.21	-27.79	-2,451.51	359.98	1,288.50	1,208.01	80.49	16.009		
15,600.00	13,111.00	14,463.64	11,971.00	59.18	56.14	-27.79	-2,551.51	360.83	1,288.50	1,206.83	81.66	15.778		
15,700.00	13,111.00	14,563.64	11,971.00	60.08	57.10	-27.79	-2,651.50	361.68	1,288.49	1,205.62	82.87	15.548		
15,800.00	13,111.00	14,663.64	11,971.00	61.00	58.07	-27.79	-2,751.50	362.53	1,288.49	1,204.38	84.10	15.321		
15,900.00	13,111.00	14,763.64	11,971.00	61.94	59.06	-27.79	-2,851.49	363.38	1,288.48	1,203.12	85.36	15.095		
16,000.00	13,111.00	14,863.64	11,971.00	62.90	60.07	-27.79	-2,951.49	364.23	1,288.48	1,201.84	86.64	14.871		
16,100.00	13,111.00	14,963.64	11,971.00	63.88	61.10	-27.79	-3,051.49	365.08	1,288.47	1,200.53	87.95	14.650		
16,200.00	13,111.00	15,063.64	11,971.00	64.87	62.15	-27.79	-3,151.48	365.93	1,288.47	1,199.19	89.28	14.432		
16,300.00	13,111.00	15,163.64	11,971.00	65.88	63.20	-27.79	-3,251.48	366.78	1,288.46	1,197.84	90.63	14.217		
16,400.00	13,111.00	15,263.64	11,971.00	66.91	64.28	-27.79	-3,351.48	367.63	1,288.46	1,196.46	92.00	14.006		
16,500.00	13,111.00	15,363.64	11,971.00	67.95	65.37	-27.79	-3,451.47	368.48	1,288.45	1,195.07	93.39	13.797		
16,600.00	13,111.00	15,463.64	11,971.00	69.00	66.47	-27.79	-3,551.47	369.33	1,288.45	1,193.65	94.80	13.592		
16,700.00	13,111.00	15,563.64	11,971.00	70.07	67.58	-27.79	-3,651.47	370.18	1,288.45	1,192.22	96.22	13.390		
16,800.00	13,111.00	15,663.64	11,971.00	71.15	68.71	-27.79	-3,751.46	371.03	1,288.44	1,190.77	97.67	13.192		
16,900.00	13,111.00	15,763.64	11,971.00	72.25	69.84	-27.79	-3,851.46	371.88	1,288.44	1,189.31	99.13	12.998		
17,000.00	13,111.00	15,863.64	11,971.00	73.35	70.99	-27.79	-3,951.45	372.73	1,288.43	1,187.83	100.61	12.807		
17,100.00	13,111.00	15,963.64	11,971.00	74.47	72.15	-27.79	-4,051.45	373.58	1,288.43	1,186.33	102.10	12.620		
17,200.00	13,111.00	16,063.64	11,971.00	75.60	73.32	-27.79	-4,151.45	374.43	1,288.42	1,184.82	103.60	12.436		
17,300.00	13,111.00	16,163.64	11,971.00	76.73	74.50	-27.78	-4,251.44	375.29	1,288.42	1,183.29	105.12	12.256		
17,400.00	13,111.00	16,263.64	11,971.00	77.88	75.68	-27.78	-4,351.44	376.14	1,288.41	1,181.76	106.66	12.080		
17,500.00	13,111.00	16,363.64	11,971.00	79.04	76.88	-27.78	-4,451.44	376.99	1,288.41	1,180.21	108.20	11.907		
17,600.00	13,111.00	16,463.64	11,971.00	80.20	78.08	-27.78	-4,551.43	377.84	1,288.40	1,178.64	109.76	11.738		
17,700.00	13,111.00	16,563.64	11,971.00	81.38	79.29	-27.78	-4,651.43	378.69	1,288.40	1,177.07	111.33	11.573		
17,800.00	13,111.00	16,663.64	11,971.00	82.56	80.51	-27.78	-4,751.43	379.54	1,288.39	1,175.48	112.91	11.411		
17,900.00	13,111.00	16,763.64	11,971.00	83.75	81.73	-27.78	-4,851.42	380.39	1,288.39	1,173.89	114.50	11.252		
18,000.00	13,111.00	16,863.64	11,971.00	84.95	82.97	-27.78	-4,951.42	381.24	1,288.39	1,172.28	116.10	11.097		
18,100.00	13,111.00	16,963.64	11,971.00	86.16	84.21	-27.78	-5,051.42	382.09	1,288.38	1,170.67	117.71	10.945		
18,200.00	13,111.00	17,063.64	11,971.00	87.37	85.45	-27.78	-5,151.41	382.94	1,288.38	1,169.04	119.34	10.796		
18,300.00	13,111.00	17,163.64	11,971.00	88.59	86.70	-27.78	-5,251.41	383.79	1,288.37	1,167.41	120.97	10.651		
18,400.00	13,111.00	17,263.64	11,971.00	89.82	87.96	-27.78	-5,351.40	384.64	1,288.37	1,165.76	122.60	10.508		
18,500.00	13,111.00	17,363.64	11,971.00	91.05	89.22	-27.78	-5,451.40	385.49	1,288.36	1,164.11	124.25	10.369		
18,600.00	13,111.00	17,463.64	11,971.00	92.28	90.49	-27.78	-5,551.40	386.34	1,288.36	1,162.45	125.91	10.233		
18,700.00	13,111.00	17,563.64	11,971.00	93.53	91.76	-27.78	-5,651.39	387.19	1,288.35	1,160.79	127.57	10.099		
18,800.00	13,111.00	17,663.64	11,971.00	94.78	93.03	-27.78	-5,751.39	388.04	1,288.35	1,159.11	129.24	9.969		
18,900.00	13,111.00	17,763.64	11,971.00	96.03	94.32	-27.78	-5,851.39	388.89	1,288.34	1,157.43	130.91	9.841		
19,000.00	13,111.00	17,863.64	11,971.00	97.29	95.60	-27.78	-5,951.38	389.74	1,288.34	1,155.74	132.60	9.716		
19,100.00	13,111.00	17,963.64	11,971.00	98.56	96.89	-27.78	-6,051.38	390.59	1,288.33	1,154.05	134.29	9.594		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 302H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program:		0-OWSG_Rev2_MWD+HRGM						Rule Assigned:				Offset Well Error:	0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
19,200.00	13,111.00	18,063.64	11,971.00	99.82	98.18	-27.78	-6,151.38	391.45	1,288.33	1,152.34	135.99	9.474		
19,300.00	13,111.00	18,163.64	11,971.00	101.10	99.48	-27.78	-6,251.37	392.30	1,288.33	1,150.64	137.69	9.357		
19,400.00	13,111.00	18,263.64	11,971.00	102.37	100.78	-27.78	-6,351.37	393.15	1,288.32	1,148.92	139.40	9.242		
19,500.00	13,111.00	18,363.64	11,971.00	103.66	102.09	-27.78	-6,451.36	394.00	1,288.32	1,147.20	141.11	9.130		
19,600.00	13,111.00	18,463.64	11,971.00	104.94	103.40	-27.78	-6,551.36	394.85	1,288.31	1,145.48	142.83	9.020		
19,700.00	13,111.00	18,563.64	11,971.00	106.23	104.71	-27.78	-6,651.36	395.70	1,288.31	1,143.75	144.56	8.912		
19,800.00	13,111.00	18,663.64	11,971.00	107.52	106.03	-27.77	-6,751.35	396.55	1,288.30	1,142.01	146.29	8.807		
19,900.00	13,111.00	18,763.64	11,971.00	108.82	107.34	-27.77	-6,851.35	397.40	1,288.30	1,140.27	148.02	8.703		
20,000.00	13,111.00	18,863.64	11,971.00	110.12	108.66	-27.77	-6,951.35	398.25	1,288.29	1,138.53	149.76	8.602		
20,100.00	13,111.00	18,963.64	11,971.00	111.43	109.99	-27.77	-7,051.34	399.10	1,288.29	1,136.78	151.51	8.503		
20,200.00	13,111.00	19,063.64	11,971.00	112.73	111.32	-27.77	-7,151.34	399.95	1,288.28	1,135.03	153.26	8.406		
20,300.00	13,111.00	19,163.64	11,971.00	114.04	112.65	-27.77	-7,251.34	400.80	1,288.28	1,133.27	155.01	8.311		
20,400.00	13,111.00	19,263.64	11,971.00	115.36	113.98	-27.77	-7,351.33	401.65	1,288.27	1,131.51	156.77	8.218		
20,500.00	13,111.00	19,363.64	11,971.00	116.67	115.31	-27.77	-7,451.33	402.50	1,288.27	1,129.74	158.53	8.126		
20,600.00	13,111.00	19,463.64	11,971.00	117.99	116.65	-27.77	-7,551.32	403.35	1,288.27	1,127.97	160.29	8.037		
20,700.00	13,111.00	19,563.64	11,971.00	119.31	117.99	-27.77	-7,651.32	404.20	1,288.26	1,126.20	162.06	7.949		
20,800.00	13,111.00	19,663.64	11,971.00	120.64	119.33	-27.77	-7,751.32	405.05	1,288.26	1,124.42	163.83	7.863		
20,900.00	13,111.00	19,763.64	11,971.00	121.96	120.67	-27.77	-7,851.31	405.90	1,288.25	1,122.64	165.61	7.779		
21,000.00	13,111.00	19,863.64	11,971.00	123.29	122.02	-27.77	-7,951.31	406.75	1,288.25	1,120.86	167.39	7.696		
21,100.00	13,111.00	19,963.64	11,971.00	124.62	123.37	-27.77	-8,051.31	407.61	1,288.24	1,119.07	169.17	7.615		
21,200.00	13,111.00	20,063.64	11,971.00	125.96	124.72	-27.77	-8,151.30	408.46	1,288.24	1,117.28	170.96	7.535		
21,300.00	13,111.00	20,163.64	11,971.00	127.29	126.07	-27.77	-8,251.30	409.31	1,288.23	1,115.49	172.75	7.457		
21,400.00	13,111.00	20,263.64	11,971.00	128.63	127.42	-27.77	-8,351.30	410.16	1,288.23	1,113.69	174.54	7.381		
21,500.00	13,111.00	20,363.64	11,971.00	129.97	128.78	-27.77	-8,451.29	411.01	1,288.22	1,111.89	176.33	7.306		
21,600.00	13,111.00	20,463.65	11,971.00	131.31	130.14	-27.77	-8,551.29	411.86	1,288.22	1,110.09	178.13	7.232		
21,700.00	13,111.00	20,563.65	11,971.00	132.66	131.50	-27.77	-8,651.29	412.71	1,288.21	1,108.28	179.93	7.160		
21,800.00	13,111.00	20,663.65	11,971.00	134.00	132.86	-27.77	-8,751.28	413.56	1,288.21	1,106.48	181.73	7.089		
21,900.00	13,111.00	20,763.65	11,971.00	135.35	134.22	-27.77	-8,851.28	414.41	1,288.21	1,104.67	183.54	7.019		
22,000.00	13,111.00	20,863.65	11,971.00	136.70	135.58	-27.77	-8,951.27	415.26	1,288.20	1,102.86	185.35	6.950		
22,100.00	13,111.00	20,963.65	11,971.00	138.05	136.95	-27.77	-9,051.27	416.11	1,288.20	1,101.04	187.16	6.883		
22,200.00	13,111.00	21,063.65	11,971.00	139.41	138.31	-27.77	-9,151.27	416.96	1,288.19	1,099.22	188.97	6.817		
22,300.00	13,111.00	21,163.65	11,971.00	140.76	139.68	-27.77	-9,251.26	417.81	1,288.19	1,097.40	190.78	6.752		
22,400.00	13,111.00	21,263.65	11,971.00	142.12	141.05	-27.76	-9,351.26	418.66	1,288.18	1,095.58	192.60	6.688		
22,500.00	13,111.00	21,363.65	11,971.00	143.47	142.42	-27.76	-9,451.26	419.51	1,288.18	1,093.76	194.42	6.626		
22,600.00	13,111.00	21,463.65	11,971.00	144.83	143.79	-27.76	-9,551.25	420.36	1,288.17	1,091.93	196.24	6.564		
22,700.00	13,111.00	21,563.65	11,971.00	146.19	145.17	-27.76	-9,651.25	421.21	1,288.17	1,090.11	198.06	6.504		
22,800.00	13,111.00	21,663.65	11,971.00	147.56	146.54	-27.76	-9,751.25	422.06	1,288.16	1,088.28	199.89	6.444		
22,900.00	13,111.00	21,763.65	11,971.00	148.92	147.92	-27.76	-9,851.24	422.91	1,288.16	1,086.44	201.72	6.386		
23,000.00	13,111.00	21,863.65	11,971.00	150.29	149.29	-27.76	-9,951.24	423.77	1,288.15	1,084.61	203.54	6.329		
23,100.00	13,111.00	21,963.65	11,971.00	151.65	150.67	-27.76	-10,051.23	424.62	1,288.15	1,082.77	205.38	6.272		
23,200.00	13,111.00	22,063.65	11,971.00	153.02	152.05	-27.76	-10,151.23	425.47	1,288.15	1,080.94	207.21	6.217		
23,300.00	13,111.00	22,163.65	11,971.00	154.39	153.43	-27.76	-10,251.23	426.32	1,288.14	1,079.10	209.04	6.162		
23,400.00	13,111.00	22,263.65	11,971.00	155.76	154.81	-27.76	-10,351.22	427.17	1,288.14	1,077.26	210.88	6.108		
23,500.00	13,111.00	22,363.65	11,971.00	157.13	156.19	-27.76	-10,451.22	428.02	1,288.13	1,075.42	212.72	6.056		
23,600.00	13,111.00	22,463.65	11,971.00	158.50	157.58	-27.76	-10,551.22	428.87	1,288.13	1,073.57	214.55	6.004		
23,700.00	13,111.00	22,563.65	11,971.00	159.88	158.96	-27.76	-10,651.21	429.72	1,288.12	1,071.73	216.39	5.953		
23,756.58	13,111.00	22,620.22	11,971.00	160.65	159.74	-27.76	-10,707.79	430.20	1,288.12	1,070.68	217.44	5.924		
23,757.21	13,111.00	22,620.85	11,971.00	160.66	159.75	-27.76	-10,708.42	430.21	1,288.12	1,070.67	217.45	5.924		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 442H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
0.00	0.00	0.22	0.22	0.00	0.00	-90.44	-0.19	-25.00	25.00				
100.00	100.00	100.22	100.22	0.13	0.13	-90.44	-0.19	-25.00	25.00	24.74	0.26	95.905	
200.00	200.00	200.22	200.22	0.49	0.49	-90.44	-0.19	-25.00	25.00	24.02	0.98	25.573	
300.00	300.00	300.22	300.22	0.85	0.85	-90.44	-0.19	-25.00	25.00	23.31	1.69	14.753	
400.00	400.00	400.22	400.22	1.21	1.21	-90.44	-0.19	-25.00	25.00	22.59	2.41	10.367	
500.00	500.00	500.22	500.22	1.56	1.56	-90.44	-0.19	-25.00	25.00	21.87	3.13	7.991	
600.00	600.00	600.22	600.22	1.92	1.92	-90.44	-0.19	-25.00	25.00	21.16	3.85	6.501	
700.00	700.00	700.22	700.22	2.28	2.28	-90.44	-0.19	-25.00	25.00	20.44	4.56	5.480	
800.00	800.00	800.22	800.22	2.64	2.64	-90.44	-0.19	-25.00	25.00	19.72	5.28	4.736	
900.00	900.00	900.22	900.22	3.00	3.00	-90.44	-0.19	-25.00	25.00	19.00	6.00	4.169	
1,000.00	1,000.00	1,000.22	1,000.22	3.36	3.36	-90.44	-0.19	-25.00	25.00	18.29	6.71	3.724	
1,100.00	1,100.00	1,100.22	1,100.22	3.71	3.72	-90.44	-0.19	-25.00	25.00	17.57	7.43	3.365	
1,200.00	1,200.00	1,200.22	1,200.22	4.07	4.07	-90.44	-0.19	-25.00	25.00	16.85	8.15	3.069	
1,300.00	1,300.00	1,300.22	1,300.22	4.43	4.43	-90.44	-0.19	-25.00	25.00	16.14	8.86	2.820	
1,400.00	1,400.00	1,400.22	1,400.22	4.79	4.79	-90.44	-0.19	-25.00	25.00	15.42	9.58	2.609	
1,500.00	1,500.00	1,500.22	1,500.22	5.15	5.15	-90.44	-0.19	-25.00	25.00	14.70	10.30	2.428	
1,600.00	1,600.00	1,600.22	1,600.22	5.51	5.51	-90.44	-0.19	-25.00	25.00	13.99	11.01	2.270	
1,700.00	1,700.00	1,700.22	1,700.22	5.87	5.87	-90.44	-0.19	-25.00	25.00	13.27	11.73	2.131	
1,800.00	1,800.00	1,800.22	1,800.22	6.22	6.22	-90.44	-0.19	-25.00	25.00	12.55	12.45	2.008	
1,900.00	1,900.00	1,900.22	1,900.22	6.58	6.58	-90.44	-0.19	-25.00	25.00	11.84	13.17	1.899	
2,000.00	2,000.00	2,000.22	2,000.22	6.94	6.94	-90.44	-0.19	-25.00	25.00	11.12	13.88	1.801	
2,100.00	2,100.00	2,100.22	2,100.22	7.30	7.30	-90.44	-0.19	-25.00	25.00	10.40	14.60	1.712	
2,200.00	2,200.00	2,200.22	2,200.22	7.66	7.66	-90.44	-0.19	-25.00	25.00	9.68	15.32	1.632	
2,300.00	2,300.00	2,300.22	2,300.22	8.02	8.02	-90.44	-0.19	-25.00	25.00	8.97	16.03	1.559	
2,400.00	2,400.00	2,400.22	2,400.22	8.37	8.38	-90.44	-0.19	-25.00	25.00	8.25	16.75	1.493 Level 3	
2,500.00	2,500.00	2,500.22	2,500.22	8.73	8.73	-90.44	-0.19	-25.00	25.00	7.53	17.47	1.431 Level 3	
2,516.59	2,516.59	2,516.81	2,516.81	8.79	8.79	-90.44	-0.19	-25.00	25.00	7.41	17.59	1.422 Level 3, CC	
2,600.00	2,600.00	2,600.00	2,600.00	9.09	9.09	-90.44	-0.19	-25.00	25.00	6.82	18.18	1.375 Level 3	
2,700.00	2,699.98	2,699.44	2,699.42	9.45	9.44	-36.36	0.55	-26.56	25.15	6.27	18.88	1.332 Level 3	
2,800.00	2,799.84	2,798.65	2,798.49	9.80	9.79	-38.13	2.75	-31.23	25.61	6.06	19.55	1.310 Level 3, ES	
2,900.00	2,899.45	2,897.86	2,897.32	10.15	10.14	-40.95	6.41	-38.99	26.43	6.21	20.22	1.307 Level 3, SF	
3,000.24	2,998.94	2,997.28	2,996.01	10.51	10.49	-44.60	11.54	-49.88	27.67	6.80	20.87	1.326 Level 3	
3,100.00	3,097.73	3,096.99	3,094.75	10.87	10.85	-48.30	17.45	-62.42	29.27	7.69	21.58	1.356 Level 3	
3,200.00	3,196.75	3,196.96	3,193.75	11.23	11.21	-51.62	23.38	-75.00	30.99	8.69	22.31	1.389 Level 3	
3,300.00	3,295.78	3,296.93	3,292.75	11.60	11.58	-54.58	29.31	-87.57	32.80	9.77	23.03	1.424 Level 3	
3,400.00	3,394.80	3,396.90	3,391.75	11.96	11.94	-57.22	35.24	-100.15	34.69	10.93	23.77	1.460 Level 3	
3,500.00	3,493.83	3,496.87	3,490.75	12.33	12.31	-59.58	41.17	-112.73	36.65	12.15	24.50	1.496 Level 3	
3,600.00	3,592.86	3,596.84	3,589.74	12.71	12.68	-61.70	47.10	-125.31	38.66	13.41	25.24	1.531	
3,700.00	3,691.88	3,696.81	3,688.74	13.08	13.06	-63.61	53.03	-137.88	40.72	14.73	25.99	1.567	
3,800.00	3,790.91	3,796.78	3,787.74	13.46	13.43	-65.34	58.96	-150.46	42.82	16.08	26.74	1.601	
3,900.00	3,889.93	3,896.75	3,886.74	13.83	13.81	-66.90	64.89	-163.04	44.95	17.46	27.49	1.635	
4,000.00	3,988.96	3,996.72	3,985.74	14.21	14.19	-68.32	70.82	-175.61	47.12	18.87	28.25	1.668	
4,100.00	4,087.98	4,096.69	4,084.74	14.59	14.57	-69.61	76.75	-188.19	49.31	20.30	29.01	1.700	
4,200.00	4,187.01	4,196.66	4,183.73	14.97	14.95	-70.80	82.67	-200.77	51.52	21.75	29.77	1.731	
4,300.00	4,286.04	4,296.63	4,282.73	15.36	15.33	-71.88	88.60	-213.34	53.76	23.22	30.54	1.760	
4,400.00	4,385.06	4,396.61	4,381.73	15.74	15.72	-72.88	94.53	-225.92	56.01	24.71	31.30	1.789	
4,500.00	4,484.09	4,496.58	4,480.73	16.13	16.10	-73.80	100.46	-238.50	58.28	26.20	32.07	1.817	
4,579.75	4,563.06	4,576.30	4,559.68	16.43	16.41	-74.48	105.19	-248.53	60.09	27.41	32.69	1.838	
4,600.00	4,583.12	4,596.55	4,579.73	16.51	16.49	-74.60	106.39	-251.08	60.58	27.73	32.84	1.844	
4,700.00	4,682.45	4,696.49	4,678.70	16.89	16.87	-73.30	112.32	-263.65	63.53	29.95	33.59	1.892	
4,800.00	4,782.13	4,796.29	4,777.53	17.26	17.26	-69.35	118.24	-276.20	67.67	33.39	34.28	1.974	
4,900.00	4,882.02	4,895.83	4,876.10	17.62	17.65	-63.43	124.14	-288.73	73.61	38.67	34.94	2.107	

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 442H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,979.99	4,962.00	4,975.19	4,954.69	17.90	17.95	-112.56	128.85	-298.71	80.17	44.74	35.44	2.262		
5,000.00	4,982.01	4,995.00	4,974.31	17.97	18.03	-111.13	130.03	-301.20	82.08	46.52	35.56	2.308		
5,100.00	5,082.01	5,094.03	5,072.38	18.32	18.42	-104.89	135.90	-313.66	92.27	56.09	36.18	2.550		
5,200.00	5,182.01	5,193.06	5,170.44	18.67	18.80	-99.93	141.77	-326.12	103.33	66.50	36.83	2.806		
5,300.00	5,282.01	5,292.52	5,268.94	19.02	19.19	-95.94	147.66	-338.61	114.99	77.49	37.50	3.066		
5,400.00	5,382.01	5,395.59	5,371.30	19.37	19.59	-93.07	152.80	-349.51	125.17	86.92	38.25	3.273		
5,500.00	5,482.01	5,499.42	5,474.78	19.72	19.98	-91.34	156.38	-357.11	132.36	93.38	38.98	3.396		
5,600.00	5,582.01	5,603.71	5,578.97	20.07	20.35	-90.46	158.37	-361.33	136.38	96.69	39.68	3.437		
5,700.00	5,682.01	5,706.98	5,682.23	20.42	20.71	-90.28	158.80	-362.25	137.25	96.88	40.37	3.400		
5,800.00	5,782.01	5,806.98	5,782.23	20.77	21.05	-90.28	158.80	-362.25	137.25	96.18	41.07	3.342		
5,900.00	5,882.01	5,906.98	5,882.23	21.13	21.40	-90.28	158.80	-362.25	137.25	95.47	41.78	3.285		
6,000.00	5,982.01	6,006.98	5,982.23	21.48	21.74	-90.28	158.80	-362.25	137.25	94.77	42.48	3.231		
6,100.00	6,082.01	6,106.98	6,082.23	21.83	22.09	-90.28	158.80	-362.25	137.25	94.06	43.19	3.178		
6,200.00	6,182.01	6,206.98	6,182.23	22.18	22.44	-90.28	158.80	-362.25	137.25	93.35	43.89	3.127		
6,300.00	6,282.01	6,306.98	6,282.23	22.53	22.78	-90.28	158.80	-362.25	137.25	92.65	44.60	3.077		
6,400.00	6,382.01	6,406.98	6,382.23	22.89	23.13	-90.28	158.80	-362.25	137.25	91.94	45.31	3.029		
6,500.00	6,482.01	6,506.98	6,482.23	23.24	23.48	-90.28	158.80	-362.25	137.25	91.24	46.01	2.983		
6,600.00	6,582.01	6,606.98	6,582.23	23.59	23.83	-90.28	158.80	-362.25	137.25	90.53	46.72	2.938		
6,700.00	6,682.01	6,706.98	6,682.23	23.95	24.18	-90.28	158.80	-362.25	137.25	89.82	47.43	2.894		
6,800.00	6,782.01	6,806.98	6,782.23	24.30	24.52	-90.28	158.80	-362.25	137.25	89.11	48.13	2.851		
6,900.00	6,882.01	6,906.98	6,882.23	24.65	24.87	-90.28	158.80	-362.25	137.25	88.41	48.84	2.810		
7,000.00	6,982.01	7,006.98	6,982.23	25.01	25.22	-90.28	158.80	-362.25	137.25	87.70	49.55	2.770		
7,100.00	7,082.01	7,106.98	7,082.23	25.36	25.57	-90.28	158.80	-362.25	137.25	86.99	50.26	2.731		
7,200.00	7,182.01	7,206.98	7,182.23	25.71	25.92	-90.28	158.80	-362.25	137.25	86.28	50.97	2.693		
7,300.00	7,282.01	7,306.98	7,282.23	26.07	26.27	-90.28	158.80	-362.25	137.25	85.57	51.68	2.656		
7,400.00	7,382.01	7,406.98	7,382.23	26.42	26.62	-90.28	158.80	-362.25	137.25	84.86	52.39	2.620		
7,500.00	7,482.01	7,506.98	7,482.23	26.78	26.97	-90.28	158.80	-362.25	137.25	84.15	53.10	2.585		
7,600.00	7,582.01	7,606.98	7,582.23	27.13	27.32	-90.28	158.80	-362.25	137.25	83.44	53.81	2.551		
7,700.00	7,682.01	7,706.98	7,682.23	27.48	27.67	-90.28	158.80	-362.25	137.25	82.73	54.51	2.518		
7,800.00	7,782.01	7,806.98	7,782.23	27.84	28.02	-90.28	158.80	-362.25	137.25	82.02	55.22	2.485		
7,900.00	7,882.01	7,906.98	7,882.23	28.19	28.37	-90.28	158.80	-362.25	137.25	81.31	55.93	2.454		
8,000.00	7,982.01	8,006.98	7,982.23	28.55	28.73	-90.28	158.80	-362.25	137.25	80.60	56.65	2.423		
8,100.00	8,082.01	8,106.98	8,082.23	28.90	29.08	-90.28	158.80	-362.25	137.25	79.89	57.36	2.393		
8,200.00	8,182.01	8,206.98	8,182.23	29.26	29.43	-90.28	158.80	-362.25	137.25	79.18	58.07	2.364		
8,300.00	8,282.01	8,306.98	8,282.23	29.61	29.78	-90.28	158.80	-362.25	137.25	78.47	58.78	2.335		
8,400.00	8,382.01	8,406.98	8,382.23	29.97	30.13	-90.28	158.80	-362.25	137.25	77.76	59.49	2.307		
8,500.00	8,482.01	8,506.98	8,482.23	30.32	30.48	-90.28	158.80	-362.25	137.25	77.05	60.20	2.280		
8,600.00	8,582.01	8,606.98	8,582.23	30.68	30.84	-90.28	158.80	-362.25	137.25	76.34	60.91	2.253		
8,700.00	8,682.01	8,706.98	8,682.23	31.03	31.19	-90.28	158.80	-362.25	137.25	75.63	61.62	2.227		
8,800.00	8,782.01	8,806.98	8,782.23	31.39	31.54	-90.28	158.80	-362.25	137.25	74.91	62.33	2.202		
8,900.00	8,882.01	8,906.98	8,882.23	31.74	31.89	-90.28	158.80	-362.25	137.25	74.20	63.04	2.177		
9,000.00	8,982.01	9,006.98	8,982.23	32.10	32.25	-90.28	158.80	-362.25	137.25	73.49	63.76	2.153		
9,100.00	9,082.01	9,106.98	9,082.23	32.46	32.60	-90.28	158.80	-362.25	137.25	72.78	64.47	2.129		
9,200.00	9,182.01	9,206.98	9,182.23	32.81	32.95	-90.28	158.80	-362.25	137.25	72.07	65.18	2.106		
9,300.00	9,282.01	9,306.98	9,282.23	33.17	33.31	-90.28	158.80	-362.25	137.25	71.36	65.89	2.083		
9,400.00	9,382.01	9,406.98	9,382.23	33.52	33.66	-90.28	158.80	-362.25	137.25	70.64	66.60	2.061		
9,500.00	9,482.01	9,506.98	9,482.23	33.88	34.01	-90.28	158.80	-362.25	137.25	69.93	67.32	2.039		
9,600.00	9,582.01	9,606.98	9,582.23	34.23	34.37	-90.28	158.80	-362.25	137.25	69.22	68.03	2.017		
9,700.00	9,682.01	9,706.98	9,682.23	34.59	34.72	-90.28	158.80	-362.25	137.25	68.51	68.74	1.997		
9,800.00	9,782.01	9,806.98	9,782.23	34.95	35.07	-90.28	158.80	-362.25	137.25	67.79	69.45	1.976		
9,900.00	9,882.01	9,906.98	9,882.23	35.30	35.43	-90.28	158.80	-362.25	137.25	67.08	70.17	1.956		
10,000.00	9,982.01	10,006.98	9,982.23	35.66	35.78	-90.28	158.80	-362.25	137.25	66.37	70.88	1.936		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 442H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,100.00	10,082.01	10,106.98	10,082.23	36.01	36.14	-90.28	158.80	-362.25	137.25	65.66	71.59	1.917	
10,200.00	10,182.01	10,206.98	10,182.23	36.37	36.49	-90.28	158.80	-362.25	137.25	64.94	72.30	1.898	
10,300.00	10,282.01	10,306.98	10,282.23	36.73	36.84	-90.28	158.80	-362.25	137.25	64.23	73.02	1.880	
10,400.00	10,382.01	10,406.98	10,382.23	37.08	37.20	-90.28	158.80	-362.25	137.25	63.52	73.73	1.861	
10,500.00	10,482.01	10,506.98	10,482.23	37.44	37.55	-90.28	158.80	-362.25	137.25	62.80	74.44	1.844	
10,600.00	10,582.01	10,606.98	10,582.23	37.80	37.91	-90.28	158.80	-362.25	137.25	62.09	75.16	1.826	
10,700.00	10,682.01	10,706.98	10,682.23	38.15	38.26	-90.28	158.80	-362.25	137.25	61.38	75.87	1.809	
10,800.00	10,782.01	10,806.98	10,782.23	38.51	38.62	-90.28	158.80	-362.25	137.25	60.66	76.58	1.792	
10,900.00	10,882.01	10,906.98	10,882.23	38.86	38.97	-90.28	158.80	-362.25	137.25	59.95	77.30	1.776	
11,000.00	10,982.01	11,006.98	10,982.23	39.22	39.33	-90.28	158.80	-362.25	137.25	59.24	78.01	1.759	
11,100.00	11,082.01	11,106.98	11,082.23	39.58	39.68	-90.28	158.80	-362.25	137.25	58.52	78.72	1.743	
11,200.00	11,182.01	11,206.98	11,182.23	39.93	40.03	-90.28	158.80	-362.25	137.25	57.81	79.44	1.728	
11,300.00	11,282.01	11,306.98	11,282.23	40.29	40.39	-90.28	158.80	-362.25	137.25	57.10	80.15	1.712	
11,400.00	11,382.01	11,406.98	11,382.23	40.65	40.74	-90.28	158.80	-362.25	137.25	56.38	80.86	1.697	
11,500.00	11,482.01	11,506.98	11,482.23	41.00	41.10	-90.28	158.80	-362.25	137.25	55.67	81.58	1.682	
11,600.00	11,582.01	11,606.98	11,582.23	41.36	41.45	-90.28	158.80	-362.25	137.25	54.96	82.29	1.668	
11,700.00	11,682.01	11,706.98	11,682.23	41.72	41.81	-90.28	158.80	-362.25	137.25	54.24	83.01	1.653	
11,800.00	11,782.01	11,806.98	11,782.23	42.07	42.17	-90.28	158.80	-362.25	137.25	53.53	83.72	1.639	
11,900.00	11,882.01	11,906.98	11,882.23	42.43	42.52	-90.28	158.80	-362.25	137.25	52.81	84.43	1.625	
12,000.00	11,982.01	12,006.98	11,982.23	42.79	42.88	-90.28	158.80	-362.25	137.25	52.10	85.15	1.612	
12,100.00	12,082.01	12,106.98	12,082.23	43.14	43.23	-90.28	158.80	-362.25	137.25	51.39	85.86	1.598	
12,169.75	12,151.76	12,176.75	12,151.98	43.39	43.47	-90.49	158.30	-362.24	137.25	50.89	86.36	1.589	
12,200.00	12,182.01	12,206.87	12,182.03	43.50	43.57	-91.34	156.25	-362.22	137.26	50.69	86.57	1.586	
12,300.00	12,282.01	12,303.54	12,277.05	43.86	43.87	-98.46	139.09	-362.08	138.68	51.39	87.29	1.589	
12,400.00	12,382.01	12,392.22	12,360.56	44.22	44.12	-110.06	109.50	-361.83	147.27	59.71	87.55	1.682	
12,500.00	12,482.01	12,470.25	12,429.50	44.57	44.31	-122.32	73.09	-361.52	169.94	83.71	86.23	1.971	
12,556.03	12,538.04	12,509.05	12,461.78	44.77	44.40	-128.36	51.57	-361.33	189.94	105.24	84.70	2.243	
12,600.00	12,581.97	12,537.88	12,484.78	44.92	44.46	-43.39	34.20	-361.19	208.05	124.78	83.27	2.498	
12,650.00	12,631.59	12,570.12	12,509.43	45.08	44.52	38.27	13.43	-361.01	229.16	147.62	81.55	2.810	
12,700.00	12,680.50	12,600.00	12,531.20	45.23	44.57	34.21	-7.03	-360.83	250.25	170.67	79.58	3.145	
12,750.00	12,728.32	12,633.17	12,554.08	45.38	44.62	30.59	-31.04	-360.63	270.87	192.89	77.98	3.473	
12,800.00	12,774.70	12,664.11	12,574.14	45.51	44.67	27.72	-54.60	-360.43	290.74	214.54	76.20	3.815	
12,850.00	12,819.28	12,700.00	12,595.77	45.64	44.71	25.09	-83.22	-360.19	309.70	234.77	74.93	4.133	
12,900.00	12,861.72	12,725.08	12,609.81	45.76	44.74	23.32	-104.01	-360.01	327.39	254.64	72.75	4.500	
12,950.00	12,901.69	12,750.00	12,622.83	45.86	44.77	21.79	-125.25	-359.83	343.93	273.24	70.69	4.865	
13,000.00	12,938.90	12,785.10	12,639.59	45.95	44.79	20.20	-156.08	-359.57	358.97	289.44	69.53	5.163	
13,050.00	12,973.05	12,814.83	12,652.29	46.03	44.82	18.99	-182.96	-359.34	372.61	304.56	68.05	5.475	
13,100.00	13,003.89	12,850.00	12,665.48	46.10	44.88	17.85	-215.55	-359.06	384.80	317.77	67.02	5.741	
13,150.00	13,031.19	12,873.86	12,673.28	46.18	44.93	17.09	-238.10	-358.87	395.27	329.81	65.46	6.039	
13,200.00	13,054.74	12,900.00	12,680.74	46.28	44.99	16.40	-263.15	-358.66	404.20	339.96	64.24	6.292	
13,250.00	13,074.35	12,932.47	12,688.41	46.39	45.05	15.73	-294.70	-358.39	411.42	347.96	63.46	6.483	
13,300.00	13,089.88	12,961.67	12,693.77	46.49	45.12	15.22	-323.39	-358.14	416.97	354.24	62.73	6.647	
13,350.00	13,101.21	13,000.00	12,698.57	46.59	45.20	14.70	-361.41	-357.82	420.97	358.60	62.37	6.750	
13,400.00	13,108.26	13,019.92	12,700.06	46.69	45.24	14.46	-381.28	-357.65	422.90	361.02	61.87	6.835	
13,450.00	13,110.97	13,052.80	12,701.00	46.79	45.30	14.18	-414.13	-357.37	423.28	361.51	61.77	6.853	
13,456.03	13,111.00	13,052.80	12,701.00	46.80	45.30	14.18	-414.13	-357.37	423.17	361.40	61.77	6.851	
13,500.00	13,111.00	13,096.24	12,701.00	46.88	45.40	13.91	-457.57	-357.00	422.63	360.86	61.77	6.842	
13,600.00	13,111.00	13,196.20	12,701.00	47.11	45.64	13.58	-557.53	-356.15	422.03	360.09	61.93	6.814	
13,622.91	13,111.00	13,219.11	12,701.00	47.17	45.70	13.57	-580.44	-355.96	422.00	360.00	62.00	6.806	
13,623.18	13,111.00	13,219.38	12,701.00	47.17	45.70	13.57	-580.71	-355.95	422.00	360.00	62.00	6.806	
13,700.00	13,111.00	13,296.20	12,701.00	47.38	45.92	13.57	-657.53	-355.30	422.01	359.75	62.26	6.779	
13,800.00	13,111.00	13,396.20	12,701.00	47.69	46.25	13.57	-757.52	-354.45	422.01	359.38	62.63	6.738	

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 442H - OH - Plan #1											Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM											Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
13,900.00	13,111.00	13,496.20	12,701.00	48.04	46.61	13.58	-857.52	-353.60	422.01	358.97	63.04	6.694
14,000.00	13,111.00	13,596.20	12,701.00	48.43	47.02	13.58	-957.52	-352.75	422.01	358.52	63.49	6.647
14,100.00	13,111.00	13,696.20	12,701.00	48.85	47.46	13.58	-1,057.51	-351.90	422.01	358.03	63.99	6.595
14,200.00	13,111.00	13,796.20	12,701.00	49.32	47.95	13.58	-1,157.51	-351.04	422.02	357.50	64.52	6.541
14,300.00	13,111.00	13,896.20	12,701.00	49.82	48.47	13.58	-1,257.51	-350.19	422.02	356.93	65.09	6.483
14,400.00	13,111.00	13,996.20	12,701.00	50.36	49.02	13.58	-1,357.50	-349.34	422.02	356.32	65.70	6.423
14,500.00	13,111.00	14,096.20	12,701.00	50.93	49.61	13.58	-1,457.50	-348.49	422.02	355.68	66.35	6.361
14,600.00	13,111.00	14,196.20	12,701.00	51.53	50.24	13.58	-1,557.50	-347.64	422.03	355.00	67.03	6.296
14,700.00	13,111.00	14,296.20	12,701.00	52.17	50.90	13.59	-1,657.49	-346.79	422.03	354.28	67.74	6.230
14,800.00	13,111.00	14,396.20	12,701.00	52.84	51.59	13.59	-1,757.49	-345.94	422.03	353.54	68.49	6.162
14,900.00	13,111.00	14,496.20	12,701.00	53.54	52.31	13.59	-1,857.48	-345.09	422.03	352.76	69.27	6.092
15,000.00	13,111.00	14,596.20	12,701.00	54.27	53.06	13.59	-1,957.48	-344.24	422.03	351.95	70.08	6.022
15,100.00	13,111.00	14,696.20	12,701.00	55.02	53.83	13.59	-2,057.48	-343.39	422.04	351.11	70.93	5.950
15,200.00	13,111.00	14,796.20	12,701.00	55.81	54.64	13.59	-2,157.47	-342.54	422.04	350.24	71.80	5.878
15,300.00	13,111.00	14,896.20	12,701.00	56.61	55.46	13.59	-2,257.47	-341.68	422.04	349.35	72.69	5.806
15,400.00	13,111.00	14,996.20	12,701.00	57.45	56.32	13.59	-2,357.47	-340.83	422.04	348.43	73.62	5.733
15,500.00	13,111.00	15,096.20	12,701.00	58.30	57.19	13.60	-2,457.46	-339.98	422.05	347.48	74.57	5.660
15,600.00	13,111.00	15,196.20	12,701.00	59.18	58.09	13.60	-2,557.46	-339.13	422.05	346.50	75.55	5.587
15,700.00	13,111.00	15,296.20	12,701.00	60.08	59.01	13.60	-2,657.46	-338.28	422.05	345.51	76.55	5.514
15,800.00	13,111.00	15,396.20	12,701.00	61.00	59.95	13.60	-2,757.45	-337.43	422.05	344.49	77.57	5.441
15,900.00	13,111.00	15,496.20	12,701.00	61.94	60.91	13.60	-2,857.45	-336.58	422.05	343.44	78.61	5.369
16,000.00	13,111.00	15,596.20	12,701.00	62.90	61.89	13.60	-2,957.44	-335.73	422.06	342.38	79.68	5.297
16,100.00	13,111.00	15,696.20	12,701.00	63.88	62.89	13.60	-3,057.44	-334.88	422.06	341.29	80.77	5.226
16,200.00	13,111.00	15,796.20	12,701.00	64.87	63.90	13.60	-3,157.44	-334.03	422.06	340.19	81.87	5.155
16,300.00	13,111.00	15,896.20	12,701.00	65.88	64.93	13.61	-3,257.43	-333.17	422.06	339.07	83.00	5.085
16,400.00	13,111.00	15,996.20	12,701.00	66.91	65.97	13.61	-3,357.43	-332.32	422.07	337.93	84.14	5.016
16,500.00	13,111.00	16,096.20	12,701.00	67.95	67.03	13.61	-3,457.43	-331.47	422.07	336.77	85.30	4.948
16,600.00	13,111.00	16,196.20	12,701.00	69.00	68.10	13.61	-3,557.42	-330.62	422.07	335.59	86.48	4.881
16,700.00	13,111.00	16,296.20	12,701.00	70.07	69.18	13.61	-3,657.42	-329.77	422.07	334.40	87.67	4.814
16,800.00	13,111.00	16,396.20	12,701.00	71.15	70.28	13.61	-3,757.42	-328.92	422.08	333.20	88.88	4.749
16,900.00	13,111.00	16,496.20	12,701.00	72.25	71.39	13.61	-3,857.41	-328.07	422.08	331.98	90.10	4.685
17,000.00	13,111.00	16,596.20	12,701.00	73.35	72.51	13.61	-3,957.41	-327.22	422.08	330.74	91.34	4.621
17,100.00	13,111.00	16,696.20	12,701.00	74.47	73.64	13.62	-4,057.41	-326.37	422.08	329.49	92.59	4.559
17,200.00	13,111.00	16,796.20	12,701.00	75.60	74.79	13.62	-4,157.40	-325.52	422.08	328.23	93.85	4.497
17,300.00	13,111.00	16,896.20	12,701.00	76.73	75.94	13.62	-4,257.40	-324.67	422.09	326.96	95.13	4.437
17,400.00	13,111.00	16,996.20	12,701.00	77.88	77.10	13.62	-4,357.39	-323.81	422.09	325.67	96.42	4.378
17,500.00	13,111.00	17,096.20	12,701.00	79.04	78.27	13.62	-4,457.39	-322.96	422.09	324.37	97.72	4.320
17,600.00	13,111.00	17,196.20	12,701.00	80.20	79.45	13.62	-4,557.39	-322.11	422.09	323.07	99.03	4.262
17,700.00	13,111.00	17,296.20	12,701.00	81.38	80.64	13.62	-4,657.38	-321.26	422.10	321.75	100.35	4.206
17,800.00	13,111.00	17,396.20	12,701.00	82.56	81.83	13.62	-4,757.38	-320.41	422.10	320.42	101.68	4.151
17,900.00	13,111.00	17,496.20	12,701.00	83.75	83.04	13.63	-4,857.38	-319.56	422.10	319.08	103.02	4.097
18,000.00	13,111.00	17,596.20	12,701.00	84.95	84.25	13.63	-4,957.37	-318.71	422.10	317.73	104.37	4.044
18,100.00	13,111.00	17,696.20	12,701.00	86.16	85.47	13.63	-5,057.37	-317.86	422.10	316.37	105.73	3.992
18,200.00	13,111.00	17,796.20	12,701.00	87.37	86.69	13.63	-5,157.37	-317.01	422.11	315.01	107.10	3.941
18,300.00	13,111.00	17,896.20	12,701.00	88.59	87.92	13.63	-5,257.36	-316.16	422.11	313.63	108.48	3.891
18,400.00	13,111.00	17,996.20	12,701.00	89.82	89.16	13.63	-5,357.36	-315.31	422.11	312.25	109.86	3.842
18,500.00	13,111.00	18,096.20	12,701.00	91.05	90.40	13.63	-5,457.35	-314.45	422.11	310.86	111.26	3.794
18,600.00	13,111.00	18,196.20	12,701.00	92.28	91.65	13.63	-5,557.35	-313.60	422.12	309.46	112.66	3.747
18,700.00	13,111.00	18,296.20	12,701.00	93.53	92.90	13.64	-5,657.35	-312.75	422.12	308.05	114.07	3.701
18,800.00	13,111.00	18,396.20	12,701.00	94.78	94.16	13.64	-5,757.34	-311.90	422.12	306.64	115.48	3.655
18,900.00	13,111.00	18,496.20	12,701.00	96.03	95.43	13.64	-5,857.34	-311.05	422.12	305.22	116.90	3.611
19,000.00	13,111.00	18,596.20	12,701.00	97.29	96.70	13.64	-5,957.34	-310.20	422.12	303.79	118.33	3.567

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 442H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
19,100.00	13,111.00	18,896.20	12,701.00	98.56	97.97	13.64	-6,057.33	-309.35	422.13	302.36	119.77	3.525		
19,200.00	13,111.00	18,796.20	12,701.00	99.82	99.25	13.64	-6,157.33	-308.50	422.13	300.92	121.21	3.483		
19,300.00	13,111.00	18,896.20	12,701.00	101.10	100.53	13.64	-6,257.33	-307.65	422.13	299.48	122.65	3.442		
19,400.00	13,111.00	18,996.20	12,701.00	102.37	101.82	13.64	-6,357.32	-306.80	422.13	298.03	124.10	3.401		
19,500.00	13,111.00	19,096.20	12,701.00	103.66	103.11	13.65	-6,457.32	-305.94	422.14	296.57	125.56	3.362		
19,600.00	13,111.00	19,196.20	12,701.00	104.94	104.40	13.65	-6,557.31	-305.09	422.14	295.11	127.02	3.323		
19,700.00	13,111.00	19,296.20	12,701.00	106.23	105.70	13.65	-6,657.31	-304.24	422.14	293.65	128.49	3.285		
19,800.00	13,111.00	19,396.20	12,701.00	107.52	107.00	13.65	-6,757.31	-303.39	422.14	292.18	129.97	3.248		
19,900.00	13,111.00	19,496.20	12,701.00	108.82	108.30	13.65	-6,857.30	-302.54	422.14	290.70	131.44	3.212		
20,000.00	13,111.00	19,596.20	12,701.00	110.12	109.61	13.65	-6,957.30	-301.69	422.15	289.22	132.92	3.176		
20,100.00	13,111.00	19,696.20	12,701.00	111.43	110.92	13.65	-7,057.30	-300.84	422.15	287.74	134.41	3.141		
20,200.00	13,111.00	19,796.20	12,701.00	112.73	112.24	13.65	-7,157.29	-299.99	422.15	286.25	135.90	3.106		
20,300.00	13,111.00	19,896.20	12,701.00	114.04	113.56	13.66	-7,257.29	-299.14	422.15	284.76	137.40	3.073		
20,400.00	13,111.00	19,996.20	12,701.00	115.36	114.88	13.66	-7,357.29	-298.29	422.16	283.26	138.90	3.039		
20,500.00	13,111.00	20,096.20	12,701.00	116.67	116.20	13.66	-7,457.28	-297.44	422.16	281.76	140.40	3.007		
20,600.00	13,111.00	20,196.20	12,701.00	117.99	117.52	13.66	-7,557.28	-296.58	422.16	280.26	141.90	2.975		
20,700.00	13,111.00	20,296.20	12,701.00	119.31	118.85	13.66	-7,657.27	-295.73	422.16	278.75	143.41	2.944		
20,800.00	13,111.00	20,396.20	12,701.00	120.64	120.18	13.66	-7,757.27	-294.88	422.16	277.24	144.93	2.913		
20,900.00	13,111.00	20,496.20	12,701.00	121.96	121.52	13.66	-7,857.27	-294.03	422.17	275.72	146.45	2.883		
21,000.00	13,111.00	20,596.20	12,701.00	123.29	122.85	13.66	-7,957.26	-293.18	422.17	274.20	147.97	2.853		
21,100.00	13,111.00	20,696.20	12,701.00	124.62	124.19	13.67	-8,057.26	-292.33	422.17	272.68	149.49	2.824		
21,200.00	13,111.00	20,796.20	12,701.00	125.96	125.53	13.67	-8,157.26	-291.48	422.17	271.16	151.02	2.796		
21,300.00	13,111.00	20,896.20	12,701.00	127.29	126.87	13.67	-8,257.25	-290.63	422.18	269.63	152.55	2.768		
21,400.00	13,111.00	20,996.20	12,701.00	128.63	128.21	13.67	-8,357.25	-289.78	422.18	268.10	154.08	2.740		
21,500.00	13,111.00	21,096.20	12,701.00	129.97	129.56	13.67	-8,457.25	-288.93	422.18	266.57	155.62	2.713		
21,600.00	13,111.00	21,196.20	12,701.00	131.31	130.91	13.67	-8,557.24	-288.07	422.18	265.03	157.15	2.686		
21,700.00	13,111.00	21,296.20	12,701.00	132.66	132.26	13.67	-8,657.24	-287.22	422.18	263.49	158.69	2.660		
21,800.00	13,111.00	21,396.20	12,701.00	134.00	133.61	13.67	-8,757.24	-286.37	422.19	261.95	160.24	2.635		
21,900.00	13,111.00	21,496.20	12,701.00	135.35	134.96	13.68	-8,857.23	-285.52	422.19	260.40	161.78	2.610		
22,000.00	13,111.00	21,596.20	12,701.00	136.70	136.32	13.68	-8,957.23	-284.67	422.19	258.86	163.33	2.585		
22,100.00	13,111.00	21,696.20	12,701.00	138.05	137.67	13.68	-9,057.22	-283.82	422.19	257.31	164.88	2.561		
22,200.00	13,111.00	21,796.20	12,701.00	139.41	139.03	13.68	-9,157.22	-282.97	422.20	255.76	166.44	2.537		
22,300.00	13,111.00	21,896.20	12,701.00	140.76	140.39	13.68	-9,257.22	-282.12	422.20	254.20	167.99	2.513		
22,400.00	13,111.00	21,996.20	12,701.00	142.12	141.75	13.68	-9,357.21	-281.27	422.20	252.65	169.55	2.490		
22,500.00	13,111.00	22,096.20	12,701.00	143.47	143.11	13.68	-9,457.21	-280.42	422.20	251.09	171.11	2.467		
22,600.00	13,111.00	22,196.20	12,701.00	144.83	144.48	13.68	-9,557.21	-279.57	422.20	249.53	172.67	2.445		
22,700.00	13,111.00	22,296.20	12,701.00	146.19	145.84	13.69	-9,657.20	-278.71	422.21	247.97	174.24	2.423		
22,800.00	13,111.00	22,396.20	12,701.00	147.56	147.21	13.69	-9,757.20	-277.86	422.21	246.40	175.80	2.402		
22,900.00	13,111.00	22,496.20	12,701.00	148.92	148.58	13.69	-9,857.20	-277.01	422.21	244.84	177.37	2.380		
23,000.00	13,111.00	22,596.20	12,701.00	150.29	149.95	13.69	-9,957.19	-276.16	422.21	243.27	178.94	2.359		
23,100.00	13,111.00	22,696.20	12,701.00	151.65	151.32	13.69	-10,057.19	-275.31	422.22	241.70	180.52	2.339		
23,200.00	13,111.00	22,796.20	12,701.00	153.02	152.69	13.69	-10,157.18	-274.46	422.22	240.13	182.09	2.319		
23,300.00	13,111.00	22,896.20	12,701.00	154.39	154.06	13.69	-10,257.18	-273.61	422.22	238.56	183.66	2.299		
23,400.00	13,111.00	22,996.20	12,701.00	155.76	155.44	13.69	-10,357.18	-272.76	422.22	236.98	185.24	2.279		
23,400.76	13,111.00	22,996.96	12,701.00	155.77	155.45	13.69	-10,357.94	-272.75	422.22	236.97	185.25	2.279		
23,500.00	13,111.00	23,041.54	12,701.00	157.13	155.98	13.69	-10,402.52	-272.37	425.75	239.09	186.66	2.281		
23,600.00	13,111.00	23,041.54	12,701.00	158.50	155.98	13.69	-10,402.52	-272.37	449.66	266.30	183.36	2.452		
23,700.00	13,111.00	23,041.54	12,701.00	159.88	155.98	13.69	-10,402.52	-272.37	493.08	317.13	175.95	2.802		
23,756.58	13,111.00	23,041.54	12,701.00	160.65	155.98	13.69	-10,402.52	-272.37	524.54	353.50	171.04	3.067		
23,757.21	13,111.00	23,041.54	12,701.00	160.66	155.98	13.69	-10,402.52	-272.37	524.92	354.43	170.49	3.079		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 462H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	89.58	0.37	50.00	50.00					
100.00	100.00	99.98	99.98	0.13	0.13	89.58	0.37	50.00	50.00	49.74	0.26	192.412		
200.00	200.00	199.98	199.98	0.49	0.49	89.58	0.37	50.00	50.00	49.02	0.98	51.191		
300.00	300.00	299.98	299.98	0.85	0.85	89.58	0.37	50.00	50.00	48.31	1.69	29.522		
400.00	400.00	399.98	399.98	1.21	1.21	89.58	0.37	50.00	50.00	47.59	2.41	20.742		
500.00	500.00	499.98	499.98	1.56	1.56	89.58	0.37	50.00	50.00	46.87	3.13	15.987		
600.00	600.00	599.98	599.98	1.92	1.92	89.58	0.37	50.00	50.00	46.16	3.84	13.006		
700.00	700.00	699.98	699.98	2.28	2.28	89.58	0.37	50.00	50.00	45.44	4.56	10.962		
800.00	800.00	799.98	799.98	2.64	2.64	89.58	0.37	50.00	50.00	44.72	5.28	9.473		
900.00	900.00	899.98	899.98	3.00	3.00	89.58	0.37	50.00	50.00	44.01	6.00	8.340		
1,000.00	1,000.00	999.98	999.98	3.36	3.36	89.58	0.37	50.00	50.00	43.29	6.71	7.449		
1,100.00	1,100.00	1,099.98	1,099.98	3.71	3.71	89.58	0.37	50.00	50.00	42.57	7.43	6.730		
1,200.00	1,200.00	1,199.98	1,199.98	4.07	4.07	89.58	0.37	50.00	50.00	41.86	8.15	6.138		
1,300.00	1,300.00	1,299.98	1,299.98	4.43	4.43	89.58	0.37	50.00	50.00	41.14	8.86	5.641		
1,400.00	1,400.00	1,399.98	1,399.98	4.79	4.79	89.58	0.37	50.00	50.00	40.42	9.58	5.219		
1,500.00	1,500.00	1,499.98	1,499.98	5.15	5.15	89.58	0.37	50.00	50.00	39.70	10.30	4.856		
1,600.00	1,600.00	1,599.98	1,599.98	5.51	5.51	89.58	0.37	50.00	50.00	38.99	11.01	4.540		
1,700.00	1,700.00	1,699.98	1,699.98	5.87	5.87	89.58	0.37	50.00	50.00	38.27	11.73	4.262		
1,800.00	1,800.00	1,799.98	1,799.98	6.22	6.22	89.58	0.37	50.00	50.00	37.55	12.45	4.017		
1,900.00	1,900.00	1,899.98	1,899.98	6.58	6.58	89.58	0.37	50.00	50.00	36.84	13.16	3.798		
2,000.00	2,000.00	1,999.98	1,999.98	6.94	6.94	89.58	0.37	50.00	50.00	36.12	13.88	3.602		
2,100.00	2,100.00	2,099.98	2,099.98	7.30	7.30	89.58	0.37	50.00	50.00	35.40	14.60	3.425		
2,200.00	2,200.00	2,199.98	2,199.98	7.66	7.66	89.58	0.37	50.00	50.00	34.69	15.32	3.265		
2,300.00	2,300.00	2,299.98	2,299.98	8.02	8.02	89.58	0.37	50.00	50.00	33.97	16.03	3.119		
2,400.00	2,400.00	2,399.98	2,399.98	8.37	8.37	89.58	0.37	50.00	50.00	33.25	16.75	2.985		
2,500.00	2,500.00	2,499.98	2,499.98	8.73	8.73	89.58	0.37	50.00	50.00	32.53	17.47	2.863		
2,600.00	2,600.00	2,599.98	2,599.98	9.09	9.09	89.58	0.37	50.00	50.00	31.82	18.18	2.750 CC, ES		
2,700.00	2,699.98	2,698.67	2,698.65	9.45	9.44	144.03	1.56	51.22	52.66	33.78	18.88	2.789		
2,800.00	2,799.84	2,796.94	2,796.78	9.80	9.79	143.48	5.10	54.84	60.62	41.06	19.57	3.098		
2,900.00	2,899.45	2,894.38	2,893.87	10.15	10.14	142.81	10.92	60.82	73.85	53.62	20.23	3.650		
3,000.24	2,998.94	2,990.84	2,989.62	10.51	10.48	142.15	18.96	69.05	92.34	71.46	20.88	4.422		
3,100.00	3,097.73	3,088.10	3,085.94	10.87	10.83	141.74	28.40	78.73	113.53	91.96	21.57	5.264		
3,200.00	3,196.75	3,185.81	3,182.70	11.23	11.18	141.45	37.90	88.46	134.78	112.52	22.26	6.055		
3,300.00	3,295.78	3,283.52	3,279.47	11.60	11.54	141.24	47.40	98.20	156.04	133.09	22.96	6.797		
3,400.00	3,394.80	3,381.24	3,376.23	11.96	11.90	141.09	56.89	107.93	177.30	153.64	23.66	7.494		
3,500.00	3,493.83	3,478.95	3,472.99	12.33	12.26	140.96	66.39	117.66	198.56	174.20	24.36	8.150		
3,600.00	3,592.86	3,576.66	3,569.75	12.71	12.62	140.86	75.89	127.40	219.82	194.76	25.07	8.769		
3,700.00	3,691.88	3,674.38	3,666.51	13.08	12.98	140.78	85.39	137.13	241.09	215.31	25.78	9.352		
3,800.00	3,790.91	3,772.09	3,763.28	13.46	13.35	140.71	94.88	146.86	262.35	235.86	26.49	9.904		
3,900.00	3,889.93	3,869.80	3,860.04	13.83	13.72	140.65	104.38	156.59	283.61	256.41	27.20	10.425		
4,000.00	3,988.96	3,967.51	3,956.80	14.21	14.08	140.60	113.88	166.33	304.88	276.96	27.92	10.920		
4,100.00	4,087.98	4,065.23	4,053.56	14.59	14.45	140.56	123.37	176.06	326.14	297.50	28.64	11.388		
4,200.00	4,187.01	4,162.94	4,150.32	14.97	14.83	140.52	132.87	185.79	347.40	318.05	29.36	11.834		
4,300.00	4,286.04	4,261.18	4,247.60	15.36	15.20	140.48	142.42	195.58	368.66	338.58	30.08	12.254		
4,400.00	4,385.06	4,370.12	4,355.78	15.74	15.61	140.67	151.43	204.81	388.38	357.47	30.91	12.563		
4,500.00	4,484.09	4,480.12	4,465.41	16.13	16.02	141.24	157.61	211.14	405.27	373.54	31.73	12.774		
4,579.75	4,563.06	4,568.39	4,553.58	16.43	16.33	141.93	160.44	214.05	416.73	384.38	32.36	12.880		
4,600.00	4,583.12	4,590.86	4,576.05	16.51	16.41	142.17	160.86	214.47	419.30	386.79	32.51	12.896		
4,700.00	4,682.45	4,697.25	4,682.43	16.89	16.79	143.23	161.37	215.00	428.96	395.70	33.26	12.897		
4,800.00	4,782.13	4,796.93	4,782.11	17.26	17.14	143.94	161.37	215.00	435.42	401.45	33.97	12.817		
4,900.00	4,882.02	4,896.82	4,882.00	17.62	17.49	144.33	161.37	215.00	439.10	404.41	34.68	12.661		
4,979.99	4,962.00	4,976.80	4,961.98	17.90	17.77	89.75	161.37	215.00	440.00	404.76	35.25	12.484		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 462H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,982.01	4,996.81	4,981.99	17.97	17.84	89.75	161.37	215.00	440.00	404.62	35.39	12.434		
5,100.00	5,082.01	5,096.81	5,081.99	18.32	18.20	89.75	161.37	215.00	440.00	403.91	36.09	12.190		
5,200.00	5,182.01	5,196.81	5,181.99	18.67	18.55	89.75	161.37	215.00	440.00	403.20	36.80	11.956		
5,300.00	5,282.01	5,296.81	5,281.99	19.02	18.90	89.75	161.37	215.00	440.00	402.50	37.51	11.731		
5,400.00	5,382.01	5,396.81	5,381.99	19.37	19.25	89.75	161.37	215.00	440.00	401.79	38.21	11.514		
5,500.00	5,482.01	5,496.81	5,481.99	19.72	19.61	89.75	161.37	215.00	440.00	401.08	38.92	11.305		
5,600.00	5,582.01	5,596.81	5,581.99	20.07	19.96	89.75	161.37	215.00	440.00	400.37	39.63	11.103		
5,700.00	5,682.01	5,696.81	5,681.99	20.42	20.31	89.75	161.37	215.00	440.00	399.67	40.34	10.908		
5,800.00	5,782.01	5,796.81	5,781.99	20.77	20.67	89.75	161.37	215.00	440.00	398.96	41.05	10.719		
5,900.00	5,882.01	5,896.81	5,881.99	21.13	21.02	89.75	161.37	215.00	440.00	398.25	41.76	10.537		
6,000.00	5,982.01	5,996.81	5,981.99	21.48	21.37	89.75	161.37	215.00	440.00	397.54	42.47	10.361		
6,100.00	6,082.01	6,096.81	6,081.99	21.83	21.73	89.75	161.37	215.00	440.00	396.83	43.17	10.191		
6,200.00	6,182.01	6,196.81	6,181.99	22.18	22.08	89.75	161.37	215.00	440.00	396.12	43.88	10.026		
6,300.00	6,282.01	6,296.81	6,281.99	22.53	22.44	89.75	161.37	215.00	440.00	395.41	44.59	9.867		
6,400.00	6,382.01	6,396.81	6,381.99	22.89	22.79	89.75	161.37	215.00	440.00	394.70	45.30	9.712		
6,500.00	6,482.01	6,496.81	6,481.99	23.24	23.15	89.75	161.37	215.00	440.00	393.99	46.01	9.562		
6,600.00	6,582.01	6,596.81	6,581.99	23.59	23.50	89.75	161.37	215.00	440.00	393.28	46.73	9.417		
6,700.00	6,682.01	6,696.81	6,681.99	23.95	23.86	89.75	161.37	215.00	440.00	392.57	47.44	9.276		
6,800.00	6,782.01	6,796.81	6,781.99	24.30	24.21	89.75	161.37	215.00	440.00	391.86	48.15	9.139		
6,900.00	6,882.01	6,896.81	6,881.99	24.65	24.57	89.75	161.37	215.00	440.00	391.15	48.86	9.006		
7,000.00	6,982.01	6,996.81	6,981.99	25.01	24.92	89.75	161.37	215.00	440.00	390.43	49.57	8.877		
7,100.00	7,082.01	7,096.81	7,081.99	25.36	25.28	89.75	161.37	215.00	440.00	389.72	50.28	8.751		
7,200.00	7,182.01	7,196.81	7,181.99	25.71	25.63	89.75	161.37	215.00	440.00	389.01	50.99	8.629		
7,300.00	7,282.01	7,296.81	7,281.99	26.07	25.99	89.75	161.37	215.00	440.00	388.30	51.70	8.510		
7,400.00	7,382.01	7,396.81	7,381.99	26.42	26.34	89.75	161.37	215.00	440.00	387.59	52.42	8.394		
7,500.00	7,482.01	7,496.81	7,481.99	26.78	26.70	89.75	161.37	215.00	440.00	386.88	53.13	8.282		
7,600.00	7,582.01	7,596.81	7,581.99	27.13	27.05	89.75	161.37	215.00	440.00	386.16	53.84	8.172		
7,700.00	7,682.01	7,696.81	7,681.99	27.48	27.41	89.75	161.37	215.00	440.00	385.45	54.55	8.066		
7,800.00	7,782.01	7,796.81	7,781.99	27.84	27.77	89.75	161.37	215.00	440.00	384.74	55.26	7.962		
7,900.00	7,882.01	7,896.81	7,881.99	28.19	28.12	89.75	161.37	215.00	440.00	384.03	55.98	7.860		
8,000.00	7,982.01	7,996.81	7,981.99	28.55	28.48	89.75	161.37	215.00	440.00	383.31	56.69	7.762		
8,100.00	8,082.01	8,096.81	8,081.99	28.90	28.83	89.75	161.37	215.00	440.00	382.60	57.40	7.665		
8,200.00	8,182.01	8,196.81	8,181.99	29.26	29.19	89.75	161.37	215.00	440.00	381.89	58.12	7.571		
8,300.00	8,282.01	8,296.81	8,281.99	29.61	29.55	89.75	161.37	215.00	440.00	381.18	58.83	7.479		
8,400.00	8,382.01	8,396.81	8,381.99	29.97	29.90	89.75	161.37	215.00	440.00	380.46	59.54	7.390		
8,500.00	8,482.01	8,496.81	8,481.99	30.32	30.26	89.75	161.37	215.00	440.00	379.75	60.25	7.302		
8,600.00	8,582.01	8,596.81	8,581.99	30.68	30.61	89.75	161.37	215.00	440.00	379.04	60.97	7.217		
8,700.00	8,682.01	8,696.81	8,681.99	31.03	30.97	89.75	161.37	215.00	440.00	378.32	61.68	7.134		
8,800.00	8,782.01	8,796.81	8,781.99	31.39	31.33	89.75	161.37	215.00	440.00	377.61	62.39	7.052		
8,900.00	8,882.01	8,896.81	8,881.99	31.74	31.68	89.75	161.37	215.00	440.00	376.90	63.11	6.972		
9,000.00	8,982.01	8,996.81	8,981.99	32.10	32.04	89.75	161.37	215.00	440.00	376.18	63.82	6.894		
9,100.00	9,082.01	9,096.81	9,081.99	32.46	32.40	89.75	161.37	215.00	440.00	375.47	64.53	6.818		
9,200.00	9,182.01	9,196.81	9,181.99	32.81	32.75	89.75	161.37	215.00	440.00	374.76	65.25	6.744		
9,300.00	9,282.01	9,296.81	9,281.99	33.17	33.11	89.75	161.37	215.00	440.00	374.04	65.96	6.671		
9,400.00	9,382.01	9,396.81	9,381.99	33.52	33.47	89.75	161.37	215.00	440.00	373.33	66.68	6.599		
9,500.00	9,482.01	9,496.81	9,481.99	33.88	33.82	89.75	161.37	215.00	440.00	372.61	67.39	6.529		
9,600.00	9,582.01	9,596.81	9,581.99	34.23	34.18	89.75	161.37	215.00	440.00	371.90	68.10	6.461		
9,700.00	9,682.01	9,696.81	9,681.99	34.59	34.54	89.75	161.37	215.00	440.00	371.19	68.82	6.394		
9,800.00	9,782.01	9,796.81	9,781.99	34.95	34.89	89.75	161.37	215.00	440.00	370.47	69.53	6.328		
9,900.00	9,882.01	9,896.81	9,881.99	35.30	35.25	89.75	161.37	215.00	440.00	369.76	70.25	6.264		
10,000.00	9,982.01	9,996.81	9,981.99	35.66	35.61	89.75	161.37	215.00	440.00	369.04	70.96	6.201		
10,100.00	10,082.01	10,096.81	10,081.99	36.01	35.96	89.75	161.37	215.00	440.00	368.33	71.67	6.139		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 462H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,200.00	10,182.01	10,196.81	10,181.99	36.37	36.32	89.75	161.37	215.00	440.00	367.62	72.39	6.078		
10,300.00	10,282.01	10,296.81	10,281.99	36.73	36.68	89.75	161.37	215.00	440.00	366.90	73.10	6.019		
10,400.00	10,382.01	10,396.81	10,381.99	37.08	37.04	89.75	161.37	215.00	440.00	366.19	73.82	5.961		
10,500.00	10,482.01	10,496.81	10,481.99	37.44	37.39	89.75	161.37	215.00	440.00	365.47	74.53	5.904		
10,600.00	10,582.01	10,596.81	10,581.99	37.80	37.75	89.75	161.37	215.00	440.00	364.76	75.25	5.848		
10,700.00	10,682.01	10,696.81	10,681.99	38.15	38.11	89.75	161.37	215.00	440.00	364.04	75.96	5.792		
10,800.00	10,782.01	10,796.81	10,781.99	38.51	38.46	89.75	161.37	215.00	440.00	363.33	76.68	5.739		
10,900.00	10,882.01	10,896.81	10,881.99	38.86	38.82	89.75	161.37	215.00	440.00	362.61	77.39	5.686		
11,000.00	10,982.01	10,996.81	10,981.99	39.22	39.18	89.75	161.37	215.00	440.00	361.90	78.10	5.634		
11,100.00	11,082.01	11,096.81	11,081.99	39.58	39.53	89.75	161.37	215.00	440.00	361.18	78.82	5.582		
11,200.00	11,182.01	11,196.81	11,181.99	39.93	39.89	89.75	161.37	215.00	440.00	360.47	79.53	5.532		
11,300.00	11,282.01	11,296.81	11,281.99	40.29	40.25	89.75	161.37	215.00	440.00	359.75	80.25	5.483		
11,400.00	11,382.01	11,396.81	11,381.99	40.65	40.61	89.75	161.37	215.00	440.00	359.04	80.96	5.435		
11,500.00	11,482.01	11,496.81	11,481.99	41.00	40.96	89.75	161.37	215.00	440.00	358.33	81.68	5.387		
11,600.00	11,582.01	11,596.81	11,581.99	41.36	41.32	89.75	161.37	215.00	440.00	357.61	82.39	5.340		
11,700.00	11,682.01	11,696.81	11,681.99	41.72	41.68	89.75	161.37	215.00	440.00	356.90	83.11	5.294		
11,800.00	11,782.01	11,796.81	11,781.99	42.07	42.04	89.75	161.37	215.00	440.00	356.18	83.82	5.249		
11,900.00	11,882.01	11,896.81	11,881.99	42.43	42.39	89.75	161.37	215.00	440.00	355.47	84.54	5.205		
12,000.00	11,982.01	11,996.81	11,981.99	42.79	42.75	89.75	161.37	215.00	440.00	354.75	85.25	5.161		
12,100.00	12,082.01	12,096.81	12,081.99	43.14	43.11	89.75	161.37	215.00	440.00	354.04	85.97	5.118		
12,200.00	12,182.01	12,196.81	12,181.99	43.50	43.47	89.75	161.37	215.00	440.00	353.32	86.68	5.076		
12,209.25	12,191.26	12,206.06	12,191.24	43.53	43.50	89.75	161.37	215.00	440.00	353.25	86.75	5.072		
12,300.00	12,282.01	12,292.28	12,277.40	43.86	43.79	90.03	159.26	215.26	440.28	352.92	87.36	5.040		
12,400.00	12,382.01	12,381.46	12,365.30	44.22	44.07	91.90	144.81	217.00	442.56	354.61	87.95	5.032		
12,500.00	12,482.01	12,464.33	12,444.04	44.57	44.30	95.14	119.40	220.08	448.49	360.11	88.38	5.075		
12,556.03	12,538.04	12,507.05	12,482.97	44.77	44.42	97.33	101.97	222.19	454.22	365.74	88.48	5.134		
12,600.00	12,581.97	12,539.14	12,511.29	44.92	44.50	-83.23	87.00	224.00	460.09	371.63	88.46	5.201		
12,650.00	12,631.59	12,574.99	12,541.88	45.08	44.58	-80.69	68.45	226.24	467.93	379.60	88.33	5.298		
12,700.00	12,680.50	12,610.22	12,570.74	45.23	44.66	-78.24	48.41	228.67	476.80	388.69	88.11	5.411		
12,750.00	12,728.32	12,650.00	12,601.77	45.38	44.74	-75.72	23.70	231.66	486.51	398.58	87.94	5.533		
12,800.00	12,774.70	12,679.12	12,623.35	45.51	44.79	-73.70	4.30	234.01	496.75	409.32	87.43	5.681		
12,850.00	12,819.28	12,712.91	12,647.11	45.64	44.85	-71.65	-19.55	236.89	507.42	420.41	87.01	5.832		
12,900.00	12,861.72	12,750.00	12,671.51	45.76	44.91	-69.66	-47.27	240.25	518.33	431.67	86.67	5.981		
12,950.00	12,901.69	12,779.42	12,689.55	45.86	44.98	-68.01	-70.35	243.04	529.26	443.15	86.12	6.146		
13,000.00	12,938.90	12,812.24	12,708.22	45.95	45.06	-66.44	-97.12	246.28	540.12	454.44	85.68	6.304		
13,050.00	12,973.05	12,850.00	12,727.77	46.03	45.14	-64.97	-129.20	250.16	550.80	465.39	85.41	6.449		
13,100.00	13,003.89	12,877.16	12,740.49	46.10	45.20	-63.79	-153.02	253.05	561.08	476.13	84.94	6.605		
13,150.00	13,031.19	12,909.35	12,754.07	46.18	45.27	-62.72	-181.99	256.55	570.97	486.29	84.68	6.743		
13,200.00	13,054.74	12,950.00	12,768.85	46.28	45.36	-61.81	-219.57	261.10	580.46	495.81	84.65	6.857		
13,250.00	13,074.35	12,973.34	12,776.10	46.39	45.41	-61.07	-241.59	263.76	589.18	504.77	84.41	6.980		
13,300.00	13,089.88	13,000.00	12,783.28	46.49	45.47	-60.44	-267.08	266.85	597.41	513.05	84.36	7.082		
13,350.00	13,101.21	13,037.02	12,791.25	46.59	45.55	-60.03	-302.96	271.19	604.90	520.35	84.55	7.154		
13,400.00	13,108.26	13,068.82	12,796.22	46.69	45.62	-59.73	-334.14	274.96	611.72	526.94	84.78	7.216		
13,450.00	13,110.97	13,100.00	12,799.40	46.79	45.69	-59.57	-364.93	278.69	617.82	532.72	85.11	7.259		
13,456.03	13,111.00	13,100.00	12,799.40	46.80	45.69	-59.51	-364.93	278.69	618.54	533.40	85.14	7.265		
13,500.00	13,111.00	13,132.57	12,800.91	46.88	45.76	-59.93	-397.22	282.60	623.74	538.27	85.47	7.298		
13,600.00	13,111.00	13,245.99	12,801.00	47.11	46.02	-60.66	-510.02	294.38	634.28	548.15	86.14	7.363		
13,623.18	13,111.00	13,274.65	12,801.00	47.17	46.09	-60.77	-538.59	296.65	635.80	549.51	86.28	7.369		
13,700.00	13,111.00	13,369.90	12,801.00	47.38	46.36	-60.97	-633.68	302.15	639.10	552.34	86.76	7.366		
13,800.00	13,111.00	13,488.13	12,801.00	47.69	46.73	-61.04	-751.87	304.69	640.17	552.80	87.37	7.327		
13,900.00	13,111.00	13,588.13	12,801.00	48.04	47.09	-61.04	-851.87	305.55	640.17	552.16	88.01	7.274		
14,000.00	13,111.00	13,688.13	12,801.00	48.43	47.50	-61.04	-951.87	306.41	640.16	551.45	88.72	7.216		

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 462H - OH - Plan #1											Offset Site Error:	0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM											Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
14,100.00	13,111.00	13,788.13	12,801.00	48.85	47.94	-61.04	-1,051.86	307.26	640.16	550.66	89.50	7.152
14,200.00	13,111.00	13,888.13	12,801.00	49.32	48.42	-61.04	-1,151.86	308.12	640.16	549.81	90.36	7.085
14,300.00	13,111.00	13,988.13	12,801.00	49.82	48.93	-61.04	-1,251.86	308.98	640.16	548.88	91.28	7.013
14,400.00	13,111.00	14,088.13	12,801.00	50.36	49.49	-61.04	-1,351.85	309.84	640.16	547.89	92.26	6.938
14,500.00	13,111.00	14,188.13	12,801.00	50.93	50.07	-61.04	-1,451.85	310.70	640.16	546.84	93.31	6.860
14,600.00	13,111.00	14,288.13	12,801.00	51.53	50.69	-61.04	-1,551.85	311.56	640.15	545.73	94.42	6.780
14,700.00	13,111.00	14,388.13	12,801.00	52.17	51.35	-61.04	-1,651.84	312.41	640.15	544.56	95.59	6.697
14,800.00	13,111.00	14,488.13	12,801.00	52.84	52.03	-61.04	-1,751.84	313.27	640.15	543.33	96.82	6.612
14,900.00	13,111.00	14,588.13	12,801.00	53.54	52.75	-61.04	-1,851.83	314.13	640.15	542.05	98.10	6.525
15,000.00	13,111.00	14,688.13	12,801.00	54.27	53.49	-61.04	-1,951.83	314.99	640.15	540.71	99.44	6.438
15,100.00	13,111.00	14,788.13	12,801.00	55.02	54.27	-61.04	-2,051.83	315.85	640.14	539.32	100.82	6.349
15,200.00	13,111.00	14,888.13	12,801.00	55.81	55.06	-61.04	-2,151.82	316.70	640.14	537.88	102.26	6.260
15,300.00	13,111.00	14,988.13	12,801.00	56.61	55.89	-61.04	-2,251.82	317.56	640.14	536.40	103.74	6.171
15,400.00	13,111.00	15,088.13	12,801.00	57.45	56.74	-61.04	-2,351.82	318.42	640.14	534.87	105.26	6.081
15,500.00	13,111.00	15,188.13	12,801.00	58.30	57.61	-61.04	-2,451.81	319.28	640.14	533.30	106.83	5.992
15,600.00	13,111.00	15,288.13	12,801.00	59.18	58.50	-61.04	-2,551.81	320.14	640.13	531.69	108.44	5.903
15,700.00	13,111.00	15,388.13	12,801.00	60.08	59.42	-61.04	-2,651.80	321.00	640.13	530.04	110.09	5.815
15,800.00	13,111.00	15,488.13	12,801.00	61.00	60.35	-61.04	-2,751.80	321.85	640.13	528.35	111.78	5.727
15,900.00	13,111.00	15,588.13	12,801.00	61.94	61.31	-61.04	-2,851.80	322.71	640.13	526.63	113.50	5.640
16,000.00	13,111.00	15,688.13	12,801.00	62.90	62.28	-61.04	-2,951.79	323.57	640.13	524.87	115.25	5.554
16,100.00	13,111.00	15,788.13	12,801.00	63.88	63.27	-61.04	-3,051.79	324.43	640.12	523.08	117.04	5.469
16,200.00	13,111.00	15,888.13	12,801.00	64.87	64.28	-61.04	-3,151.79	325.29	640.12	521.26	118.86	5.385
16,300.00	13,111.00	15,988.13	12,801.00	65.88	65.31	-61.04	-3,251.78	326.15	640.12	519.41	120.71	5.303
16,400.00	13,111.00	16,088.13	12,801.00	66.91	66.35	-61.04	-3,351.78	327.00	640.12	517.53	122.59	5.222
16,500.00	13,111.00	16,188.13	12,801.00	67.95	67.40	-61.04	-3,451.78	327.86	640.12	515.62	124.49	5.142
16,600.00	13,111.00	16,288.13	12,801.00	69.00	68.47	-61.04	-3,551.77	328.72	640.11	513.69	126.42	5.063
16,700.00	13,111.00	16,388.13	12,801.00	70.07	69.55	-61.04	-3,651.77	329.58	640.11	511.73	128.38	4.986
16,800.00	13,111.00	16,488.13	12,801.00	71.15	70.64	-61.04	-3,751.76	330.44	640.11	509.75	130.36	4.910
16,900.00	13,111.00	16,588.13	12,801.00	72.25	71.75	-61.04	-3,851.76	331.29	640.11	507.75	132.36	4.836
17,000.00	13,111.00	16,688.13	12,801.00	73.35	72.87	-61.04	-3,951.76	332.15	640.11	505.72	134.38	4.763
17,100.00	13,111.00	16,788.13	12,801.00	74.47	73.99	-61.04	-4,051.75	333.01	640.10	503.68	136.43	4.692
17,200.00	13,111.00	16,888.13	12,801.00	75.60	75.13	-61.04	-4,151.75	333.87	640.10	501.61	138.49	4.622
17,300.00	13,111.00	16,988.13	12,801.00	76.73	76.28	-61.04	-4,251.75	334.73	640.10	499.53	140.57	4.554
17,400.00	13,111.00	17,088.13	12,801.00	77.88	77.44	-61.04	-4,351.74	335.59	640.10	497.43	142.67	4.487
17,500.00	13,111.00	17,188.13	12,801.00	79.04	78.61	-61.04	-4,451.74	336.44	640.10	495.31	144.79	4.421
17,600.00	13,111.00	17,288.13	12,801.00	80.20	79.78	-61.04	-4,551.73	337.30	640.09	493.17	146.92	4.357
17,700.00	13,111.00	17,388.13	12,801.00	81.38	80.97	-61.04	-4,651.73	338.16	640.09	491.02	149.07	4.294
17,800.00	13,111.00	17,488.13	12,801.00	82.56	82.16	-61.04	-4,751.73	339.02	640.09	488.86	151.24	4.232
17,900.00	13,111.00	17,588.13	12,801.00	83.75	83.36	-61.03	-4,851.72	339.88	640.09	486.68	153.41	4.172
18,000.00	13,111.00	17,688.13	12,801.00	84.95	84.57	-61.03	-4,951.72	340.73	640.09	484.48	155.61	4.113
18,100.00	13,111.00	17,788.13	12,801.00	86.16	85.78	-61.03	-5,051.72	341.59	640.09	482.27	157.81	4.056
18,200.00	13,111.00	17,888.13	12,801.00	87.37	87.01	-61.03	-5,151.71	342.45	640.08	480.05	160.03	4.000
18,300.00	13,111.00	17,988.13	12,801.00	88.59	88.23	-61.03	-5,251.71	343.31	640.08	477.82	162.26	3.945
18,400.00	13,111.00	18,088.13	12,801.00	89.82	89.47	-61.03	-5,351.71	344.17	640.08	475.58	164.50	3.891
18,500.00	13,111.00	18,188.13	12,801.00	91.05	90.71	-61.03	-5,451.70	345.03	640.08	473.32	166.76	3.838
18,600.00	13,111.00	18,288.13	12,801.00	92.28	91.95	-61.03	-5,551.70	345.88	640.08	471.05	169.02	3.787
18,700.00	13,111.00	18,388.13	12,801.00	93.53	93.21	-61.03	-5,651.69	346.74	640.07	468.78	171.30	3.737
18,800.00	13,111.00	18,488.13	12,801.00	94.78	94.46	-61.03	-5,751.69	347.60	640.07	466.49	173.58	3.687
18,900.00	13,111.00	18,588.13	12,801.00	96.03	95.72	-61.03	-5,851.69	348.46	640.07	464.20	175.87	3.639
19,000.00	13,111.00	18,688.13	12,801.00	97.29	96.99	-61.03	-5,951.68	349.32	640.07	461.89	178.18	3.592
19,100.00	13,111.00	18,788.13	12,801.00	98.56	98.26	-61.03	-6,051.68	350.17	640.07	459.58	180.49	3.546
19,200.00	13,111.00	18,888.13	12,801.00	99.82	99.54	-61.03	-6,151.68	351.03	640.06	457.25	182.81	3.501

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

Anticollision Report

Company:	Earthstone Operating, LLC	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Project:	Lea County, NM (NAD 27)	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Reference Site:	Los Vaqueros Fed Pad	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	LEAM Multi_User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Los Vaqueros Fed Pad - Los Vaqueros Fed 462H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-OWSG_Rev2_MWD+HRGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,300.00	13,111.00	18,988.13	12,801.00	101.10	100.82	-61.03	-6,251.67	351.89	640.06	454.92	185.14	3.457	
19,400.00	13,111.00	19,088.13	12,801.00	102.37	102.10	-61.03	-6,351.67	352.75	640.06	452.58	187.48	3.414	
19,500.00	13,111.00	19,188.13	12,801.00	103.66	103.39	-61.03	-6,451.66	353.61	640.06	450.24	189.82	3.372	
19,600.00	13,111.00	19,288.13	12,801.00	104.94	104.68	-61.03	-6,551.66	354.47	640.06	447.89	192.17	3.331	
19,700.00	13,111.00	19,388.13	12,801.00	106.23	105.98	-61.03	-6,651.66	355.32	640.05	445.52	194.53	3.290	
19,800.00	13,111.00	19,488.13	12,801.00	107.52	107.28	-61.03	-6,751.65	356.18	640.05	443.16	196.89	3.251	
19,900.00	13,111.00	19,588.13	12,801.00	108.82	108.58	-61.03	-6,851.65	357.04	640.05	440.78	199.27	3.212	
20,000.00	13,111.00	19,688.13	12,801.00	110.12	109.89	-61.03	-6,951.65	357.90	640.05	438.40	201.64	3.174	
20,100.00	13,111.00	19,788.13	12,801.00	111.43	111.19	-61.03	-7,051.64	358.76	640.05	436.02	204.03	3.137	
20,200.00	13,111.00	19,888.13	12,801.00	112.73	112.51	-61.03	-7,151.64	359.62	640.04	433.63	206.42	3.101	
20,300.00	13,111.00	19,988.13	12,801.00	114.04	113.82	-61.03	-7,251.64	360.47	640.04	431.23	208.81	3.065	
20,400.00	13,111.00	20,088.13	12,801.00	115.36	115.14	-61.03	-7,351.63	361.33	640.04	428.83	211.22	3.030	
20,500.00	13,111.00	20,188.13	12,801.00	116.67	116.46	-61.03	-7,451.63	362.19	640.04	426.42	213.62	2.996	
20,600.00	13,111.00	20,288.13	12,801.00	117.99	117.79	-61.03	-7,551.62	363.05	640.04	424.00	216.03	2.963	
20,700.00	13,111.00	20,388.13	12,801.00	119.31	119.11	-61.03	-7,651.62	363.91	640.03	421.59	218.45	2.930	
20,800.00	13,111.00	20,488.13	12,801.00	120.64	120.44	-61.03	-7,751.62	364.76	640.03	419.16	220.87	2.898	
20,900.00	13,111.00	20,588.13	12,801.00	121.96	121.77	-61.03	-7,851.61	365.62	640.03	416.73	223.30	2.866	
21,000.00	13,111.00	20,688.13	12,801.00	123.29	123.11	-61.03	-7,951.61	366.48	640.03	414.30	225.73	2.835	
21,100.00	13,111.00	20,788.13	12,801.00	124.62	124.44	-61.03	-8,051.61	367.34	640.03	411.87	228.16	2.805	
21,200.00	13,111.00	20,888.13	12,801.00	125.96	125.78	-61.03	-8,151.60	368.20	640.02	409.42	230.60	2.775	
21,300.00	13,111.00	20,988.13	12,801.00	127.29	127.12	-61.03	-8,251.60	369.06	640.02	406.98	233.04	2.746	
21,400.00	13,111.00	21,088.13	12,801.00	128.63	128.46	-61.03	-8,351.59	369.91	640.02	404.53	235.49	2.718	
21,500.00	13,111.00	21,188.13	12,801.00	129.97	129.81	-61.03	-8,451.59	370.77	640.02	402.08	237.94	2.690	
21,600.00	13,111.00	21,288.13	12,801.00	131.31	131.15	-61.03	-8,551.59	371.63	640.02	399.62	240.40	2.662	
21,700.00	13,111.00	21,388.13	12,801.00	132.66	132.50	-61.03	-8,651.58	372.49	640.02	397.16	242.85	2.635	
21,800.00	13,111.00	21,488.13	12,801.00	134.00	133.85	-61.03	-8,751.58	373.35	640.01	394.70	245.32	2.609	
21,900.00	13,111.00	21,588.13	12,801.00	135.35	135.20	-61.03	-8,851.58	374.20	640.01	392.23	247.78	2.583	
22,000.00	13,111.00	21,688.13	12,801.00	136.70	136.56	-61.03	-8,951.57	375.06	640.01	389.76	250.25	2.557	
22,100.00	13,111.00	21,788.13	12,801.00	138.05	137.91	-61.03	-9,051.57	375.92	640.01	387.29	252.72	2.532	
22,200.00	13,111.00	21,888.13	12,801.00	139.41	139.27	-61.03	-9,151.57	376.78	640.01	384.81	255.19	2.508	
22,300.00	13,111.00	21,988.13	12,801.00	140.76	140.63	-61.03	-9,251.56	377.64	640.00	382.33	257.67	2.484	
22,400.00	13,111.00	22,088.13	12,801.00	142.12	141.99	-61.03	-9,351.56	378.50	640.00	379.85	260.15	2.460	
22,500.00	13,111.00	22,188.13	12,801.00	143.47	143.35	-61.03	-9,451.55	379.35	640.00	377.36	262.63	2.437	
22,600.00	13,111.00	22,288.13	12,801.00	144.83	144.71	-61.03	-9,551.55	380.21	640.00	374.88	265.12	2.414	
22,700.00	13,111.00	22,388.13	12,801.00	146.19	146.08	-61.03	-9,651.55	381.07	640.00	372.39	267.61	2.392	
22,800.00	13,111.00	22,488.13	12,801.00	147.56	147.44	-61.03	-9,751.54	381.93	639.99	369.89	270.10	2.369	
22,900.00	13,111.00	22,588.13	12,801.00	148.92	148.81	-61.03	-9,851.54	382.79	639.99	367.40	272.59	2.348	
23,000.00	13,111.00	22,688.13	12,801.00	150.29	150.18	-61.03	-9,951.54	383.64	639.99	364.90	275.09	2.326	
23,100.00	13,111.00	22,788.13	12,801.00	151.65	151.55	-61.03	-10,051.53	384.50	639.99	362.40	277.59	2.306	
23,200.00	13,111.00	22,888.13	12,801.00	153.02	152.92	-61.03	-10,151.53	385.36	639.99	359.90	280.09	2.285	
23,300.00	13,111.00	22,988.13	12,801.00	154.39	154.29	-61.03	-10,251.53	386.22	639.98	357.39	282.59	2.265	
23,400.00	13,111.00	23,088.13	12,801.00	155.76	155.66	-61.03	-10,351.52	387.08	639.98	354.88	285.10	2.245	
23,500.00	13,111.00	23,188.13	12,801.00	157.13	157.04	-61.03	-10,451.52	387.94	639.98	352.37	287.61	2.225	
23,600.00	13,111.00	23,288.13	12,801.00	158.50	158.41	-61.03	-10,551.51	388.79	639.98	349.86	290.12	2.206	
23,700.00	13,111.00	23,388.13	12,801.00	159.88	159.79	-61.03	-10,651.51	389.65	639.98	347.35	292.63	2.187	
23,756.58	13,111.00	23,444.71	12,801.00	160.65	160.57	-61.03	-10,708.08	390.14	639.98	345.93	294.05	2.176	
23,757.21	13,111.00	23,445.33	12,801.00	160.66	160.58	-61.03	-10,708.71	390.14	639.98	345.91	294.06	2.176 SF	

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

Planning Report

Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Los Vaqueros Fed Pad			
Site Position: From:	Map	Northing:	372,540.36 usft	Latitude:	32° 1' 15.08 N
		Easting:	786,686.05 usft	Longitude:	103° 24' 30.00 W
		Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "

Well	Los Vaqueros Fed 522H					
Well Position	+N/-S	0.37 usft	Northing:	372,540.73 usft	Latitude:	32° 1' 15.07 N
	+E/-W	50.00 usft	Easting:	786,736.05 usft	Longitude:	103° 24' 29.41 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,183.31 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	5/13/2023	6.20	59.55	47,224.50000000

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.51

Plan Survey Tool Program	Date	4/13/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	23,756.58 Plan #1 (OH)	OWSG_Rev2_MWD+HRGM	OWSG MWD + HRGM

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.24	8.00	305.33	2,998.94	16.14	-22.77	2.00	2.00	0.00	305.33	
4,579.75	8.00	305.33	4,563.06	143.33	-202.23	0.00	0.00	0.00	0.00	
4,979.99	0.00	0.00	4,962.00	159.47	-225.00	2.00	-2.00	0.00	180.00	
12,556.03	0.00	0.00	12,538.04	159.47	-225.00	0.00	0.00	0.00	0.00	
13,456.03	90.00	182.85	13,111.00	-412.78	-253.49	10.00	10.00	0.00	182.85	
13,623.18	90.00	179.51	13,111.00	-579.87	-256.93	2.00	0.00	-2.00	-90.00	
23,756.58	90.00	179.51	13,111.00	-10,712.89	-169.74	0.00	0.00	0.00	0.00	PBHL (LV Fed 522H)

Planning Report

Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (LV Fed 522H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,045.81	0.00	0.00	1,045.81	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,480.81	0.00	0.00	1,480.81	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	2.00	305.33	2,699.98	1.01	-1.42	-1.02	2.00	2.00	0.00
2,800.00	4.00	305.33	2,799.84	4.04	-5.69	-4.08	2.00	2.00	0.00
2,900.00	6.00	305.33	2,899.45	9.07	-12.80	-9.18	2.00	2.00	0.00
3,000.24	8.00	305.33	2,998.94	16.14	-22.77	-16.33	2.00	2.00	0.00
3,100.00	8.00	305.33	3,097.73	24.17	-34.11	-24.46	0.00	0.00	0.00
3,200.00	8.00	305.33	3,196.75	32.23	-45.47	-32.61	0.00	0.00	0.00
3,300.00	8.00	305.33	3,295.78	40.28	-56.83	-40.76	0.00	0.00	0.00
3,400.00	8.00	305.33	3,394.80	48.33	-68.19	-48.91	0.00	0.00	0.00
3,500.00	8.00	305.33	3,493.83	56.38	-79.55	-57.06	0.00	0.00	0.00
3,600.00	8.00	305.33	3,592.86	64.44	-90.91	-65.21	0.00	0.00	0.00
3,700.00	8.00	305.33	3,691.88	72.49	-102.28	-73.36	0.00	0.00	0.00
3,800.00	8.00	305.33	3,790.91	80.54	-113.64	-81.51	0.00	0.00	0.00
3,900.00	8.00	305.33	3,889.93	88.59	-125.00	-89.66	0.00	0.00	0.00
4,000.00	8.00	305.33	3,988.96	96.65	-136.36	-97.81	0.00	0.00	0.00
4,100.00	8.00	305.33	4,087.98	104.70	-147.72	-105.96	0.00	0.00	0.00
4,200.00	8.00	305.33	4,187.01	112.75	-159.08	-114.11	0.00	0.00	0.00
4,300.00	8.00	305.33	4,286.04	120.80	-170.44	-122.26	0.00	0.00	0.00
4,400.00	8.00	305.33	4,385.06	128.86	-181.80	-130.41	0.00	0.00	0.00
4,500.00	8.00	305.33	4,484.09	136.91	-193.17	-138.55	0.00	0.00	0.00
4,579.75	8.00	305.33	4,563.06	143.33	-202.23	-145.05	0.00	0.00	0.00
4,600.00	7.60	305.33	4,583.12	144.92	-204.47	-146.66	2.00	-2.00	0.00

Planning Report

Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	5.60	305.33	4,682.45	151.56	-213.85	-153.39	2.00	-2.00	0.00
4,800.00	3.60	305.33	4,782.13	156.20	-220.39	-158.08	2.00	-2.00	0.00
4,900.00	1.60	305.33	4,882.02	158.82	-224.09	-160.74	2.00	-2.00	0.00
4,979.99	0.00	0.00	4,962.00	159.47	-225.00	-161.39	2.00	-2.00	0.00
5,000.00	0.00	0.00	4,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,068.80	0.00	0.00	5,050.81	159.47	-225.00	-161.39	0.00	0.00	0.00
Base Salt									
5,100.00	0.00	0.00	5,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,200.00	0.00	0.00	5,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,300.00	0.00	0.00	5,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,378.80	0.00	0.00	5,360.81	159.47	-225.00	-161.39	0.00	0.00	0.00
Lamar									
5,393.80	0.00	0.00	5,375.81	159.47	-225.00	-161.39	0.00	0.00	0.00
Bell Canyon									
5,400.00	0.00	0.00	5,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,500.00	0.00	0.00	5,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,600.00	0.00	0.00	5,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,700.00	0.00	0.00	5,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,800.00	0.00	0.00	5,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00
5,900.00	0.00	0.00	5,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,000.00	0.00	0.00	5,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,100.00	0.00	0.00	6,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,200.00	0.00	0.00	6,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,300.00	0.00	0.00	6,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,400.00	0.00	0.00	6,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,403.80	0.00	0.00	6,385.81	159.47	-225.00	-161.39	0.00	0.00	0.00
Cherry Canyon									
6,500.00	0.00	0.00	6,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,600.00	0.00	0.00	6,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,700.00	0.00	0.00	6,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,800.00	0.00	0.00	6,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00
6,900.00	0.00	0.00	6,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,000.00	0.00	0.00	6,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,100.00	0.00	0.00	7,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,200.00	0.00	0.00	7,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,300.00	0.00	0.00	7,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,400.00	0.00	0.00	7,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,500.00	0.00	0.00	7,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,600.00	0.00	0.00	7,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,700.00	0.00	0.00	7,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,800.00	0.00	0.00	7,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00
7,888.80	0.00	0.00	7,870.81	159.47	-225.00	-161.39	0.00	0.00	0.00
Brushy Canyon									
7,900.00	0.00	0.00	7,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,000.00	0.00	0.00	7,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,100.00	0.00	0.00	8,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,200.00	0.00	0.00	8,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,300.00	0.00	0.00	8,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,400.00	0.00	0.00	8,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,500.00	0.00	0.00	8,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,600.00	0.00	0.00	8,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,700.00	0.00	0.00	8,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00
8,800.00	0.00	0.00	8,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,900.00	0.00	0.00	8,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,303.80	0.00	0.00	9,285.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
Top BSPG Lime										
9,400.00	0.00	0.00	9,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,578.80	0.00	0.00	10,560.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
1st BSPG Ss										
10,600.00	0.00	0.00	10,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,798.80	0.00	0.00	10,780.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
2nd BSPG Carb										
10,800.00	0.00	0.00	10,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,123.80	0.00	0.00	11,105.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
2nd BSPG Ss										
11,200.00	0.00	0.00	11,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,568.80	0.00	0.00	11,550.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
3rd BSPG Carb										
11,600.00	0.00	0.00	11,582.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,682.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,782.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,882.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,982.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,100.00	0.00	0.00	12,082.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,168.80	0.00	0.00	12,150.81	159.47	-225.00	-161.39	0.00	0.00	0.00	
3rd BSPG Ss										
12,200.00	0.00	0.00	12,182.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,300.00	0.00	0.00	12,282.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,400.00	0.00	0.00	12,382.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,500.00	0.00	0.00	12,482.01	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,556.03	0.00	0.00	12,538.04	159.47	-225.00	-161.39	0.00	0.00	0.00	
12,578.81	2.28	182.85	12,560.81	159.02	-225.02	-160.94	10.00	10.00	0.00	
Wolfcamp										
12,600.00	4.40	182.85	12,581.97	157.79	-225.08	-159.71	10.00	10.00	0.00	

Planning Report

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Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,650.00	9.40	182.85	12,631.59	151.79	-225.38	-153.71	10.00	10.00	0.00	
12,700.00	14.40	182.85	12,680.50	141.50	-225.89	-143.43	10.00	10.00	0.00	
12,750.00	19.40	182.85	12,728.32	126.99	-226.62	-128.92	10.00	10.00	0.00	
12,800.00	24.40	182.85	12,774.70	108.37	-227.54	-110.31	10.00	10.00	0.00	
12,850.00	29.40	182.85	12,819.28	85.79	-228.67	-87.74	10.00	10.00	0.00	
12,900.00	34.40	182.85	12,861.72	59.41	-229.98	-61.37	10.00	10.00	0.00	
12,950.00	39.40	182.85	12,901.69	29.44	-231.47	-31.42	10.00	10.00	0.00	
13,000.00	44.40	182.85	12,938.90	-3.90	-233.13	1.91	10.00	10.00	0.00	
13,036.00	48.00	182.85	12,963.81	-29.84	-234.42	27.84	10.00	10.00	0.00	
FTP (LV Fed 522H)										
13,050.00	49.40	182.85	12,973.05	-40.35	-234.95	38.34	10.00	10.00	0.00	
13,100.00	54.40	182.85	13,003.89	-79.63	-236.90	77.60	10.00	10.00	0.00	
13,150.00	59.40	182.85	13,031.19	-121.45	-238.99	119.40	10.00	10.00	0.00	
13,200.00	64.40	182.85	13,054.74	-165.49	-241.18	163.42	10.00	10.00	0.00	
13,250.00	69.40	182.85	13,074.35	-211.41	-243.46	209.32	10.00	10.00	0.00	
13,300.00	74.40	182.85	13,089.88	-258.86	-245.83	256.75	10.00	10.00	0.00	
13,350.00	79.40	182.85	13,101.21	-307.48	-248.25	305.35	10.00	10.00	0.00	
13,400.00	84.40	182.85	13,108.26	-356.91	-250.71	354.75	10.00	10.00	0.00	
13,441.36	88.53	182.85	13,110.81	-398.13	-252.76	395.95	10.00	10.00	0.00	
Target LP										
13,450.00	89.40	182.85	13,110.97	-406.75	-253.19	404.57	10.00	10.00	0.00	
13,456.03	90.00	182.85	13,111.00	-412.78	-253.49	410.60	10.00	10.00	0.00	
13,500.00	90.00	181.97	13,111.00	-456.71	-255.34	454.51	2.00	0.00	-2.00	
13,600.00	90.00	179.97	13,111.00	-556.69	-257.03	554.47	2.00	0.00	-2.00	
13,623.18	90.00	179.51	13,111.00	-579.87	-256.93	577.65	2.00	0.00	-2.00	
13,700.00	90.00	179.51	13,111.00	-656.69	-256.26	654.47	0.00	0.00	0.00	
13,800.00	90.00	179.51	13,111.00	-756.68	-255.40	754.47	0.00	0.00	0.00	
13,900.00	90.00	179.51	13,111.00	-856.68	-254.54	854.47	0.00	0.00	0.00	
14,000.00	90.00	179.51	13,111.00	-956.67	-253.68	954.47	0.00	0.00	0.00	
14,100.00	90.00	179.51	13,111.00	-1,056.67	-252.82	1,054.47	0.00	0.00	0.00	
14,200.00	90.00	179.51	13,111.00	-1,156.67	-251.96	1,154.47	0.00	0.00	0.00	
14,300.00	90.00	179.51	13,111.00	-1,256.66	-251.10	1,254.47	0.00	0.00	0.00	
14,400.00	90.00	179.51	13,111.00	-1,356.66	-250.24	1,354.47	0.00	0.00	0.00	
14,500.00	90.00	179.51	13,111.00	-1,456.66	-249.38	1,454.47	0.00	0.00	0.00	
14,600.00	90.00	179.51	13,111.00	-1,556.65	-248.52	1,554.47	0.00	0.00	0.00	
14,700.00	90.00	179.51	13,111.00	-1,656.65	-247.66	1,654.47	0.00	0.00	0.00	
14,800.00	90.00	179.51	13,111.00	-1,756.64	-246.80	1,754.47	0.00	0.00	0.00	
14,900.00	90.00	179.51	13,111.00	-1,856.64	-245.94	1,854.47	0.00	0.00	0.00	
15,000.00	90.00	179.51	13,111.00	-1,956.64	-245.08	1,954.47	0.00	0.00	0.00	
15,100.00	90.00	179.51	13,111.00	-2,056.63	-244.22	2,054.47	0.00	0.00	0.00	
15,200.00	90.00	179.51	13,111.00	-2,156.63	-243.36	2,154.47	0.00	0.00	0.00	
15,300.00	90.00	179.51	13,111.00	-2,256.63	-242.50	2,254.47	0.00	0.00	0.00	
15,400.00	90.00	179.51	13,111.00	-2,356.62	-241.64	2,354.47	0.00	0.00	0.00	
15,500.00	90.00	179.51	13,111.00	-2,456.62	-240.78	2,454.47	0.00	0.00	0.00	
15,600.00	90.00	179.51	13,111.00	-2,556.61	-239.92	2,554.47	0.00	0.00	0.00	
15,700.00	90.00	179.51	13,111.00	-2,656.61	-239.06	2,654.47	0.00	0.00	0.00	
15,800.00	90.00	179.51	13,111.00	-2,756.61	-238.20	2,754.47	0.00	0.00	0.00	
15,900.00	90.00	179.51	13,111.00	-2,856.60	-237.34	2,854.47	0.00	0.00	0.00	
16,000.00	90.00	179.51	13,111.00	-2,956.60	-236.47	2,954.47	0.00	0.00	0.00	
16,100.00	90.00	179.51	13,111.00	-3,056.60	-235.61	3,054.47	0.00	0.00	0.00	
16,200.00	90.00	179.51	13,111.00	-3,156.59	-234.75	3,154.47	0.00	0.00	0.00	
16,300.00	90.00	179.51	13,111.00	-3,256.59	-233.89	3,254.47	0.00	0.00	0.00	
16,400.00	90.00	179.51	13,111.00	-3,356.59	-233.03	3,354.47	0.00	0.00	0.00	

Planning Report

Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,500.00	90.00	179.51	13,111.00	-3,456.58	-232.17	3,454.47	0.00	0.00	0.00	
16,600.00	90.00	179.51	13,111.00	-3,556.58	-231.31	3,554.47	0.00	0.00	0.00	
16,700.00	90.00	179.51	13,111.00	-3,656.57	-230.45	3,654.47	0.00	0.00	0.00	
16,800.00	90.00	179.51	13,111.00	-3,756.57	-229.59	3,754.47	0.00	0.00	0.00	
16,900.00	90.00	179.51	13,111.00	-3,856.57	-228.73	3,854.47	0.00	0.00	0.00	
17,000.00	90.00	179.51	13,111.00	-3,956.56	-227.87	3,954.47	0.00	0.00	0.00	
17,100.00	90.00	179.51	13,111.00	-4,056.56	-227.01	4,054.47	0.00	0.00	0.00	
17,200.00	90.00	179.51	13,111.00	-4,156.56	-226.15	4,154.47	0.00	0.00	0.00	
17,300.00	90.00	179.51	13,111.00	-4,256.55	-225.29	4,254.47	0.00	0.00	0.00	
17,400.00	90.00	179.51	13,111.00	-4,356.55	-224.43	4,354.47	0.00	0.00	0.00	
17,500.00	90.00	179.51	13,111.00	-4,456.54	-223.57	4,454.47	0.00	0.00	0.00	
17,600.00	90.00	179.51	13,111.00	-4,556.54	-222.71	4,554.47	0.00	0.00	0.00	
17,700.00	90.00	179.51	13,111.00	-4,656.54	-221.85	4,654.47	0.00	0.00	0.00	
17,800.00	90.00	179.51	13,111.00	-4,756.53	-220.99	4,754.47	0.00	0.00	0.00	
17,900.00	90.00	179.51	13,111.00	-4,856.53	-220.13	4,854.47	0.00	0.00	0.00	
18,000.00	90.00	179.51	13,111.00	-4,956.53	-219.27	4,954.47	0.00	0.00	0.00	
18,100.00	90.00	179.51	13,111.00	-5,056.52	-218.41	5,054.47	0.00	0.00	0.00	
18,200.00	90.00	179.51	13,111.00	-5,156.52	-217.55	5,154.47	0.00	0.00	0.00	
18,300.00	90.00	179.51	13,111.00	-5,256.52	-216.68	5,254.47	0.00	0.00	0.00	
18,400.00	90.00	179.51	13,111.00	-5,356.51	-215.82	5,354.47	0.00	0.00	0.00	
18,500.00	90.00	179.51	13,111.00	-5,456.51	-214.96	5,454.47	0.00	0.00	0.00	
18,600.00	90.00	179.51	13,111.00	-5,556.50	-214.10	5,554.47	0.00	0.00	0.00	
18,700.00	90.00	179.51	13,111.00	-5,656.50	-213.24	5,654.47	0.00	0.00	0.00	
18,800.00	90.00	179.51	13,111.00	-5,756.50	-212.38	5,754.47	0.00	0.00	0.00	
18,900.00	90.00	179.51	13,111.00	-5,856.49	-211.52	5,854.47	0.00	0.00	0.00	
19,000.00	90.00	179.51	13,111.00	-5,956.49	-210.66	5,954.47	0.00	0.00	0.00	
19,100.00	90.00	179.51	13,111.00	-6,056.49	-209.80	6,054.47	0.00	0.00	0.00	
19,200.00	90.00	179.51	13,111.00	-6,156.48	-208.94	6,154.47	0.00	0.00	0.00	
19,300.00	90.00	179.51	13,111.00	-6,256.48	-208.08	6,254.47	0.00	0.00	0.00	
19,400.00	90.00	179.51	13,111.00	-6,356.47	-207.22	6,354.47	0.00	0.00	0.00	
19,500.00	90.00	179.51	13,111.00	-6,456.47	-206.36	6,454.47	0.00	0.00	0.00	
19,600.00	90.00	179.51	13,111.00	-6,556.47	-205.50	6,554.47	0.00	0.00	0.00	
19,700.00	90.00	179.51	13,111.00	-6,656.46	-204.64	6,654.47	0.00	0.00	0.00	
19,800.00	90.00	179.51	13,111.00	-6,756.46	-203.78	6,754.47	0.00	0.00	0.00	
19,900.00	90.00	179.51	13,111.00	-6,856.46	-202.92	6,854.47	0.00	0.00	0.00	
20,000.00	90.00	179.51	13,111.00	-6,956.45	-202.06	6,954.47	0.00	0.00	0.00	
20,100.00	90.00	179.51	13,111.00	-7,056.45	-201.20	7,054.47	0.00	0.00	0.00	
20,200.00	90.00	179.51	13,111.00	-7,156.44	-200.34	7,154.47	0.00	0.00	0.00	
20,300.00	90.00	179.51	13,111.00	-7,256.44	-199.48	7,254.47	0.00	0.00	0.00	
20,400.00	90.00	179.51	13,111.00	-7,356.44	-198.62	7,354.47	0.00	0.00	0.00	
20,500.00	90.00	179.51	13,111.00	-7,456.43	-197.76	7,454.47	0.00	0.00	0.00	
20,572.81	90.00	179.51	13,111.00	-7,529.24	-197.13	7,527.28	0.00	0.00	0.00	
SLC (LV Fed 522H)										
20,600.00	90.00	179.51	13,111.00	-7,556.43	-196.90	7,554.47	0.00	0.00	0.00	
20,700.00	90.00	179.51	13,111.00	-7,656.43	-196.03	7,654.47	0.00	0.00	0.00	
20,800.00	90.00	179.51	13,111.00	-7,756.42	-195.17	7,754.47	0.00	0.00	0.00	
20,900.00	90.00	179.51	13,111.00	-7,856.42	-194.31	7,854.47	0.00	0.00	0.00	
21,000.00	90.00	179.51	13,111.00	-7,956.42	-193.45	7,954.47	0.00	0.00	0.00	
21,100.00	90.00	179.51	13,111.00	-8,056.41	-192.59	8,054.47	0.00	0.00	0.00	
21,200.00	90.00	179.51	13,111.00	-8,156.41	-191.73	8,154.47	0.00	0.00	0.00	
21,300.00	90.00	179.51	13,111.00	-8,256.40	-190.87	8,254.47	0.00	0.00	0.00	
21,400.00	90.00	179.51	13,111.00	-8,356.40	-190.01	8,354.47	0.00	0.00	0.00	
21,500.00	90.00	179.51	13,111.00	-8,456.40	-189.15	8,454.47	0.00	0.00	0.00	
21,600.00	90.00	179.51	13,111.00	-8,556.39	-188.29	8,554.47	0.00	0.00	0.00	

Planning Report

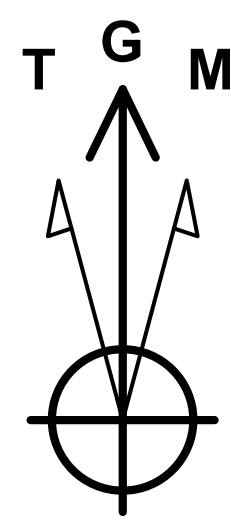
Database:	LEAM Multi_User Db	Local Co-ordinate Reference:	Well Los Vaqueros Fed 522H
Company:	Earthstone Operating, LLC	TVD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Project:	Lea County, NM (NAD 27)	MD Reference:	GE 3183.31' + KB 27.5' @ 3210.81usft
Site:	Los Vaqueros Fed Pad	North Reference:	Grid
Well:	Los Vaqueros Fed 522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,700.00	90.00	179.51	13,111.00	-8,656.39	-187.43	8,654.47	0.00	0.00	0.00
21,800.00	90.00	179.51	13,111.00	-8,756.39	-186.57	8,754.47	0.00	0.00	0.00
21,900.00	90.00	179.51	13,111.00	-8,856.38	-185.71	8,854.47	0.00	0.00	0.00
22,000.00	90.00	179.51	13,111.00	-8,956.38	-184.85	8,954.47	0.00	0.00	0.00
22,100.00	90.00	179.51	13,111.00	-9,056.37	-183.99	9,054.47	0.00	0.00	0.00
22,200.00	90.00	179.51	13,111.00	-9,156.37	-183.13	9,154.47	0.00	0.00	0.00
22,300.00	90.00	179.51	13,111.00	-9,256.37	-182.27	9,254.47	0.00	0.00	0.00
22,400.00	90.00	179.51	13,111.00	-9,356.36	-181.41	9,354.47	0.00	0.00	0.00
22,500.00	90.00	179.51	13,111.00	-9,456.36	-180.55	9,454.47	0.00	0.00	0.00
22,600.00	90.00	179.51	13,111.00	-9,556.36	-179.69	9,554.47	0.00	0.00	0.00
22,700.00	90.00	179.51	13,111.00	-9,656.35	-178.83	9,654.47	0.00	0.00	0.00
22,800.00	90.00	179.51	13,111.00	-9,756.35	-177.97	9,754.47	0.00	0.00	0.00
22,900.00	90.00	179.51	13,111.00	-9,856.34	-177.11	9,854.47	0.00	0.00	0.00
23,000.00	90.00	179.51	13,111.00	-9,956.34	-176.24	9,954.47	0.00	0.00	0.00
23,100.00	90.00	179.51	13,111.00	-10,056.34	-175.38	10,054.47	0.00	0.00	0.00
23,200.00	90.00	179.51	13,111.00	-10,156.33	-174.52	10,154.47	0.00	0.00	0.00
23,300.00	90.00	179.51	13,111.00	-10,256.33	-173.66	10,254.47	0.00	0.00	0.00
23,400.00	90.00	179.51	13,111.00	-10,356.33	-172.80	10,354.47	0.00	0.00	0.00
23,500.00	90.00	179.51	13,111.00	-10,456.32	-171.94	10,454.47	0.00	0.00	0.00
23,593.13	90.00	179.51	13,111.00	-10,549.45	-171.14	10,547.60	0.00	0.00	0.00
LTP (LV Fed 522H)									
23,600.00	90.00	179.51	13,111.00	-10,556.32	-171.08	10,554.47	0.00	0.00	0.00
23,700.00	90.00	179.51	13,111.00	-10,656.32	-170.22	10,654.47	0.00	0.00	0.00
23,756.58	90.00	179.51	13,111.00	-10,712.89	-169.74	10,711.05	0.00	0.00	0.00
PBHL (LV Fed 522H)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,045.81	1,045.81	Rustler				
1,480.81	1,480.81	Salado				
5,068.80	5,050.81	Base Salt				
5,378.80	5,360.81	Lamar				
5,393.80	5,375.81	Bell Canyon				
6,403.80	6,385.81	Cherry Canyon				
7,888.80	7,870.81	Brushy Canyon				
9,303.80	9,285.81	Top BSPG Lime				
10,578.80	10,560.81	1st BSPG Ss				
10,798.80	10,780.81	2nd BSPG Carb				
11,123.80	11,105.81	2nd BSPG Ss				
11,568.80	11,550.81	3rd BSPG Carb				
12,168.80	12,150.81	3rd BSPG Ss				
12,578.81	12,560.81	Wolfcamp				
13,441.36	13,110.81	Target LP				

Earthstone Operating, LLC

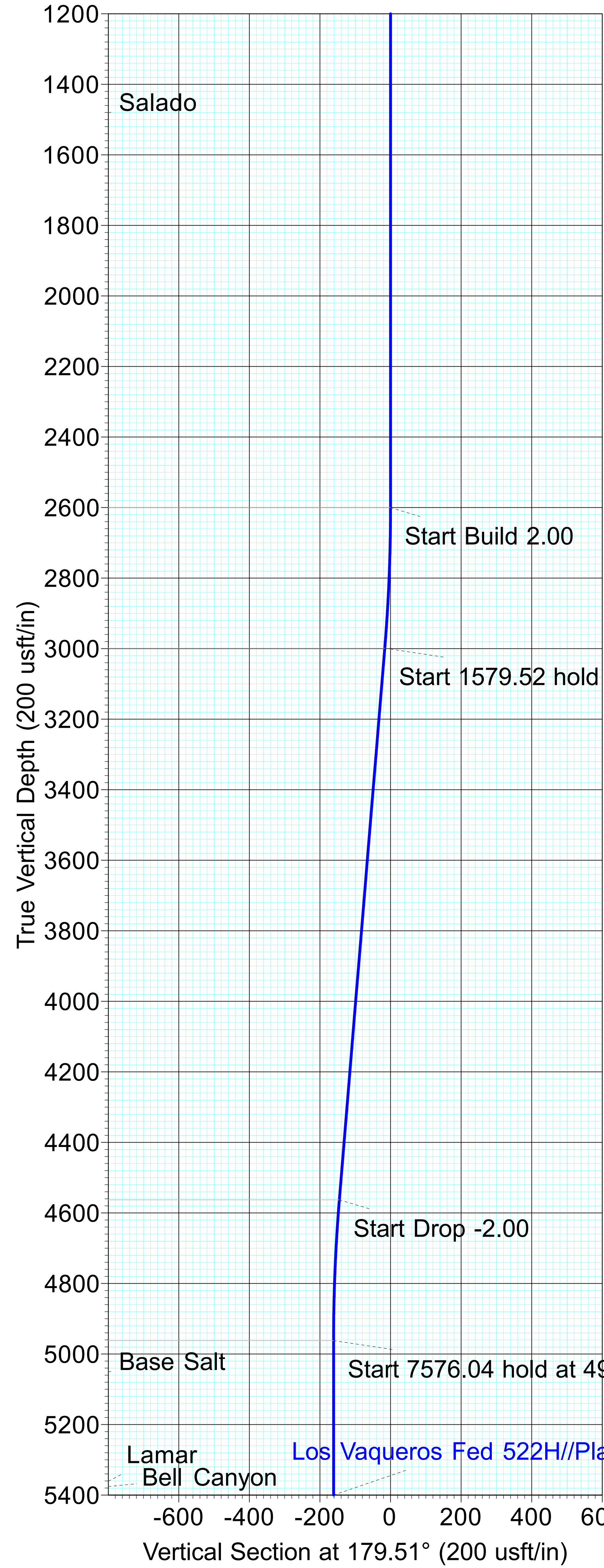
Project: Lea County, NM (NAD 27)
Site: Los Vaqueros Fed Pad
Well: Los Vaqueros Fed 522H
Wellbore: OH
Design: Plan #1



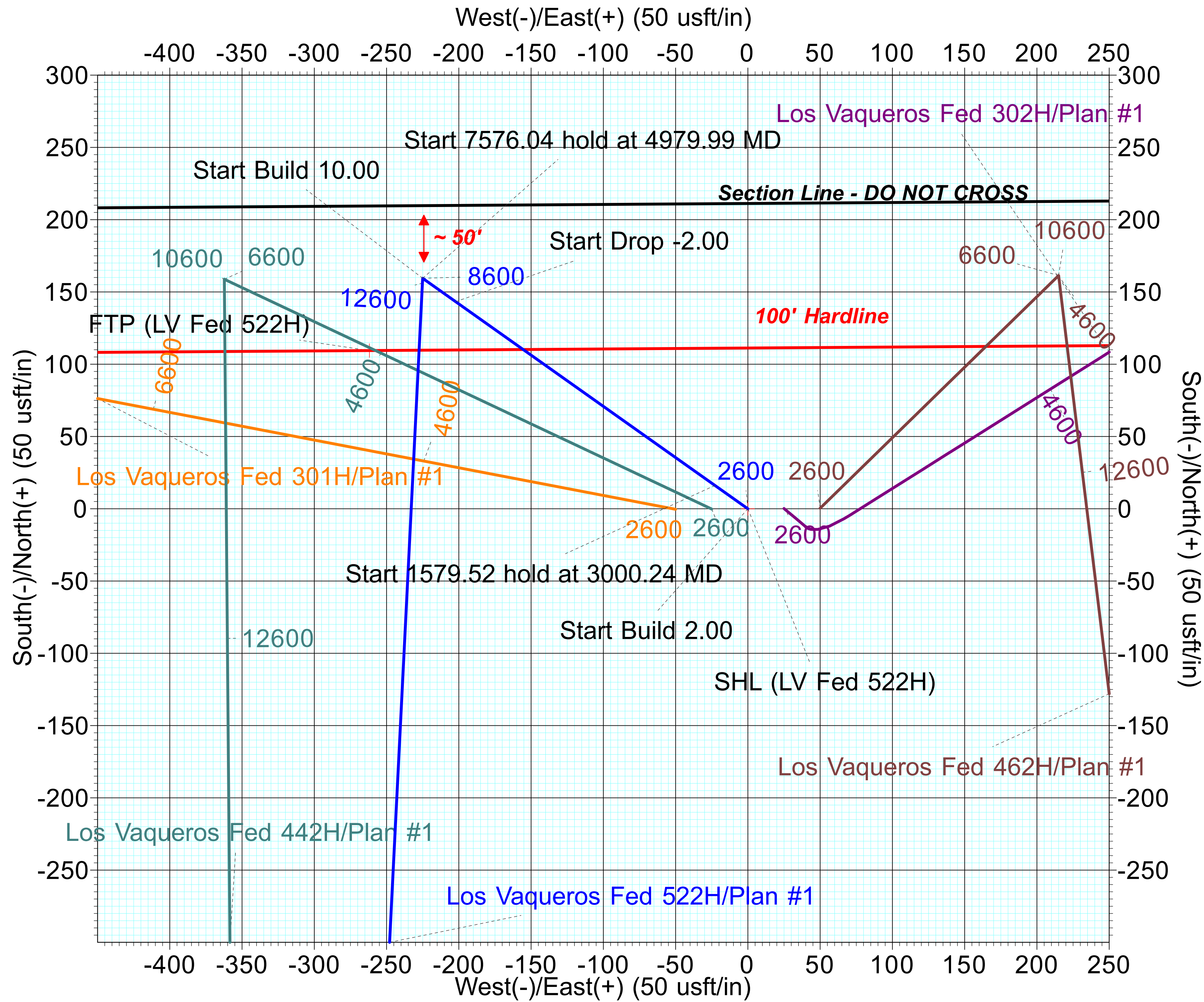
Azimuths to Grid North
True North: -0.49°
Magnetic North: 5.71°

Magnetic Field
Strength: 47224.5nT
Dip Angle: 59.55°
Date: 5/13/2023
Model: HDGM_FILE

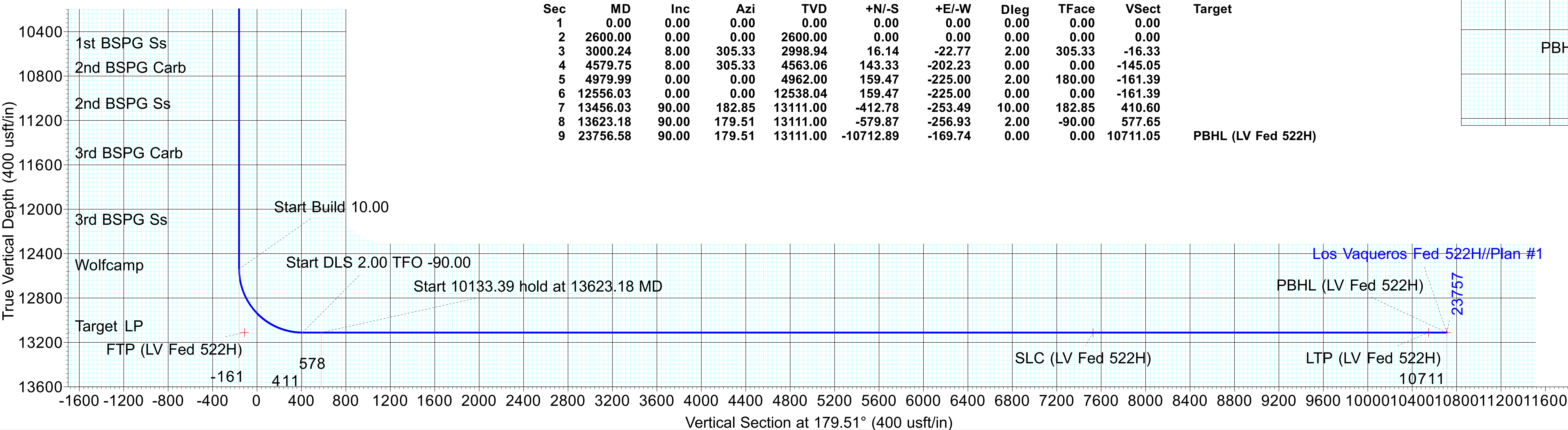
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
Referenced TVD: GE 3183.31' + KB 27.5' @ 3210.81usft



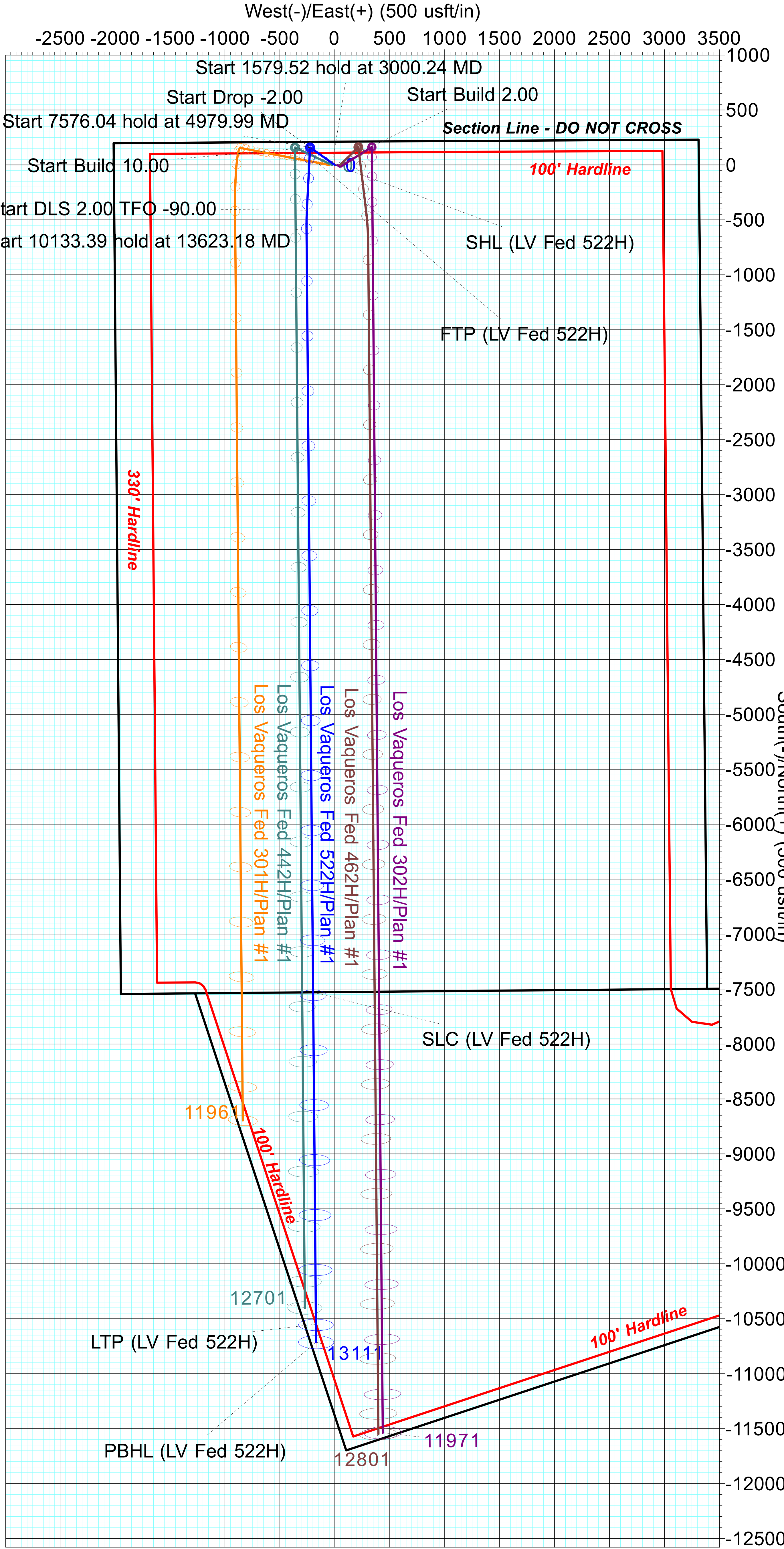
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1045.81	1045.81	Rustler
1480.81	1480.81	Salado
5050.81	5068.80	Base Salt
5360.81	5378.80	Lamar
5375.81	5393.80	Bell Canyon
6385.81	6403.80	Cherry Canyon
7870.81	7888.80	Brushy Canyon
9285.81	9303.80	Top BSPG Lime
10560.81	10578.80	1st BSPG Ss
10780.81	10798.80	2nd BSPG Carb
11105.81	11123.80	2nd BSPG Ss
11550.81	11568.80	3rd BSPG Carb
12150.81	12168.80	3rd BSPG Ss
12560.81	12578.81	Wolfcamp
13110.81	13441.36	Target LP



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (LV Fed 522H)	0.00	0.00	0.00	372540.73	786736.05	32° 1' 15.07 N	103° 24' 29.41 W
FTP (LV Fed 522H)	13111.00	109.45	-261.83	372650.18	786474.22	32° 1' 16.18 N	103° 24' 32.44 W
LTP (LV Fed 522H)	13111.00	-10549.45	-171.12	361991.28	786564.93	31° 59' 30.70 N	103° 24' 32.45 W
PBHL (LV Fed 522H)	13111.00	-10712.89	-169.74	361827.84	786566.31	31° 59' 29.08 N	103° 24' 32.45 W
SLC (LV Fed 522H)	13111.00	-7529.24	-196.72	365011.49	786539.33	32° 0' 0.59 N	103° 24' 32.45 W



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	
3	3000.24	8.00	305.33	2998.94	16.14	-22.77	2.00	305.33	-16.33	
4	4579.75	8.00	305.33	4563.06	143.33	-202.23	0.00	0.00	-145.05	
5	4979.99	0.00	0.00	4962.00	159.47	-225.00	2.00	180.00	-161.39	
6	12556.03	0.00	0.00	12538.04	159.47	-225.00	0.00	0.00	-161.39	
7	13456.03	90.00	182.85	13111.00	-412.78	-253.49	10.00	182.85	410.60	
8	13623.18	90.00	179.51	13111.00	-579.87	-256.93	2.00	-90.00	577.65	
9	23756.58	90.00	179.51	13111.00	-10712.89	-169.74	0.00	0.00	10711.05	PBHL (LV Fed 522H)



Plan: Plan #1 (Los Vaqueros Fed 522H/OH)
Created By: Pete Broussard
Date: 12:58, April 13 2023

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

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

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

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

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

CONDITIONS

Action 260544

CONDITIONS

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 260544
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	10/2/2023