Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC058775

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.
NMNM 138364

8. Lease Name and Well No.
PERIDOT 5 FEDERAL COM [333931]
018H

2. Name of Operator
MAVERICK PERMIAN LLC [331199]

9. API Well No.
30-025-51371

3a. Address
1111 BAGBY ST SUITE 1600, HOUSTON, TX 77002

3b. Phone No. *(include area code)*
(713) 437-8043

10. Field and Pool, or Exploratory
MALJAMAR-YESO, WEST [44500]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NWSE / 1972 FSL / 2250 FEL / LAT 32.861846 / LONG -103.787388
At proposed prod. zone LOT 6 / 1687 FSL / 317 FWL / LAT 32.861096 / LONG -103.813491

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5/T17S/R32E/NMP

14. Distance in miles and direction from nearest town or post office*
1 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
390 feet

16. No of acres in lease

17. Spacing Unit dedicated to this well
481.8

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
20 feet

19. Proposed Depth
6058 feet / 13821 feet

20. BLM/BIA Bond No. in file
FED: NMB105749546

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4092 feet

22. Approximate date work will start*
06/01/2023

23. Estimated duration
30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRIAN WOOD / Ph: (713) 437-8043	01/05/2023

Title
President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	04/12/2023

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field Office

Application approval 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.
Conditions of approval, if any, are attached.

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.

NGMP Rec 04/18/2023

KZ
04/21/2023

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/12/2023

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 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 REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-51371	44500	MALJAMAR; YESO, WEST

Property Code	Property Name	Well Number
333931	PERIDOT 5 FEDERAL COM	#018H

OGRID No.	Operator Name	Elevation
331199	MAVERICK PERMIAN LLC	4092'

Surface Location

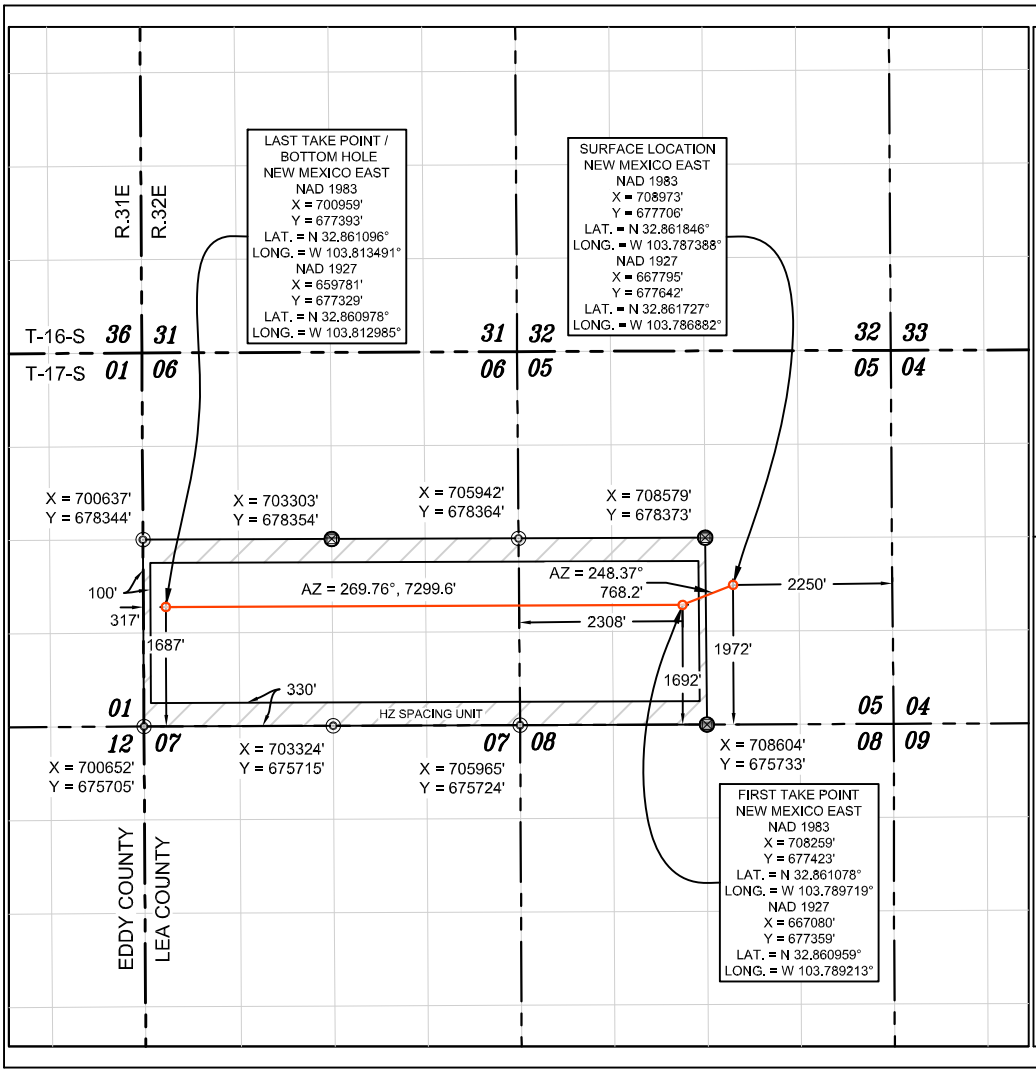
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	05	17 S	32 E		1972	SOUTH	2250	EAST	LEA

Bottom Hole Location 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
LOT 6	06	17 S	32 E		1687	SOUTH	317	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
481.80			

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.



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.

Cory Walk — Signature
12-21-22 — Date
Cory Walk — Printed Name
cory@permitswest.com — E-mail Address

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.

November 07, 2022
Date of Survey

Signature and Seal of Professional Surveyor:

Job No.: 22-10-2577
MATTHEW B. TOMERLIN, N.M.P.L.S.
Certificate Number 23203

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: _Maverick Permian LLC_____ **OGRID:** __331199_____ **Date:** 04 / 18 / 2023

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Peridot 5 Federal Com 007H	30-025-_____	J-5-17S-32E	1952 FSL 2250 FEL	833	1017	5412
Peridot 5 Federal Com 008H	30-025-_____	J-5-17S-32E	1992 FSL 2351 FEL	640	782	4162
Peridot 5 Federal Com 018H	30-025-_____	J-5-17S-32E	1972 FSL 2250 FEL	359	404	898
Peridot 5 Federal Com 019H	30-025-_____	J-5-17S-32E	2012 FSL 2251 FEL	479	539	1198

IV. Central Delivery Point Name: Peridot 8 Federal Com CTB located in Sec 8, T17S, R32E [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Peridot 5 Federal Com 007H	30-025-_____	04/09/2024	05/04/2024	07/31/2024	08/01/2024	08/01/2024
Peridot 5 Federal Com 008H	30-025-_____	04/09/2024	05/29/2024	08/14/2024	08/22/2024	08/22/2024
Peridot 5 Federal Com 018H	30-025-_____	04/09/2024	06/23/2024	08/04/2024	09/11/2024	09/11/2024
Peridot 5 Federal Com 019H	30-025-_____	04/09/2024	07/18/2024	09/22/2024	09/29/2024	09/29/2024

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

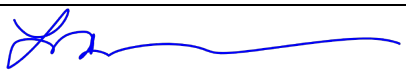
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Lauri M. Stanfield
Title: Sr. Regulatory Analyst
E-mail Address: Lauri.Stanfield@mavresources.com
Date: 04/18/2023
Phone: 713.437.8052

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

APPENDIX

Section 1 – Parts VI, VII, and VIII

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

- Separation equipment is sized to allow for retention of time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
- All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
- Valves and meters are designed to service without flow interruption or venting of gas.

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

- **19.15.27.8 (A) – Venting and Flaring of Natural Gas**
  - Maverick Permian LLC's field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas using properly sized flares in accordance with state air permit rules.
- **19.15.27.8 (B) – Venting and Flaring During Drilling Operations**
  - A properly sized flare stack will be located at a minimum of 100' from the nearest surface hole location on the pad.
  - All-natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- **19.15.27.8 (C) – Venting and Flaring During Completion or Recompletion Operations**
  - During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines.
  - The CTB will have properly sized separation equipment for maximum anticipated flow rates.
  - Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.
- **19.15.27.8 (D) – Venting and Flaring During Production Operations**
  - During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.
  - Flares are equipped with auto-ignition systems and continuous pilot operations.
  - Automatic gauging equipment is installed on all tanks.
- **19.15.27.8 (E) – Performance Standards**
  - Production equipment will be designed to handle maximum anticipated rates and pressure.
  - Automatic gauging equipment is installed on all tanks to minimize venting.
  - All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
  - Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status.
  - Weekly AVOs will be performed on all wells and facilities that produce more than 60 MCFD.
  - Gas/H2S detectors will not be installed throughout the facilities and wellheads.
- **19.15.27.8 (F) – Measurement or Estimation of Vented and Flared Natural Gas**
  - All high pressure flared gas is measured by equipment conforming to API 14.10.

- Meter bypasses are installed and will only by used in an upset event..
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be calculated through flare flow curves through our ESG Team, as necessary.

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

- Maverick Permian LLC will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance.
- All-natural gas is routed into a gas gathering system and directed to one of Maverick Permian LLC's multiple gas sales outlets.
- All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment.
- All control equipment will be maintained to provide highest run-time possible.
- All procedures are drafted to keep venting and flaring to the absolute minimum.

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

Drilling Plan Data Report
04/13/2023

APD ID: 10400089937
Submission Date: 01/05/2023
Operator Name: MAVERICK PERMIAN LLC
Well Name: PERIDOT 5 FEDERAL COM
Well Number: 018H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
9686919	QUATERNARY	4092	0	0	ALLUVIUM	NONE	N
9686918	RUSTLER ANHYDRITE	3177	915	915	ANHYDRITE	OTHER : Salt	N
9686920	SALADO	3025	1067	1067	SALT	OTHER : Salt	N
9686922	TANSILL	1953	2139	2140	SALT	OTHER : Salt	N
9686923	YATES	1814	2278	2280	ANHYDRITE, SANDSTONE, SILTSTONE	NONE	N
9686924	SEVEN RIVERS	1509	2583	2586	LIMESTONE	NONE	N
9686921	QUEEN	893	3199	3203	SANDSTONE	NONE	N
9686925	GRAYBURG	441	3651	3656	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
9686926	SAN ANDRES	158	3934	3940	DOLOMITE	NATURAL GAS, OIL	N
9686927	GLORIETA	-1342	5434	5444	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
9686928	PADDOCK	-1421	5513	5523	DOLOMITE	NATURAL GAS, OIL	N
9686929	BLINEBRY	-1701	5793	5821	DOLOMITE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M
Rating Depth: 10000

Equipment: Ten thousand (10M) psi working pressure Blind Rams and Pipe Rams and a five thousand (5M) psi Annular Preventer will be installed on all casing below surface casing. The annular preventor will be tested to 50% of working pressure and the 10M Rams will be tested to 5,000 psi.
Requesting Variance? YES

Variance request: A variance to the requirement of a rigid steel line connecting to the choke manifold is requested. Specifications for the flex hose are provided with the BOP schematic in exhibit section. A variance is requested for the use of flexible choke line form the BOP to Choke Manifold. If yes, specs and hydrostatic

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

test certification will be available in the company man's trailer and on the rig floor. The flex line will meet the API 16C requirements and have a manufacture pressure test chart. At this moment there is no data, and the flex line will be sundried at a later date.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and high pressure indicated above per Onshore Order 2 requirements. The system may be upgraded to a higher pressure but still be tested to the working pressure 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. In addition, the BOP equipment will be tested after any repairs to the equipment. Floor safety valves that are full open and sized to fit drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use. A 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 should be performed. The testing of the BOPE system will be as a 5M BOPE however utilizing a 10M BOPE rated system and meeting the minimum requirement and exceed this requirement. If meeting the minimum requirement of a 5M BOPE system, utilizing a 10M BOPE system a well control plan should not be required due to MASP under 5,000 psi, however Maverick Permian LLC does maintain well control plans at each well should the need arise. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.I.i. A multi-bowl 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. See attached schematic.

Choke Diagram Attachment:

Choke_Diagram_v2_20230307141635.pdf

BOP Diagram Attachment:

BOP_Diagram_v2_20230307141646.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1015	0	1015	4092	3077	1015	J-55	54.5	ST&C	2.49	6.04	DRY	9.29	DRY	9.29
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2431	0	2428	4057	1664	2431	HCL-80	40	LT&C	5.31	7.89	DRY	7.49	DRY	7.49
3	PRODUCTION	8.75	7.0	NEW	API	Y	0	5950	0	5893	4057	-1801	5950	L-80	29	LT&C	5.76	5.23	DRY	4.29	DRY	4.29
4	PRODUCTION	8.75	5.5	NEW	API	N	5950	13821	5893	6058	-1801	-1966	7871	L-80	17	BUTT	3.46	4.26	DRY	4.16	DRY	4.16

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20221225063206.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20221225063238.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing_Design_Assumptions_20230105091314.pdf

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20221225063308.pdf

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20230105091433.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	700	380	2.6	11.8	988	100	Class C	2% CaCl2 and 0.25 lbm/sk Poly-E-Flake
SURFACE	Tail		700	1015	335	1.32	14.8	443	100	Class C	2% CaCl2 and 0.25 lbm/sk Poly-E-Flake
INTERMEDIATE	Lead		0	1370	470	2.19	12.4	1029	75	Class C	0.6% LAP-1 & 1.5% FDP-C1026
INTERMEDIATE	Tail		1370	2431	210	1.32	14.8	277	50	Class C	0.6% LAP-1 & 1.5% FDP-C1026
PRODUCTION	Lead		0	5950	223	4.67	10.5	1041	20	65/35 C/POZ	8% Gel, 8% Gyp, 18% SFA, 1% SMS, 0.8% SA-2, 0.4 lb/sk Poly Flakes
PRODUCTION	Tail		5950	13821	1348	1.77	13	2386	20	Class C	4% GEL, 4% Gypsum, 0.4% SFL-5, 0.4% SA-2, 0.15% C-49, 0.25 LBS Poly Flake

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Mud weight increases at shoe depths are for pressure control. Mud weight increase in the curve and lateral section of the hole are for hole stability, not pressure control. Mud weight assumptions for casing load designs exceed anticipated maximum mud weight for balanced drilling in all hole sections. Expected mud weights in producing formation will be 0.5 to 1.0 ppg greater than formation pressure (i.e. overbalanced drilling). An industry accepted medium will be stored on location in the event that there is a loss of circulation in the well bore.
Describe the mud monitoring system utilized: The mud system will run as a closed loop system with PVT monitoring.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1015	OTHER : Fresh Water	8.4	8.4							
1015	2431	OTHER : Brine Water	9.5	9.5							
2431	13821	OTHER : Brine/Lube	9.7	9.7							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Mud Logging/Gamma Ray/MWD

List of open and cased hole logs run in the well:

GAMMA RAY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,MEASUREMENT WHILE DRILLING,

Coring operation description for the well:

No open-hole logs are planned at this time.

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3150 **Anticipated Surface Pressure:** 1817

Anticipated Bottom Hole Temperature(F): 240

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Peridot_Pad3_H2S_Plan_20221225063528.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Peridot_18H_Directional_Plan_20221225063542.pdf

Other proposed operations facets description:

Hydraulic fracturing will occur through the production casing. The burst design calculation assumes TOC at 0 ft., therefore, the backside of the production casing is not evacuated. The maximum pumping pressure is 10000 psi with a maximum proppant fluid weight of 9.6 ppg. The design safety factor for burst is 1.236.

Upon request, operator will provide proof of cement bonding by bond log. Operator is responsible for log interpretation and certification prior to frac treatment.

Upon request, operator will provide estimated fracture lengths, flowback storage, volumes of fluids and amount of sand to be used, and number of stages of frac procedure. Furthermore, a report of the annulus pressures before and after each stage of treatment may be requested by the BLM. The report may include chemical additives (other than proprietary), dissolved solids in frac fluid, and depth of perforations.

Gas detection equipment and pit flow monitoring equipment will be on location. A flow paddle will be installed in the flow line to monitor relative amount of mud flowing in the non-pressurized return line. Mud probes will be installed in the individual tanks to monitor pit volumes of the drilling fluid with a pit volume totalizer. Gas detecting equipment and H2S monitor alarm will be installed in the mud return system and will be monitored. A mud gas separator will be installed and operable before drilling out from the Surface Casing. The gases shall be piped into the flare system. Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

Maverick Permian LLC has an H2S safety package on all wells. Adequate flare lines will be installed off the mud/gas separator where gas may be safely flared. All personnel will be familiar with all aspects of safe operation of equipment being used.

Other proposed operations facets attachment:

Peridot_18H_Anticollision_Report_20221225063615.pdf

Wellhead_Diagram_SDT_3865_7in_20221227111521.pdf

Operator Name: MAVERICK PERMIAN LLC

Well Name: PERIDOT 5 FEDERAL COM **Well Number:** 018H

Peridot_18H_Drill_Plan_v2_20230307141709.pdf

Other Variance attachment:

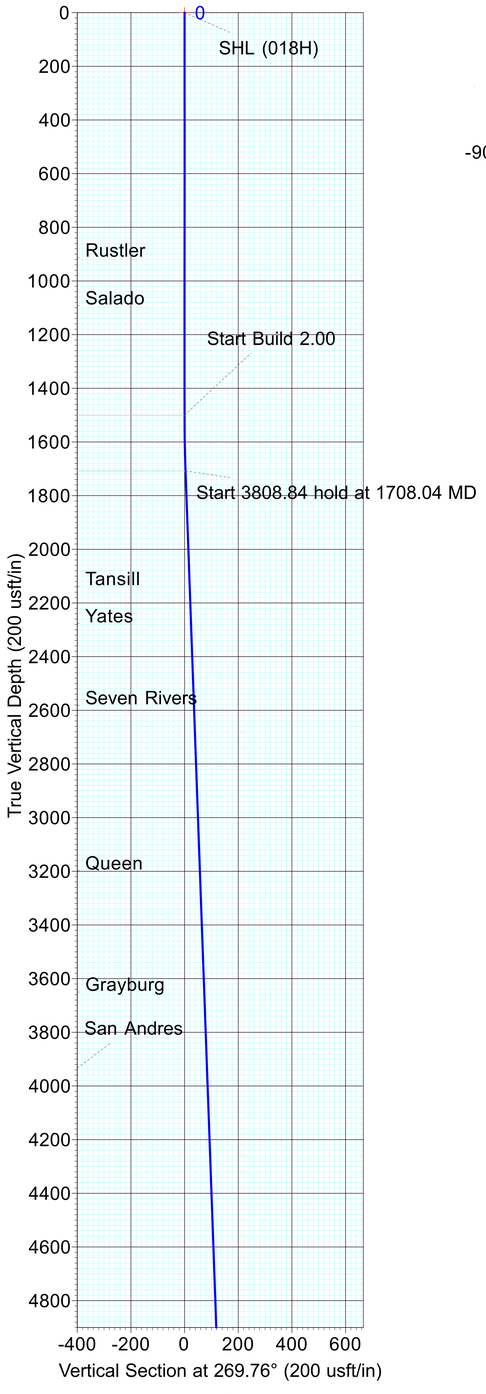
Maverick Permian LLC

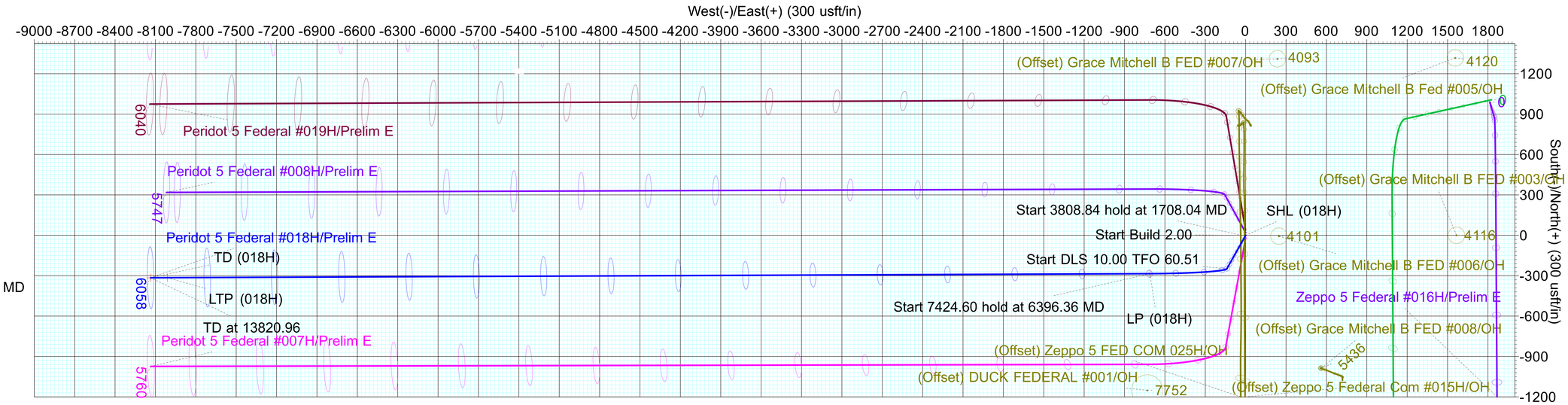
Project: Gemstone Project (NAD 83)
Site: Peridot Pad #3
Well: Peridot 5 Federal #018H
Wellbore: OH
Design: Prelim E

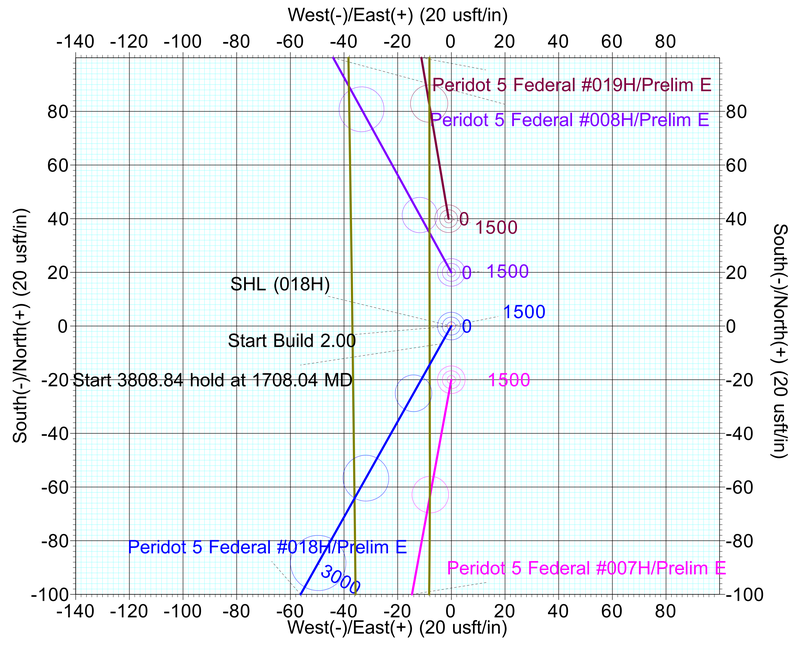
Azimuths to Grid North
True North: -0.30°
Magnetic North: 6.35°

Magnetic Field
Strength: 47852.8nT
Dip Angle: 60.63°
Date: 9/8/2022
Model: HDGM_FILE

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
Referenced TVD: GE 4092' + KB 28 @ 4120.00usft





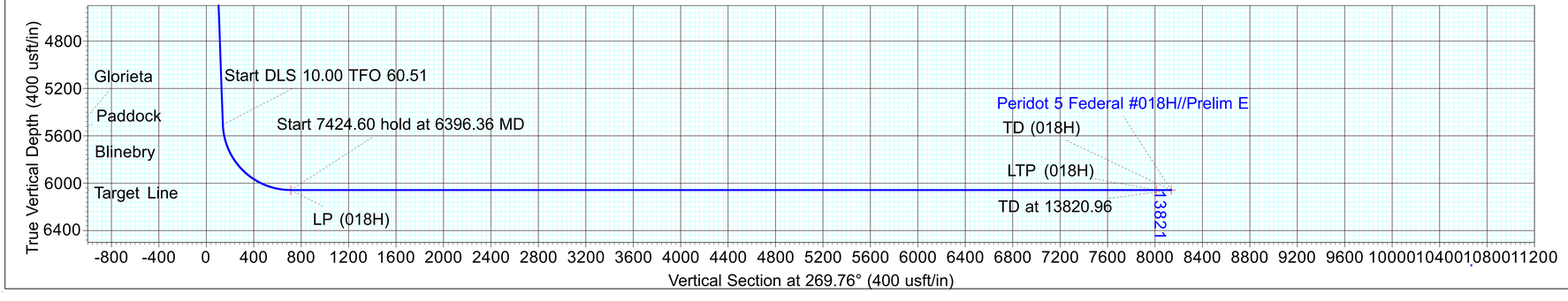


SECTION DETAILS

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	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
3	1708.04	4.16	209.32	1707.85	-6.58	-3.70	2.00	209.32	3.73	
4	5516.87	4.16	209.32	5506.65	-247.52	-139.03	0.00	0.00	140.07	
5	6396.36	90.00	269.77	6058.00	-284.75	-711.48	10.00	60.51	712.66	LP (018H)
6	13820.96	90.00	269.77	6058.00	-315.04	-8136.01	0.00	0.00	8137.26	TD (018H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (018H)	0.00	0.00	0.00	677706.00	708973.00	32.86184494	-103.78738785
LP (018H)	6058.00	-284.75	-711.48	677421.25	708261.52	32.86107240	-103.78970963
LTP (018H)	6058.00	-315.04	-8011.01	677390.96	700961.99	32.86109019	-103.81348174
TD (018H)	6058.00	-315.04	-8136.01	677390.96	700836.99	32.86109188	-103.81388882



LEAM Drilling Services

Maverick Permian LLC

Gemstone Project
Peridot Pad #3
Peridot 5 Federal #018H

OH

Plan: Prelim E

Standard Planning Report

12 December, 2022

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

Project Gemstone Project

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Peridot Pad #3

Site Position:		**Northing:**	677,745.99 usft	**Latitude:**	32.86195488
From:	Map	**Easting:**	708,972.00 usft	**Longitude:**	-103.78739043
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.30 °

Well Peridot 5 Federal #018H

Well Position	**+N/-S**	-39.99 usft	**Northing:**	677,706.00 usft	**Latitude:**	32.86184494
	+E/-W	1.00 usft	**Easting:**	708,973.00 usft	**Longitude:**	-103.78738785
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	4,092.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	9/8/2022	6.65	60.63	47,852.80000000

Design Prelim E

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	269.76

Plan Survey Tool Program **Date** 12/12/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,820.96	Prelim E (OH)	LEAM_MWD+HDGM	
				LEAM MWD + HDGM	

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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,708.04	4.16	209.32	1,707.85	-6.58	-3.70	2.00	2.00	0.00	209.32	
5,516.87	4.16	209.32	5,506.65	-247.52	-139.03	0.00	0.00	0.00	0.00	
6,396.36	90.00	269.77	6,058.00	-284.75	-711.48	10.00	9.76	6.87	60.51	LP (018H)
13,820.96	90.00	269.77	6,058.00	-315.04	-8,136.01	0.00	0.00	0.00	0.00	TD (018H)

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

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 (018H)									
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
915.00	0.00	0.00	915.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,093.00	0.00	0.00	1,093.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	2.00	209.32	1,599.98	-1.52	-0.85	0.86	2.00	2.00	0.00
1,708.04	4.16	209.32	1,707.85	-6.58	-3.70	3.73	2.00	2.00	0.00
1,800.00	4.16	209.32	1,799.57	-12.40	-6.97	7.02	0.00	0.00	0.00
1,900.00	4.16	209.32	1,899.31	-18.73	-10.52	10.60	0.00	0.00	0.00
2,000.00	4.16	209.32	1,999.05	-25.05	-14.07	14.18	0.00	0.00	0.00
2,100.00	4.16	209.32	2,098.78	-31.38	-17.63	17.76	0.00	0.00	0.00
2,140.32	4.16	209.32	2,139.00	-33.93	-19.06	19.20	0.00	0.00	0.00
Tansill									
2,200.00	4.16	209.32	2,198.52	-37.70	-21.18	21.34	0.00	0.00	0.00
2,279.69	4.16	209.32	2,278.00	-42.74	-24.01	24.19	0.00	0.00	0.00
Yates									
2,300.00	4.16	209.32	2,298.26	-44.03	-24.73	24.92	0.00	0.00	0.00
2,400.00	4.16	209.32	2,397.99	-50.36	-28.28	28.50	0.00	0.00	0.00
2,500.00	4.16	209.32	2,497.73	-56.68	-31.84	32.08	0.00	0.00	0.00
2,585.50	4.16	209.32	2,583.00	-62.09	-34.88	35.14	0.00	0.00	0.00
Seven Rivers									
2,600.00	4.16	209.32	2,597.47	-63.01	-35.39	35.65	0.00	0.00	0.00
2,700.00	4.16	209.32	2,697.20	-69.33	-38.94	39.23	0.00	0.00	0.00
2,800.00	4.16	209.32	2,796.94	-75.66	-42.50	42.81	0.00	0.00	0.00
2,900.00	4.16	209.32	2,896.68	-81.98	-46.05	46.39	0.00	0.00	0.00
3,000.00	4.16	209.32	2,996.41	-88.31	-49.60	49.97	0.00	0.00	0.00
3,100.00	4.16	209.32	3,096.15	-94.64	-53.16	53.55	0.00	0.00	0.00
3,200.00	4.16	209.32	3,195.89	-100.96	-56.71	57.13	0.00	0.00	0.00
3,203.12	4.16	209.32	3,199.00	-101.16	-56.82	57.24	0.00	0.00	0.00
Queen									
3,300.00	4.16	209.32	3,295.62	-107.29	-60.26	60.71	0.00	0.00	0.00
3,400.00	4.16	209.32	3,395.36	-113.61	-63.82	64.29	0.00	0.00	0.00
3,500.00	4.16	209.32	3,495.09	-119.94	-67.37	67.87	0.00	0.00	0.00
3,600.00	4.16	209.32	3,594.83	-126.26	-70.92	71.45	0.00	0.00	0.00
3,656.32	4.16	209.32	3,651.00	-129.83	-72.92	73.47	0.00	0.00	0.00
Grayburg									
3,700.00	4.16	209.32	3,694.57	-132.59	-74.48	75.03	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

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)
3,800.00	4.16	209.32	3,794.30	-138.92	-78.03	78.61	0.00	0.00	0.00
3,900.00	4.16	209.32	3,894.04	-145.24	-81.58	82.19	0.00	0.00	0.00
3,940.07	4.16	209.32	3,934.00	-147.78	-83.01	83.63	0.00	0.00	0.00
San Andres									
4,000.00	4.16	209.32	3,993.78	-151.57	-85.14	85.77	0.00	0.00	0.00
4,100.00	4.16	209.32	4,093.51	-157.89	-88.69	89.35	0.00	0.00	0.00
4,200.00	4.16	209.32	4,193.25	-164.22	-92.24	92.93	0.00	0.00	0.00
4,300.00	4.16	209.32	4,292.99	-170.55	-95.80	96.51	0.00	0.00	0.00
4,400.00	4.16	209.32	4,392.72	-176.87	-99.35	100.09	0.00	0.00	0.00
4,500.00	4.16	209.32	4,492.46	-183.20	-102.90	103.67	0.00	0.00	0.00
4,600.00	4.16	209.32	4,592.20	-189.52	-106.46	107.25	0.00	0.00	0.00
4,700.00	4.16	209.32	4,691.93	-195.85	-110.01	110.83	0.00	0.00	0.00
4,800.00	4.16	209.32	4,791.67	-202.17	-113.56	114.41	0.00	0.00	0.00
4,900.00	4.16	209.32	4,891.40	-208.50	-117.12	117.99	0.00	0.00	0.00
5,000.00	4.16	209.32	4,991.14	-214.83	-120.67	121.57	0.00	0.00	0.00
5,100.00	4.16	209.32	5,090.88	-221.15	-124.22	125.15	0.00	0.00	0.00
5,200.00	4.16	209.32	5,190.61	-227.48	-127.78	128.73	0.00	0.00	0.00
5,300.00	4.16	209.32	5,290.35	-233.80	-131.33	132.31	0.00	0.00	0.00
5,400.00	4.16	209.32	5,390.09	-240.13	-134.88	135.89	0.00	0.00	0.00
5,444.03	4.16	209.32	5,434.00	-242.91	-136.45	137.46	0.00	0.00	0.00
Glorieta									
5,500.00	4.16	209.32	5,489.82	-246.45	-138.44	139.47	0.00	0.00	0.00
5,516.87	4.16	209.32	5,506.65	-247.52	-139.03	140.07	0.00	0.00	0.00
5,523.24	4.51	216.39	5,513.00	-247.93	-139.30	140.33	10.00	5.46	111.02
Paddock									
5,550.00	6.47	235.84	5,539.64	-249.62	-141.17	142.21	10.00	7.33	72.68
5,600.00	10.97	250.72	5,589.05	-252.77	-147.99	149.05	10.00	9.01	29.75
5,650.00	15.77	256.82	5,637.69	-255.90	-159.11	160.18	10.00	9.61	12.21
5,700.00	20.67	260.11	5,685.17	-258.96	-174.43	175.51	10.00	9.79	6.58
5,750.00	25.60	262.18	5,731.13	-261.95	-193.84	194.93	10.00	9.87	4.14
5,800.00	30.56	263.61	5,775.23	-264.84	-217.19	218.30	10.00	9.91	2.87
5,820.86	32.63	264.09	5,793.00	-266.01	-228.05	229.17	10.00	9.93	2.30
Blinebry									
5,850.00	35.52	264.68	5,817.13	-267.60	-244.30	245.42	10.00	9.94	2.01
5,900.00	40.50	265.52	5,856.52	-270.22	-274.97	276.10	10.00	9.95	1.67
5,950.00	45.48	266.20	5,893.08	-272.67	-308.96	310.10	10.00	9.96	1.36
6,000.00	50.46	266.77	5,926.55	-274.94	-346.02	347.17	10.00	9.96	1.15
6,050.00	55.44	267.27	5,956.66	-277.01	-385.86	387.02	10.00	9.97	0.99
6,100.00	60.43	267.71	5,983.20	-278.86	-428.18	429.34	10.00	9.97	0.88
6,150.00	65.42	268.11	6,005.95	-280.48	-472.65	473.82	10.00	9.97	0.80
6,200.00	70.40	268.48	6,024.75	-281.86	-518.95	520.12	10.00	9.98	0.74
6,250.00	75.39	268.82	6,039.44	-282.98	-566.71	567.89	10.00	9.98	0.69
6,300.00	80.38	269.15	6,049.93	-283.85	-615.57	616.76	10.00	9.98	0.66
6,350.00	85.37	269.47	6,056.13	-284.44	-665.17	666.35	10.00	9.98	0.64
6,396.36	90.00	269.77	6,058.00	-284.75	-711.48	712.66	10.00	9.98	0.63
Target Line - LP (018H)									
6,400.00	90.00	269.77	6,058.00	-284.76	-715.12	716.30	0.00	0.00	0.00
6,500.00	90.00	269.77	6,058.00	-285.17	-815.12	816.30	0.00	0.00	0.00
6,600.00	90.00	269.77	6,058.00	-285.58	-915.11	916.30	0.00	0.00	0.00
6,700.00	90.00	269.77	6,058.00	-285.99	-1,015.11	1,016.30	0.00	0.00	0.00
6,800.00	90.00	269.77	6,058.00	-286.39	-1,115.11	1,116.30	0.00	0.00	0.00
6,900.00	90.00	269.77	6,058.00	-286.80	-1,215.11	1,216.30	0.00	0.00	0.00
7,000.00	90.00	269.77	6,058.00	-287.21	-1,315.11	1,316.30	0.00	0.00	0.00
7,100.00	90.00	269.77	6,058.00	-287.62	-1,415.11	1,416.30	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

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)
7,200.00	90.00	269.77	6,058.00	-288.03	-1,515.11	1,516.30	0.00	0.00	0.00
7,300.00	90.00	269.77	6,058.00	-288.43	-1,615.11	1,616.30	0.00	0.00	0.00
7,400.00	90.00	269.77	6,058.00	-288.84	-1,715.11	1,716.30	0.00	0.00	0.00
7,500.00	90.00	269.77	6,058.00	-289.25	-1,815.11	1,816.30	0.00	0.00	0.00
7,600.00	90.00	269.77	6,058.00	-289.66	-1,915.11	1,916.30	0.00	0.00	0.00
7,700.00	90.00	269.77	6,058.00	-290.06	-2,015.11	2,016.30	0.00	0.00	0.00
7,800.00	90.00	269.77	6,058.00	-290.47	-2,115.10	2,116.30	0.00	0.00	0.00
7,900.00	90.00	269.77	6,058.00	-290.88	-2,215.10	2,216.30	0.00	0.00	0.00
8,000.00	90.00	269.77	6,058.00	-291.29	-2,315.10	2,316.30	0.00	0.00	0.00
8,100.00	90.00	269.77	6,058.00	-291.70	-2,415.10	2,416.30	0.00	0.00	0.00
8,200.00	90.00	269.77	6,058.00	-292.10	-2,515.10	2,516.30	0.00	0.00	0.00
8,300.00	90.00	269.77	6,058.00	-292.51	-2,615.10	2,616.30	0.00	0.00	0.00
8,400.00	90.00	269.77	6,058.00	-292.92	-2,715.10	2,716.30	0.00	0.00	0.00
8,500.00	90.00	269.77	6,058.00	-293.33	-2,815.10	2,816.30	0.00	0.00	0.00
8,600.00	90.00	269.77	6,058.00	-293.74	-2,915.10	2,916.30	0.00	0.00	0.00
8,700.00	90.00	269.77	6,058.00	-294.14	-3,015.10	3,016.30	0.00	0.00	0.00
8,800.00	90.00	269.77	6,058.00	-294.55	-3,115.10	3,116.30	0.00	0.00	0.00
8,900.00	90.00	269.77	6,058.00	-294.96	-3,215.10	3,216.30	0.00	0.00	0.00
9,000.00	90.00	269.77	6,058.00	-295.37	-3,315.10	3,316.30	0.00	0.00	0.00
9,100.00	90.00	269.77	6,058.00	-295.78	-3,415.09	3,416.30	0.00	0.00	0.00
9,200.00	90.00	269.77	6,058.00	-296.18	-3,515.09	3,516.30	0.00	0.00	0.00
9,300.00	90.00	269.77	6,058.00	-296.59	-3,615.09	3,616.30	0.00	0.00	0.00
9,400.00	90.00	269.77	6,058.00	-297.00	-3,715.09	3,716.30	0.00	0.00	0.00
9,500.00	90.00	269.77	6,058.00	-297.41	-3,815.09	3,816.30	0.00	0.00	0.00
9,600.00	90.00	269.77	6,058.00	-297.82	-3,915.09	3,916.30	0.00	0.00	0.00
9,700.00	90.00	269.77	6,058.00	-298.22	-4,015.09	4,016.30	0.00	0.00	0.00
9,800.00	90.00	269.77	6,058.00	-298.63	-4,115.09	4,116.30	0.00	0.00	0.00
9,900.00	90.00	269.77	6,058.00	-299.04	-4,215.09	4,216.30	0.00	0.00	0.00
10,000.00	90.00	269.77	6,058.00	-299.45	-4,315.09	4,316.30	0.00	0.00	0.00
10,100.00	90.00	269.77	6,058.00	-299.86	-4,415.09	4,416.30	0.00	0.00	0.00
10,200.00	90.00	269.77	6,058.00	-300.26	-4,515.09	4,516.30	0.00	0.00	0.00
10,300.00	90.00	269.77	6,058.00	-300.67	-4,615.08	4,616.30	0.00	0.00	0.00
10,400.00	90.00	269.77	6,058.00	-301.08	-4,715.08	4,716.30	0.00	0.00	0.00
10,500.00	90.00	269.77	6,058.00	-301.49	-4,815.08	4,816.30	0.00	0.00	0.00
10,600.00	90.00	269.77	6,058.00	-301.90	-4,915.08	4,916.30	0.00	0.00	0.00
10,700.00	90.00	269.77	6,058.00	-302.30	-5,015.08	5,016.30	0.00	0.00	0.00
10,800.00	90.00	269.77	6,058.00	-302.71	-5,115.08	5,116.30	0.00	0.00	0.00
10,900.00	90.00	269.77	6,058.00	-303.12	-5,215.08	5,216.30	0.00	0.00	0.00
11,000.00	90.00	269.77	6,058.00	-303.53	-5,315.08	5,316.30	0.00	0.00	0.00
11,100.00	90.00	269.77	6,058.00	-303.94	-5,415.08	5,416.30	0.00	0.00	0.00
11,200.00	90.00	269.77	6,058.00	-304.34	-5,515.08	5,516.30	0.00	0.00	0.00
11,300.00	90.00	269.77	6,058.00	-304.75	-5,615.08	5,616.30	0.00	0.00	0.00
11,400.00	90.00	269.77	6,058.00	-305.16	-5,715.08	5,716.30	0.00	0.00	0.00
11,500.00	90.00	269.77	6,058.00	-305.57	-5,815.07	5,816.30	0.00	0.00	0.00
11,600.00	90.00	269.77	6,058.00	-305.98	-5,915.07	5,916.30	0.00	0.00	0.00
11,700.00	90.00	269.77	6,058.00	-306.38	-6,015.07	6,016.30	0.00	0.00	0.00
11,800.00	90.00	269.77	6,058.00	-306.79	-6,115.07	6,116.30	0.00	0.00	0.00
11,900.00	90.00	269.77	6,058.00	-307.20	-6,215.07	6,216.30	0.00	0.00	0.00
12,000.00	90.00	269.77	6,058.00	-307.61	-6,315.07	6,316.30	0.00	0.00	0.00
12,100.00	90.00	269.77	6,058.00	-308.01	-6,415.07	6,416.30	0.00	0.00	0.00
12,200.00	90.00	269.77	6,058.00	-308.42	-6,515.07	6,516.30	0.00	0.00	0.00
12,300.00	90.00	269.77	6,058.00	-308.83	-6,615.07	6,616.30	0.00	0.00	0.00
12,400.00	90.00	269.77	6,058.00	-309.24	-6,715.07	6,716.30	0.00	0.00	0.00
12,500.00	90.00	269.77	6,058.00	-309.65	-6,815.07	6,816.30	0.00	0.00	0.00

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

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)
12,600.00	90.00	269.77	6,058.00	-310.05	-6,915.07	6,916.30	0.00	0.00	0.00
12,700.00	90.00	269.77	6,058.00	-310.46	-7,015.06	7,016.30	0.00	0.00	0.00
12,800.00	90.00	269.77	6,058.00	-310.87	-7,115.06	7,116.30	0.00	0.00	0.00
12,900.00	90.00	269.77	6,058.00	-311.28	-7,215.06	7,216.30	0.00	0.00	0.00
13,000.00	90.00	269.77	6,058.00	-311.69	-7,315.06	7,316.30	0.00	0.00	0.00
13,100.00	90.00	269.77	6,058.00	-312.09	-7,415.06	7,416.30	0.00	0.00	0.00
13,200.00	90.00	269.77	6,058.00	-312.50	-7,515.06	7,516.30	0.00	0.00	0.00
13,300.00	90.00	269.77	6,058.00	-312.91	-7,615.06	7,616.30	0.00	0.00	0.00
13,400.00	90.00	269.77	6,058.00	-313.32	-7,715.06	7,716.30	0.00	0.00	0.00
13,500.00	90.00	269.77	6,058.00	-313.73	-7,815.06	7,816.30	0.00	0.00	0.00
13,600.00	90.00	269.77	6,058.00	-314.13	-7,915.06	7,916.30	0.00	0.00	0.00
13,695.96	90.00	269.77	6,058.00	-314.53	-8,011.02	8,012.26	0.00	0.00	0.00
LTP (018H)									
13,700.00	90.00	269.77	6,058.00	-314.54	-8,015.06	8,016.30	0.00	0.00	0.00
13,800.00	90.00	269.77	6,058.00	-314.95	-8,115.06	8,116.30	0.00	0.00	0.00
13,820.96	90.00	269.77	6,058.00	-315.04	-8,136.01	8,137.26	0.00	0.00	0.00
TD (018H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (018H) - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	677,706.00	708,973.00	32.86184494	-103.78738785
LTP (018H) - plan misses target center by 0.51usft at 13695.96usft MD (6058.00 TVD, -314.53 N, -8011.01 E) - Point	0.00	0.00	6,058.00	-315.04	-8,011.01	677,390.96	700,961.98	32.86109019	-103.81348174
LP (018H) - plan hits target center - Point	0.00	0.00	6,058.00	-284.75	-711.48	677,421.25	708,261.52	32.86107240	-103.78970963
TD (018H) - plan hits target center - Point	0.00	0.00	6,058.00	-315.04	-8,136.01	677,390.96	700,836.98	32.86109188	-103.81388882

Planning Report

Database:	LEAM Multi_User Db	**Local Co-ordinate Reference:**	Well Peridot 5 Federal #018H
Company:	Maverick Permian LLC	**TVD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Project:	Gemstone Project	**MD Reference:**	GE 4092' + KB 28 @ 4120.00usft
Site:	Peridot Pad #3	**North Reference:**	Grid
Well:	Peridot 5 Federal #018H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim E		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
915.00	915.00	Rustler			
1,093.00	1,093.00	Salado			
2,140.32	2,139.00	Tansill			
2,279.69	2,278.00	Yates			
2,585.50	2,583.00	Seven Rivers			
3,203.12	3,199.00	Queen			
3,656.32	3,651.00	Grayburg			
3,940.07	3,934.00	San Andres			
5,444.03	5,434.00	Glorieta			
5,523.24	5,513.00	Paddock			
5,820.86	5,793.00	Blinebry			
6,396.36	6,058.00	Target Line			

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Maverick Permian LLC**
LEASE NO.:	**NMLC029406B**
LOCATION:	Section 5, T.17 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Peridot 5 Federal Com 18H**
SURFACE HOLE FOOTAGE:	1972'/S & 2250'/E
BOTTOM HOLE FOOTAGE	1687'/S & 317'/W
ATS/API ID:	**ATS-23-609**
APD ID:	**10400089937**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Peridot 5 Federal Com 19H**
SURFACE HOLE FOOTAGE:	2012'/S & 2251'/E
BOTTOM HOLE FOOTAGE	2303'/N & 319'/W
ATS/API ID:	**ATS-23-610**
APD ID:	**10400089938**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Peridot 5 Federal Com 007H**
SURFACE HOLE FOOTAGE:	1952'/S & 2250'/E
BOTTOM HOLE FOOTAGE	1028'/S & 315'/W
ATS/API ID:	**ATS-23-607**
APD ID:	**10400089933**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Peridot 5 Federal Com 008H**
SURFACE HOLE FOOTAGE:	1992'/S & 2251'/E
BOTTOM HOLE FOOTAGE	2318'/S & 317'/W
ATS/API ID:	**ATS-23-608**
APD ID:	**10400089934**
Sundry ID:	**N/a**

COA

 Approval Date: 04/12/2023

H2S	Yes		
Potash	None		
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	◉ None	○ Flex Hose	○ Other
Wellhead	Conventional and Multibowl		
Other	☐ 4 String	Capitan Reef: None	☐ WIPP
Other	Pilot Hole: None	☐ Open Annulus	
Cementing	Contingency Squeeze: None	Echo-Meter: None	Primary Cement Squeeze: None
Special Requirements	☐ Water Disposal/Injection	☑ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	☐ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Grayburg** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1015 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **17 1/2** inch in diameter.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of

six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **2428 feet** is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the **7** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

 Approval Date: 04/12/2023

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin

 Approval Date: 04/12/2023

after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

LVO 4/10/2023

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H_2S Drilling Operations Contingency Plan

H_2S Contingency Plan Holders:

Attached is an H_2S Contingency Plan for Maverick Natural Resources, LLC and its subsidiaries, Maverick Permian, LLC and Breitburn Operating, LLC working in the West Texas and Eastern New Mexico on all leases operated by Maverick Natural Resources, LLC.

If you have any questions regarding this plan, please contact Laurie Stanfield, SR, Regulatory Analyst, Maverick Natural Resources, LLC at (713) 437-8052 or (832) 646-0429.

Regards,

Caleb Cooley
HSE Supervisor
office: 903.291.6511
mobile: 903.649.3015
caleb.cooley@mavresources.com

MAVERICK NATURAL RESOURCES, LLC
230 Progress Blvd, Longview, TX 75604
www.mavresources.com

MAVERICK NATURAL RESOURCES

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713-437-8000

Table of Contents

Section

MAVERICK
NATURAL RESOURCES

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Houston • Texas • 77002
713-437-8000

HYDROGEN SULFIDE (H_2S) OPERATIONS

Contingency Plan
For
Drilling Operations

Maverick Natural Resources, LLC
(Including all subsidiaries)

West Texas
(Andrews County, Ector County)
Eastern New Mexico
(Lea County, Eddie County)

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I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the Area Superintendent and will depend on the severity and extent of the H_2S release. Any release of H_2S must be reported to the Region Superintendent, Drilling Supervisor & HSE Specialist along with it being documented in the Daily Reports.

II. SCOPE

This Contingency plan shall cover the West Texas and East New Mexico areas, which could contain H2S exposed atmospheres and could result in a release in which the 100 ppm radius of exposure is greater than 50’ yet less than 3000’ and does not include a public area, and in which the 500 ppm radius of exposure does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

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III. PROCEDURES

Maverick Well Site Manager or First Person on Scene

- Assess the incident the incident and ensure your own safety before entering

  (Note the following)
  - Location of the Incident
  - Nature of the Incident
  - Wind Direction and weather Conditions
  - Any other assistance and support needed to enter the area safely

- Notify regional field management listed below until personal contact is made with an MNR Supervisor.

- Conduct emergency assessment of the incident and response needed to enter safely. The response may include rescue and/or the evacuation of personnel, shutting in the well Though BOP and/or notifying nearby residents or public.

- Follow the directions and support the On-Scene Incident Commander (First Maverick Permian Supervisor arriving on scene)

First Maverick Permian, LLC Supervisor on Scene (On Scene Incident Commander)

- Becomes MNR On scene Incident Commander upon arrival to location.

- Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

  DETECT the problem
  ESTIMATE likely harm without intervention
  CHOOSE response objectives
  IDENTIFY action options
  DO the best option
  EVALUATE the progress

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- Notify the regional General Manager and HSE Support.

- Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public, requesting assistance from regional MNR personnel or outside agencies and obtaining any safety equipment that may be required.

- Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies as needed.

- Ensure site security during the entire active incident.

    - Set barricades and /or warning signs at or beyond the calculated 100 ppm H_2S radius of exposure (ROE). All manned barricades must be equipped with an H_2S monitor and a 2-way radio.

    - Set roadblocks and staging area as need in an effort to minimize personnel from entering the active incident area.

- Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

    - **Planning Chief** (The individual who will keep account of activity during the incident)
    - **Public Information Officer** (The individual who will communicate updates to the media and public)
    - **Safety Officer** (The individual who will advise on the proper safety protocols during the incident)

- The Planning Chief (or designee) will begin documenting the incident on an incident log for the duration of the live incident.

- Perform a site characterization and designate the following

    - **Hot Zone** – Hazardous Area (Exposure Area)
    - **Warm Zone** – Preparation and Medical Area
    - **Cold Zone** – Staging Area, Command Post, Public Briefing Area

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- Refer all media, public to the Maverick Natural Resources, LLC On Scene Public Information Officer.

- Coordinate the attempt to stop the release of H_2S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

- Once the emergency is over, return the situation to normal by:

    - Confirming the absence of H_2S and combustible gas throughout the area through third party clearing of the area.
    - Removing all barricades and warning signs,
    - Allowing evacuees to return to the area, and
    - Advising all parties previously notified that the emergency has ended.

- Ensure the proper regulatory authorities/agencies are notified of the incident.

- Assist MNR HSE with completing all incident reports detailing incident cause, response, and corrective actions.

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Emergency Procedures during Drilling Operations

Responsibilities

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The Maverick Well Site Manger will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate personnel and agencies.

1. In an emergency situation, the Well Site Manager (WSM) on duty will have complete responsibility and authority to take whatever action is necessary to ensure that personnel's safety and protection of the well is the number one priority and the environment impact and property damage is as minimum as possible.

2. The Drilling Rig Tool pusher will assume all responsibilities of the Well Site Manager in an emergency situation in which the Well Site Manager becomes incapacitated.

3. The WSM will advise each contractor, Service Company, and all others entering the site that H2S may be encountered and of the potential hazards that may exist.

4. Authorize the evacuation of local residents if H2S threatens their safety.

5. Keep the number of persons on location to a minimum during hazardous operations and keep an up to date roster on who's on location at all times.

6. Direct corrective actions to control the flow of gas.

7. The Maverick Natural Resources, LLC Director of Drilling will have full responsibility to authorize the igniting of escaping gas to reduce the toxicity hazard. (This should be used **ONLY AS A LAST RESORT**)

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IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

American Safety Services Incorporated (ASSI)
Odessa, TX (432) 552-7625, Artesia, NM (575) 746-1096

- H_2S monitors
- Breathing air including cascade systems
- First aid and medical supplies
- Safety equipment
- H2S Specialist & Technicians

Standard Safety & Supply
Odessa, TX (432) 894-2988

- H_2S monitors
- Breathing air including cascade systems
- First aid and medical supplies
- Safety equipment
- H2S Specialist

Legacy Safety & Consulting
Hobbs, NM (575) 964-8552

- H_2S monitors
- Breathing air including cascade systems
- First aid and medical supplies
- Safety equipment
- H2S Specialist

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Emergency Equipment and Maintenance (continued)

General Information

- Materials used for repair should be suitable for use where H_2S concentrations exceed 100 ppm. In general, carbon steels having low yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

- Appropriate signs should be maintained in good condition at location entrance and other locations as specified in ***Texas Statewide Rule 36*** and ***NMOCD Rule 118***.

- All notification lists should be kept current with changes in names, telephone numbers, etc.

- All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

- All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S, and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will be onsite prior to cementing the surface casing and contain at a minimum the following:

4 – Fixed H2S sensors located as follows:
- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker
- 1 – at the flow line or by the open pits

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

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2 – Windsocks that are clearly visible (one on the rig Floor, the second at the opposite end of the rig pits.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)
1 – Located at the rig floor
1 – Located in the mud mixing room (if applicable)

Note: All alarms (audible and visual) shall be set to alarm at 10 ppm.

2 - Briefing areas clearly marked
2 - SCBA's at each briefing area
1- SCBA located at the Drilling Rep's office
Note:
1. All SCBA's must be positive pressure type only.
2. All SCBA's must be either Scott or Drager brand.
3. All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.

5 – Emergency Escape Packs located at Top Doghouse.
*Note: Ensure provisions are included for any personnel working above rig floor in derrick.

No area personnel will be allowed to reenter the location until the area is cleared by a 3rd party safety service company.

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V. EMERGENCY CALL LIST:

Maverick Natural Resources, LLC

Carter Blanche (MNR Drilling Engineer)	(225) 892-8438
Jason Thomas (MNR HSE Director)	(903) 291-6513
David Bowen (Permian General Manager)	(505) 320-2704
Matthew Henning (New Mexico Superintendent)	(713) 594-7964
Greg Dodge (Texas Superintendent)	(231) 735-6106
Cody Chesshire (Permian HSE Specialist)	(432) 208-6402
Caleb Cooley (MNR HSE Supervisor)	(903) 649-3015
Lauri Stanfield (MNR Sr. Regulatory)	(832) 646-0429
Sarah Payne (MNR Public Information & Communications)	(713) 437-8087
Maverick Permian Emergency Contact #	(432) 309-7440

Aera Emergency Numbers

New Mexico

Hospital: Lea Co. Regional Medical Center	(575) 492-5000
Ambulance: Hobbs Fire Department	(575) 397-9308
Air Ambulance: Care Star	(888) 624-3571
Air Ambulance: Areo Star	(800) 627-2376
Fire Department: Hobbs	(575) 397-9308
Fire Department: Maljamar	(575) 676-4100
State Police: Artesia	(575) 748-9718
State Police: Hobbs	(575) 392-5580
Sheriff : Lovington	(575) 396-3611
Police : Lovington	(575) 396-2811
BLM 24 HR	(575) 393-3612
New Mexico Emergency Response Com. (Santa Fe)	(505) 476-9600
New Mexico State Emergency (Ops Ctr)	(505) 476-9635
National Emergency Response Center	(800) 424-8802

Texas

Hospital: Permian Regional Medical Center (Andrews)	(432) 523-2200
Hospital: Odessa Regional Medical Center (Odessa)	(432) 582-8000
Sheriff: Andrews County	(432) 523-5675
Sheriff: Ector County	(432) 335-3050
Fire Department: Andrews County	(432) 523-3111
Fire Department: Ector County	(432) 257-0502
Texas Highway Patrol: Andrews	(432) 524-1443
Texas Highway Patrol: Ector	(432) 363-7400

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Regulatory Agencies

Texas Railroad Commission (District 8)	Office: (432) 684-5581
10 Desta Dr. Suite 500E Midland, TX 79705	24 HR Emergency: (512) 463-6788
New Mexico Oil Conservation Commission	Office: (575) 393-6161
P.O. Box 1980 Hobbs, NM 88240	24 HR Emergency: (575) 370-3186
Bureau of Land Management (Carlsbad Field Office)	Office: (575) 234-5972
620 E. Greene St. Carlsbad, NM 88220	24 HR Emergency: (575) 393-3612

VI. Public Media Relations
Sarah Payne (713) 437-8087

The **Public Information Officer** will become Maverick Natural Resources, LLC on-scene contact point. (Once designated by the MNR On-Scene Incident Commander).

The Public Information Officer confers with Houston Office's Public Affairs team, who is responsible for assisting in the coordination of local public relations duties.

If you are the Public Information Officer, answer media questions honestly and **only with facts,** do not speculate about the cause, amount of damage, or the potential impact of the incident on the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are not comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- "I am not qualified to answer that question, but I will try to find someone who is."
- "It is under investigation."

Note:
Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Deceased. Confer with the Houston Office's Human Public Affairs Team, who is responsible for providing that information.

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VII. Public Notification/Evacuation

Alert and/or Evacuate People within the Exposure Area

1. **Public Notification** – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

   Note: Bilingual employees may be needed to assist in notification of residents.

2. **Evacuation Procedures** – Evacuation will proceed upwind from the source of the release of H_2S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

Note: In all situations, consideration should be given to wind direction and weather conditions. H_2S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

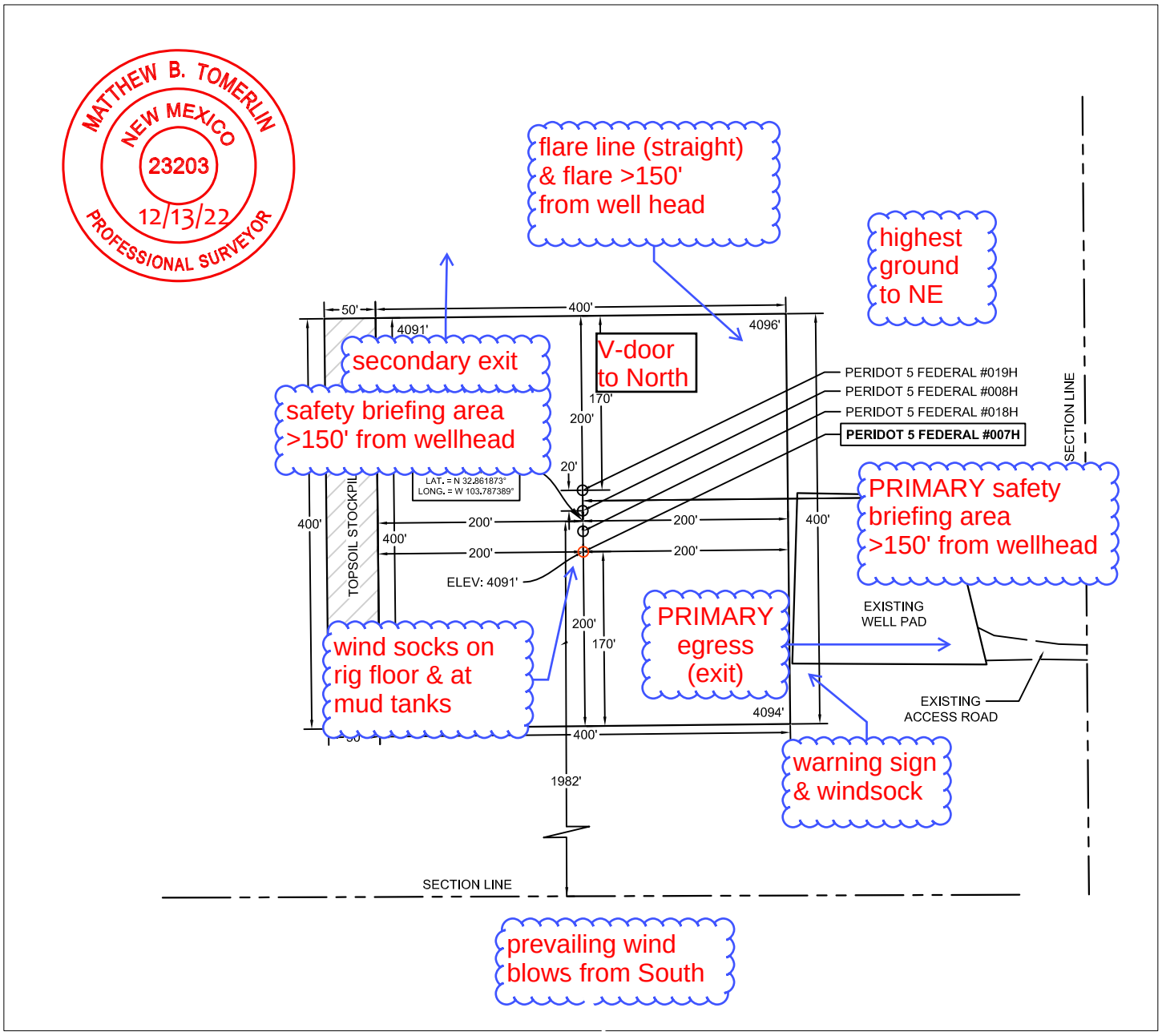
All Personnel working on Maverick Natural Resources, LLC property shall have Hydrogen Sulfide awareness training within the last 12 months and follow the MNR Hydrogen Sulfide Program.

0' 150' 300'

SCALE: 1" = 150'

EXHIBIT 2B
PAD LAYOUT

N



LEASE NAME AND WELL NUMBER: PERIDOT 5 FEDERAL #007H
LATITUDE: N 32.861791 LONGITUDE: W 103.787388 ELEVATION: 4091'
DESCRIPTION: CENTER OF PAD IS 1982' FSL & 2250' FEL

LEGEND
SECTION LINE
TOWNSHIP/RANGE LINE
PROPOSED ACCESS ROAD

MAVERICK PERMIAN LLC

Situated in
SECTION 05, TOWNSHIP 17 SOUTH, RANGE 32 EAST
LEA COUNTY, NEW MEXICO

NOTES

1. ALL COORDINATES, BEARINGS, AND DISTANCES CONTAINED HEREIN ARE GRID, BASED UPON THE NEW MEXICO STATE PLANE COORDINATES SYSTEM, NORTH AMERICAN DATUM 83, NEW MEXICO EAST (3001), NAVD 88.

2. THIS DOCUMENT IS BASED UPON AN ON THE GROUND SURVEY PERFORMED DURING NOVEMBER, 2022. CERTIFICATION OF THIS DOCUMENT IS ONLY TO THE LOCATION OF THIS EASEMENT IN RELATION TO RECORDED MONUMENT OF DEEDS PROVIDED BY THE CLIENT.

3. ELEVATIONS MSL, DERIVED FROM G.N.S.S. OBSERVATION AND DERIVED FROM SAID ON-THE-GROUND SURVEY.

I, MATTHEW B. TOMERLIN, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23203, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT THIS SURVEY MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

MATTHEW B. TOMERLIN, N.M. P.L.S. NO. 23203

DATAPOINT SURVEYING & MAPPING
12450 Network Blvd. - Suite 300
San Antonio, TX 78249
Phone: 726-777-4240
Firm No. 10194585

DRAWN BY: JW	DATE : 12/13/2022	REV. 0
CHECKED BY: JH	DATE : 12/13/2022	
AFE #		PAGE 1 OF 1

PLOT DATE: 11/28/2022 9:27:13 AM FILENAME: Z:\2022\MAVERICK PERMIAN, LLC\22-10-2577 - PERIDOT PAD #3 (GEMSTONE DEVELOPMENT_BASE)\PLATS\FED-PACKETS\PERIDOT 5 FEDERAL #007H\5-PADSITE\MM-MAVERICK-PERIDOT 5 FEDERAL #007H-PADSITE.DWG

Maverick Permian LLC

Peridot Pad 3
H_2S Contingency Plan:
Radius Map

Section 5, Township 17S, Range 32E
Lea County, New Mexico

Well Pad Location

1:27,000

0 0.25 0.5 1

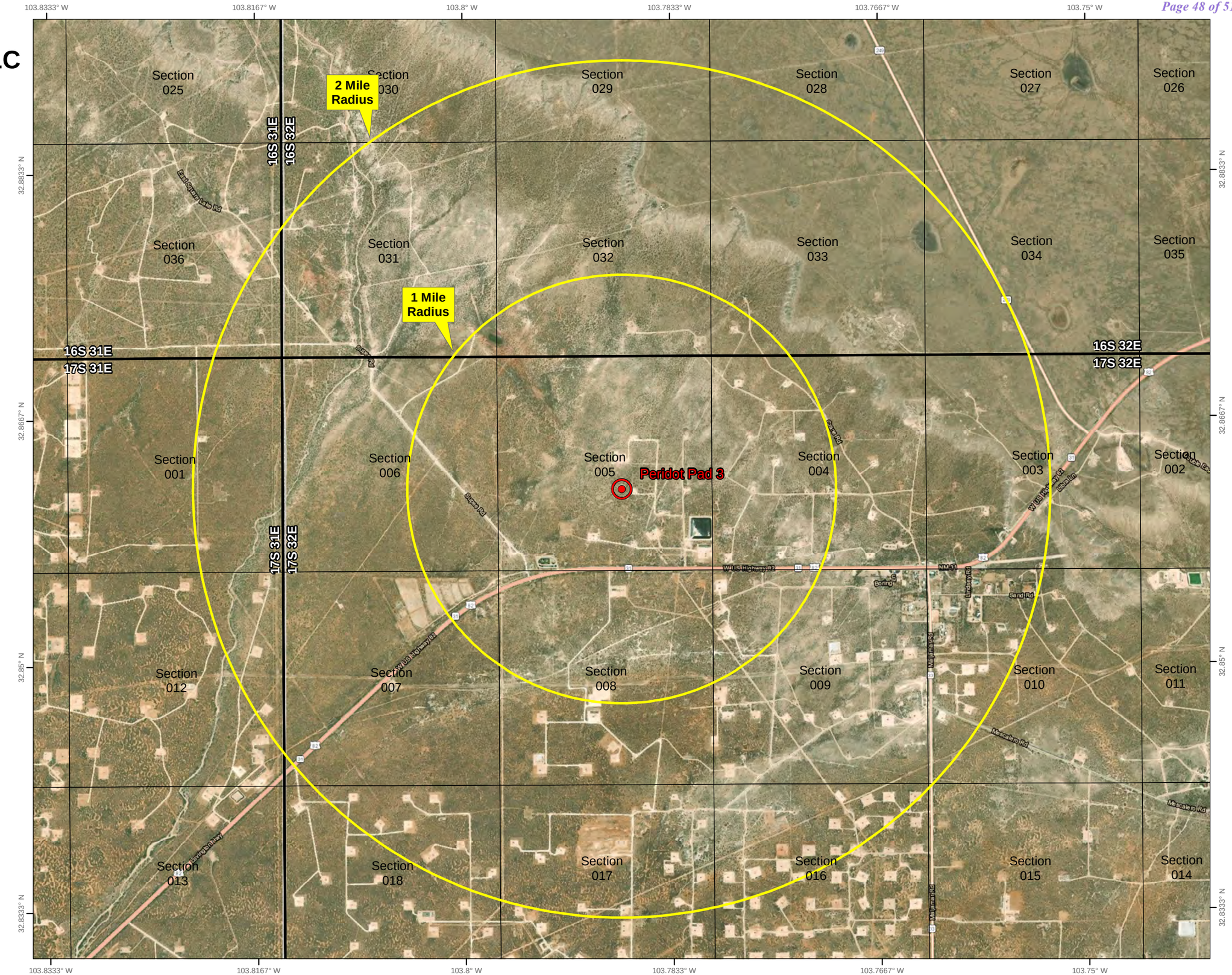
Miles

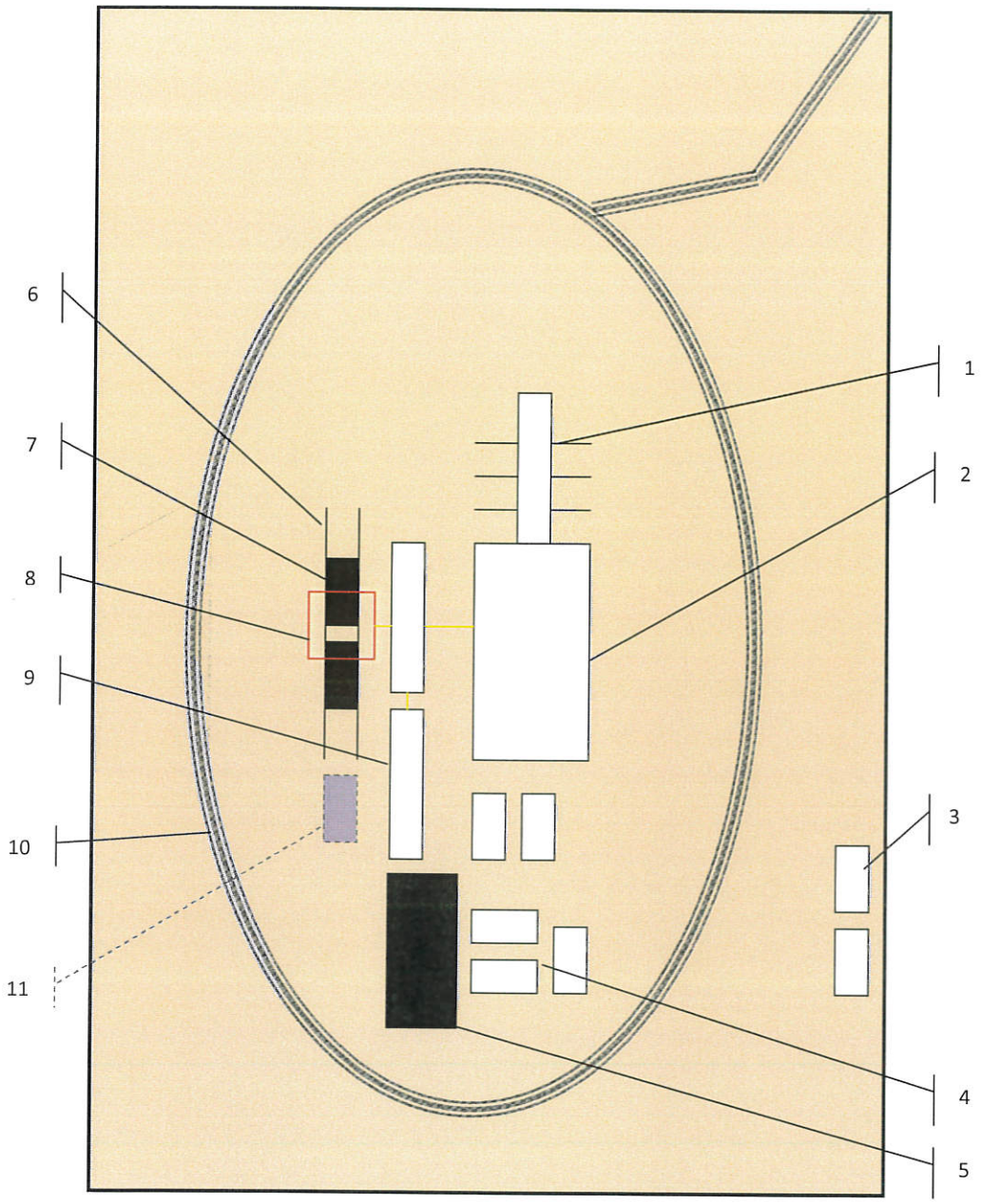
N

NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., December 21, 2022
for Maverick Permian LLC





Schematic Closed Loop Drilling Rig*

1. Pipe Rack
2. Drill Rig
3. House Trailers/ Offices
4. Generator/Fuel/Storage
5. Overflow-Frac Tank
6. Skids
7. Roll Offs
8. Hopper or Centrifuge
9. Mud Tanks
10. Loop Drive
11. Generator (only for use with centrifuge)

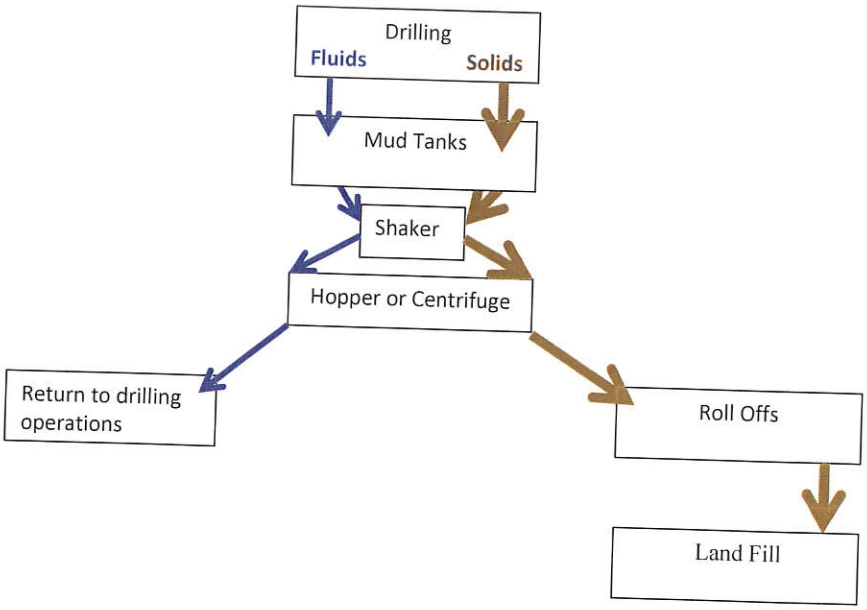
*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available

Above: Centrifugal Closed Loop System

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

Closed Loop Drilling System: Mud tanks to right (1)
Hopper in air to settle out solids (2)
Water return pipe (3)
Shaker between hopper and mud tanks (4)
Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil Field Service

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

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 208812

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 208812
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/21/2023
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	4/21/2023
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	4/21/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	4/21/2023