Form 3160-3
(June 2015)

OCD – HOBBS
06/24/2020
RECEIVED

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.
NMLC0063228

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.

8. Lease Name and Well No.
WILD SALSA 24-13 FED [328507]
323H

2. Name of Operator
TITUS OIL AND GAS PRODUCTION LLC [373986]

9. API Well No.
30-025-47637

3a. Address
420 Throckmorton St., Suite 1150, Fort Worth, TX 76102

3b. Phone No. *(include area code)*
(817) 852-6358

10. Field and Pool, or Exploratory [17644]
DIAMONDTAIL/BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface TR A / 653 FNL / 1236 FEL / LAT 32.2812038 / LONG -103.6237782
At proposed prod. zone TR B / 0 FNL / 1870 FEL / LAT 32.3120266 / LONG -103.6258269

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 25/T23S/R32E/NMP

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

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)
653 feet

16. No of acres in lease
1600

17. Spacing Unit dedicated to this well
600.0

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

19. Proposed Depth
12159 feet / 22966 feet

20. BLM/BIA Bond No. in file
FED: NMB001532

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3719 feet

22. Approximate date work will start*
01/31/2020

23. Estimated duration
45 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
(Electronic Submission)

Name *(Printed/Typed)*
RYAN DELONG / Ph: (817) 852-6358

Date
08/16/2019

Title
Regulatory Manager

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575) 234-5959

Date
06/16/2020

Title
Assistant Field Manager Lands & Minerals

Office
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.

GCP Rec 06/24/2020

SL

APPROVED WITH CONDITIONS

KZ
09/02/2020

Approval Date: 06/16/2020

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Titus Oil and Gas Production LLC**
LEASE NO.:	**NMLC0063228**
WELL NAME & NO.:	Wild Salsa 24-13 Federal 323H
SURFACE HOLE FOOTAGE:	653'/N & 1236'/E
BOTTOM HOLE FOOTAGE	0'/N & 1870'/E
LOCATION:	Section 25, T.23 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	(•) None	( ) Secretary	( ) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	(•) Conventional	( ) Multibowl	( ) Both
Other	[ ] 4 String Area	[ ] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[ ] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Cruz / Delaware** 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 **1,340 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8 inch** intermediate casing and shall be set at approximately **5,040 feet** is:

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

3. The minimum required fill of cement behind the **5-1/2 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. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi**.

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

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) 393-3612

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.

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 after cut-off or once cement reaches 500 psi compressive strength (including

lead when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. 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.

YJ (06/03/2020)

Operator Certification Data Report

06/25/2020

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Ryan DeLong **Signed on:** 08/16/2019

Title: Regulatory Manager

Street Address: 420 Throckmorton Street, Suite 1150

City: Fort Worth **State:** TX **Zip:** 76102

Phone: (817)852-6370

Email address: rdelong@titusoil.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

APD ID: 10400045840 **Submission Date:** 08/16/2019

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400045840 **Tie to previous NOS?** N **Submission Date:** 08/16/2019

BLM Office: CARLSBAD **User:** Ryan DeLong **Title:** Regulatory Manager

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMLC0063228 **Lease Acres:** 1600

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO **APD Operator:** TITUS OIL AND GAS PRODUCTION LLC

Operator letter of designation:

Operator Info

Operator Organization Name: TITUS OIL AND GAS PRODUCTION LLC

Operator Address: 420 Throckmorton St., Suite 1150

Zip: 76102

Operator PO Box:

Operator City: Fort Worth **State:** TX

Operator Phone: (817)852-6358

Operator Internet Address: rdelong@titusoil.com

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** DIAMONDTAIL **Pool Name:** BONE SPRING

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Wild Salsa **Number:** 1

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: **Distance to nearest well:** 25 FT **Distance to lease line:** 653 FT

Reservoir well spacing assigned acres Measurement: 600 Acres

Well plat: 20190816_R4009_WILD_SALSA_24_13_FED_323H_REV2_CERT_C102_20190816162439.pdf

Well work start Date: 01/31/2020 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	653	FNL	1236	FEL	23S	32E	25	Tract A	32.2812038	-103.6237782	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063228	3719	0	0	Y
KOP Leg #1	380	FNL	1791	FEL	23S	32E	25	Tract B	32.2819499	-103.6255664	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063228	-8006	11751	11725	Y
PPP Leg #1-1	350	FNL	1790	FEL	23S	32E	25	Tract B	32.2820319	-103.6255679	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0063228	-8181	11924	11900	Y

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	0	FNL	1870	FEL	23S	32E	13	Tract B	32.3120266	-103.6258269	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0536344	-8440	22966	12159	Y
BHL Leg #1	0	FNL	1870	FEL	23S	32E	13	Tract B	32.3120266	-103.6258269	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0536344	-8440	22966	12159	Y

APD ID: 10400045840 **Submission Date:** 08/16/2019

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

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 Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
514350	QUATERNARY	3719	0	0	ALLUVIUM	NONE	N
514351	RUSTLER	2404	1315	1315	ANHYDRITE	USEABLE WATER	N
514352	SALADO	2369	1350	1350	SALT	NONE	N
514353	BASE OF SALT	-1098	4817	4817	SALT	NONE	N
514354	LAMAR	-1363	5082	5082	LIMESTONE	NONE	N
514355	DELAWARE	-1378	5097	5097	SANDSTONE, SHALE, SILTSTONE	NONE	N
514359	BONE SPRING LIME	-5143	8862	8862	LIMESTONE	NATURAL GAS, OIL	N
514360	FIRST BONE SPRING SAND	-6283	10002	10002	SANDSTONE	NATURAL GAS, OIL	N
514361	BONE SPRING 2ND	-6903	10622	10622	SANDSTONE	NATURAL GAS, OIL	N
514362	BONE SPRING 3RD	-8181	11900	11901	SANDSTONE	NATURAL GAS, OIL	N
514363	WOLFCAMP	-8489	12208	12209	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 5110

Equipment: 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.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See specs and hydrostatic test chart attached in part 8 as "Flex Hose Certifications."
Testing Procedure: 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.

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Choke Diagram Attachment:

2M_Choke_Diagram_20190814144348.pdf

BOP Diagram Attachment:

2M_BOP_Diagram_20190814144353.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 12202

Equipment: 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.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See specs and hydrostatic test chart attached in part 8 as "Flex Hose Certifications."
Testing Procedure: 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.
Choke Diagram Attachment:

5M_Choke_Diagram_20190814144308.pdf

BOP Diagram Attachment:

5M_BOP_Diagram_20190814144313.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	1340	0	1340	3719	2379	1340	J-55	54.5	ST&C	1.84	1.25	DRY	7.04	DRY	7.04
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5110	0	5110	3719	-1391	5110	J-55	40	LT&C	1	1	DRY	2.54	DRY	2.54
3	PRODUCTION	8.75	5.5	NEW	API	N	0	22966	0	12159	3719	-8440	22966	P-110	17	LT&C	1.26	2.25	DRY	2.15	DRY	2.15

Casing Attachments

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Assumptions__deep__WILD_SALSA_20200511132114.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Assumptions__deep__WILD_SALSA_20200511132244.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Assumptions__deep__WILD_SALSA_20200511132320.pdf

Section 4 - Cement

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1340	610	1.75	13.5	1067.5	50	Class C	4% Gel, 1% CaCl2
SURFACE	Tail		0	1340	250	1.34	14.8	335	50	Class C	2% CaCl2
INTERMEDIATE	Lead		0	5110	970	2	12.7	1940	50	35:65:6 C Blend	N/A
INTERMEDIATE	Tail		0	5110	250	1.34	14.8	335	50	Class C	N/A
PRODUCTION	Lead		0	22966	990	2.5	11.9	2475	25	50:50:10 H Blend	N/A
PRODUCTION	Tail		0	22966	2880	1.24	14.4	3571.2	40	50:50:2 H Blend	N/A

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

Describe the mud monitoring system utilized: PVT/Pason/Visual 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	1340	WATER-BASED MUD	8.6	8.8							Additional mud properties included in the PDF Drilling Plan attached to section 8.
935	5110	SALT SATURATED	10	10.2							Additional mud properties included in the PDF Drilling Plan attached to section 8.

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

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
5110	12159	OTHER : Cut Brine	8.6	9.4							Additional mud properties included in the PDF Drilling Plan attached to section 8.

Section 6 - Test, Logging, Coring

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

GR from TD to surface (horizontal well - vertical portion of hole). Logs run will be stated in the completion report and submitted to the BLM.

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

DIRECTIONAL SURVEY,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5945 **Anticipated Surface Pressure:** 3270

Anticipated Bottom Hole Temperature(F): 175

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Plan_WILD_SALSA_24_13_Fed_323H_20190815131049.pdf

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Directional_Plan_Wild_Salsa_24_13_323H_20190816074120.pdf

AC_Report_Wild_Salsa_24_13_323H_20190816074124.pdf

Other proposed operations facets description:

-Flex Hose Certification
-Gas Capture Plan
-APD Drilling Program

Other proposed operations facets attachment:

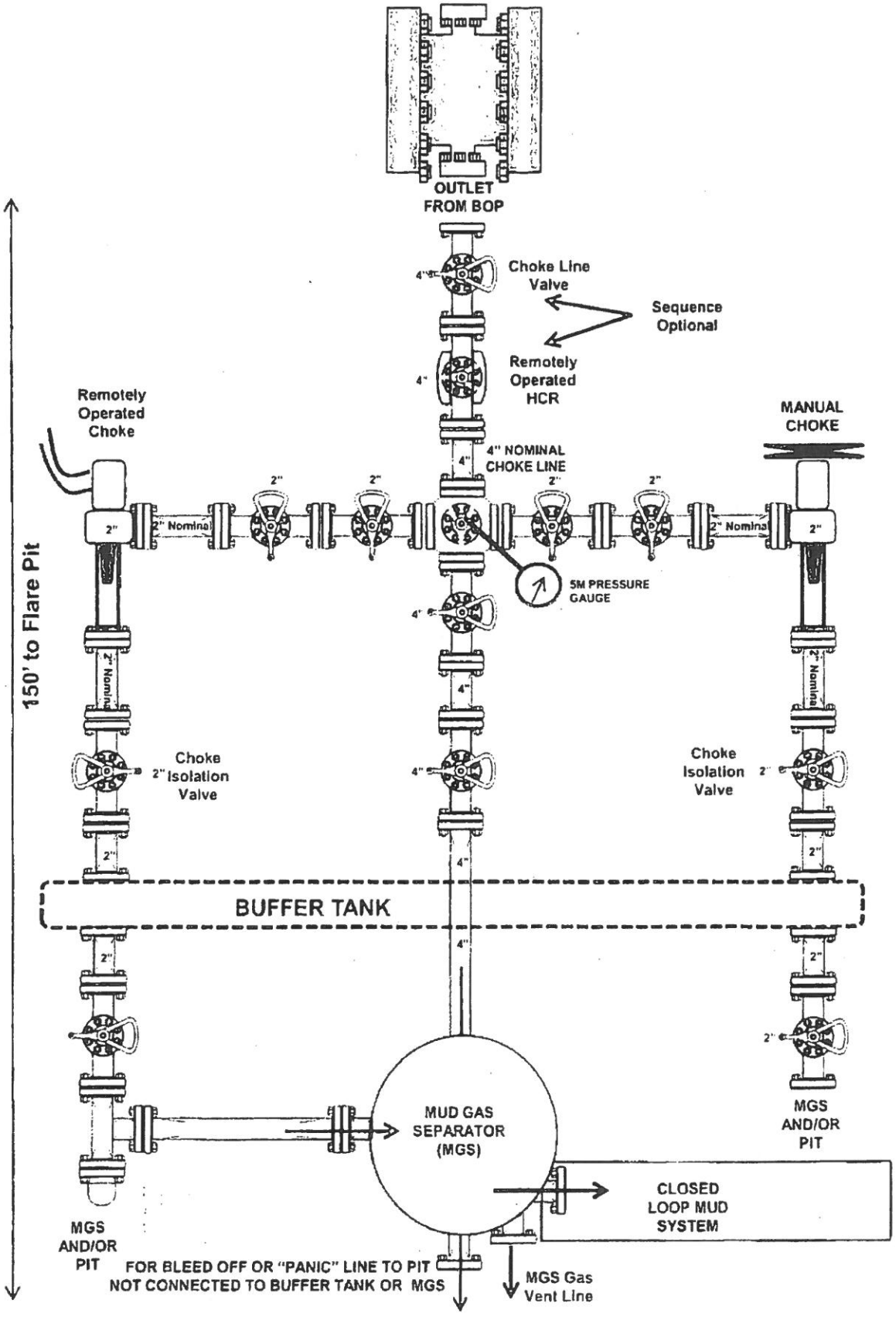
H_P_614_Flex_Hose_Certs_20190814153312.pdf

Gas_Capture_Plan_WILD_SALSA_20190815151537.pdf

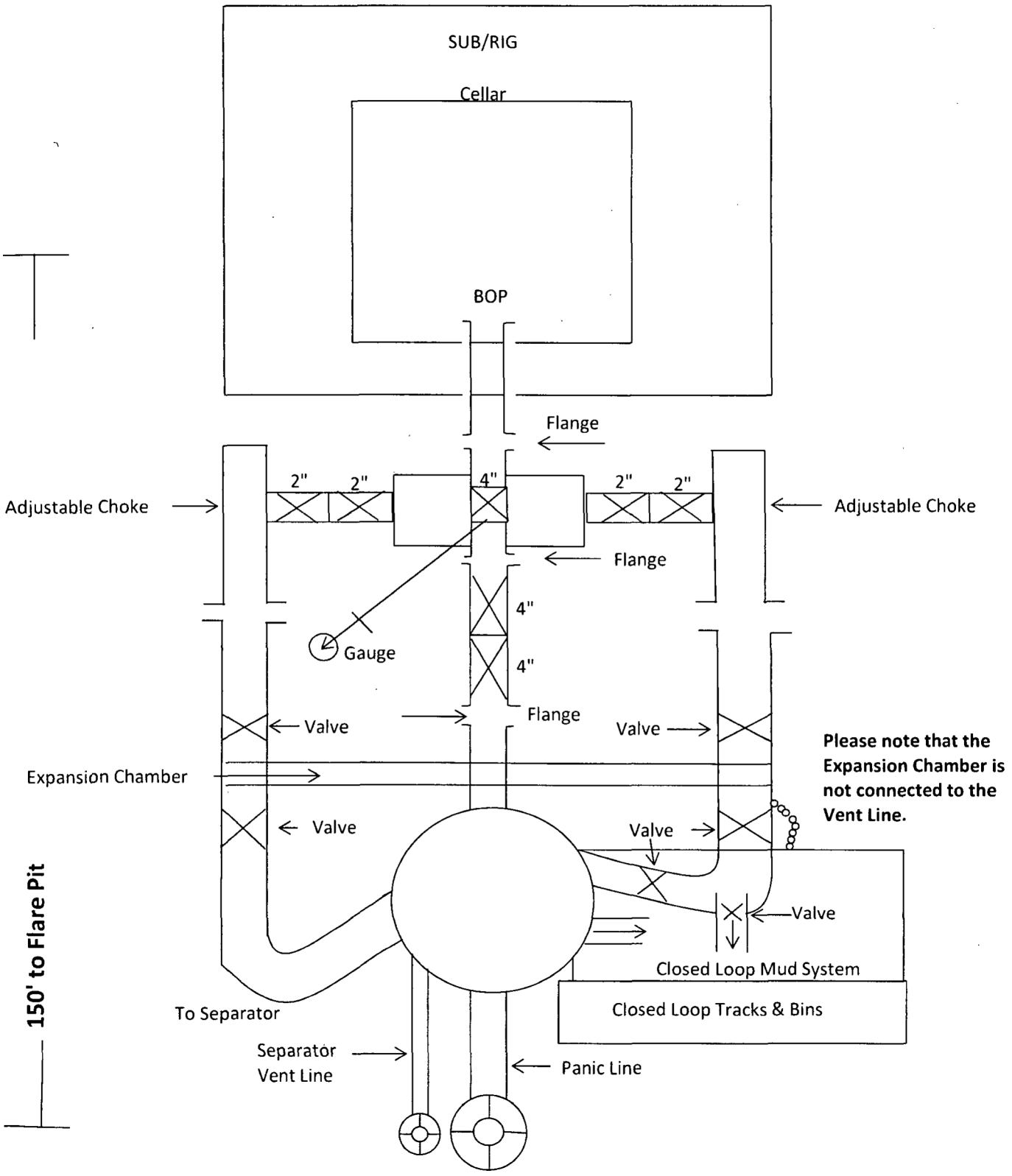
Wild_Salsa_24_13_Fed_323H___Drilling_Plan_20200511133206.pdf

Other Variance attachment:

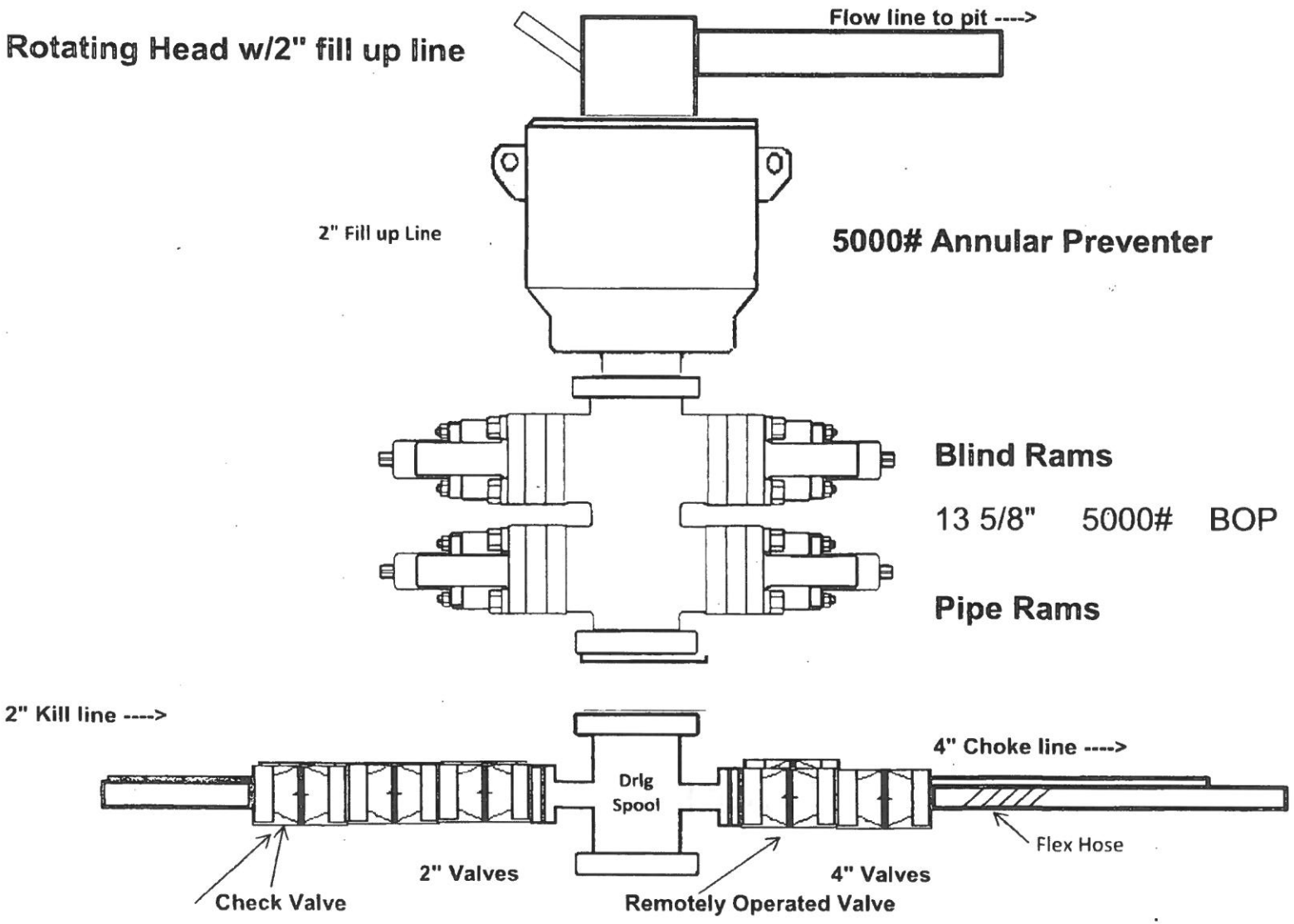
5M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)



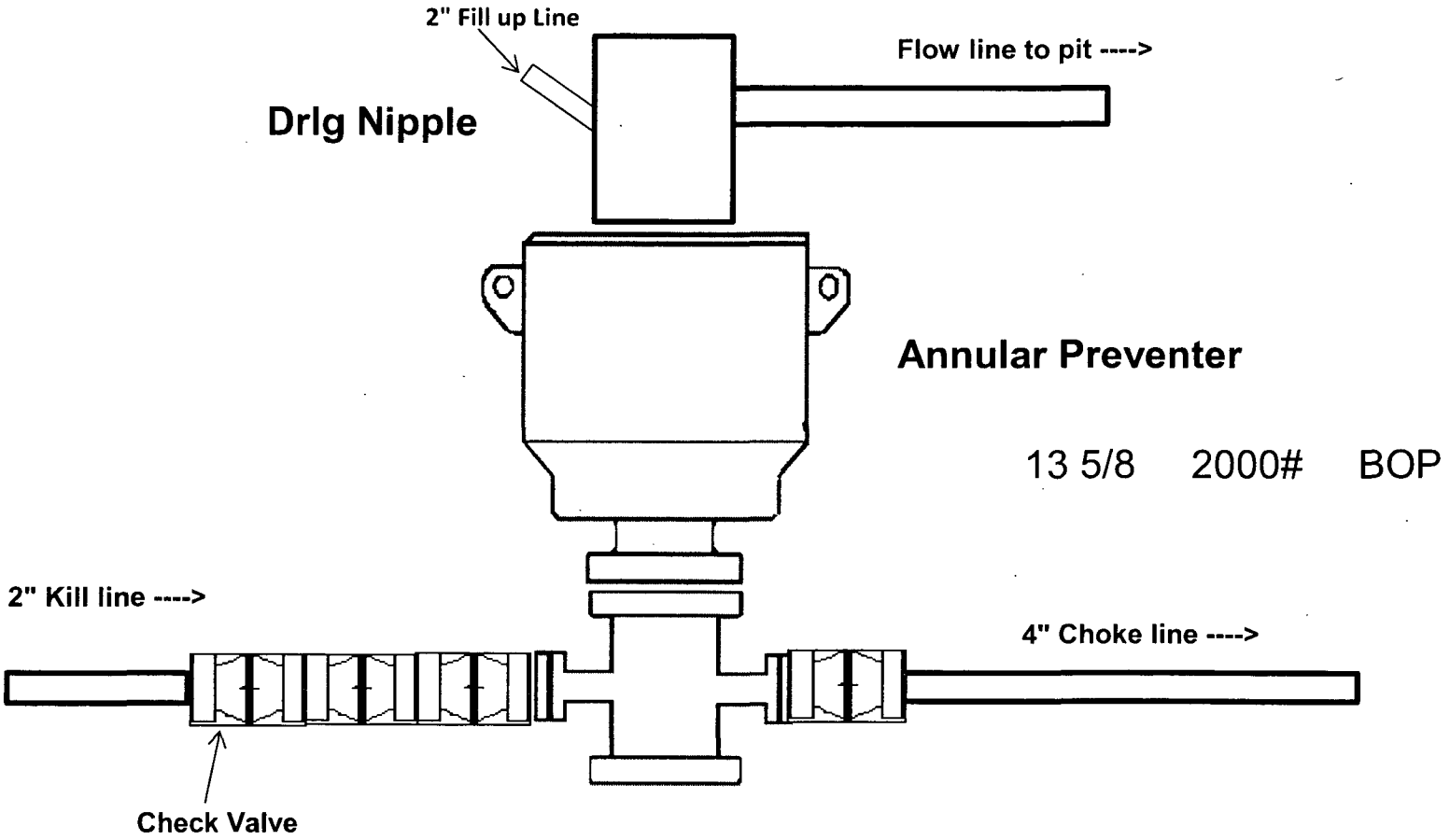
2M Choke Manifold Equipment



5,000 psi BOP Schematic



2,000 psi BOP Schematic



Wild Salsa Casing Assumptions – Titus Oil & Gas Production, LLC

- Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse.
- Surface 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 Order 2 III.B.1.h.
- The 5” casing will be run back 500’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

Wild Salsa Casing Assumptions – Titus Oil & Gas Production, LLC

- Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse.
- Surface 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 Order 2 III.B.1.h.
- The 5” casing will be run back 500’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

Wild Salsa Casing Assumptions – Titus Oil & Gas Production, LLC

- Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse.
- Surface 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 Order 2 III.B.1.h.
- The 5” casing will be run back 500’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

TITUS

Oil & Gas LLC

TITUS Oil & Gas Production, LLC

100 Throckmorton Street
Suite 1630
Fort Worth, TX 76102

Hydrogen Sulfide (H_2S) Contingency Plan

For

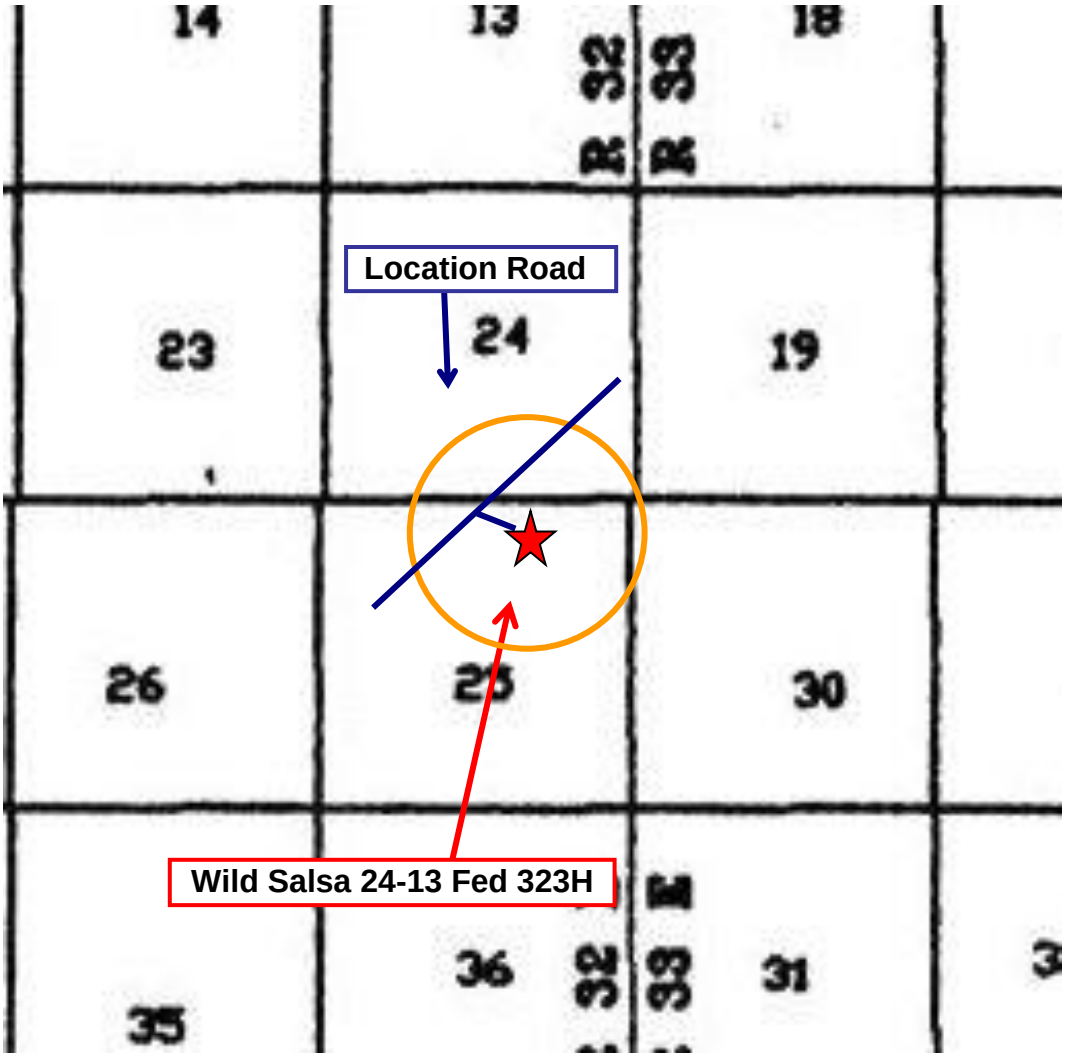
Wild Salsa 24-13 Fed 323H

Sec-25 T-23S R-32E
653 FNL & 1236' FEL
LAT. = 32.28120389' N (NAD83)
LONG = 103.62377824' W

Lea County NM

Wild Salsa 24-13 Fed 323H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Titus Oil & Gas personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Titus Oil & Gas Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - **Bell nipple**
   - **Rig floor**
   - **Cellar**
   - **Possum Belly/Shale shaker**
   - **Choke manifold**

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

   The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

   B. All elastomers used for packing and seals shall be H_2S trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

7. **Well testing:**

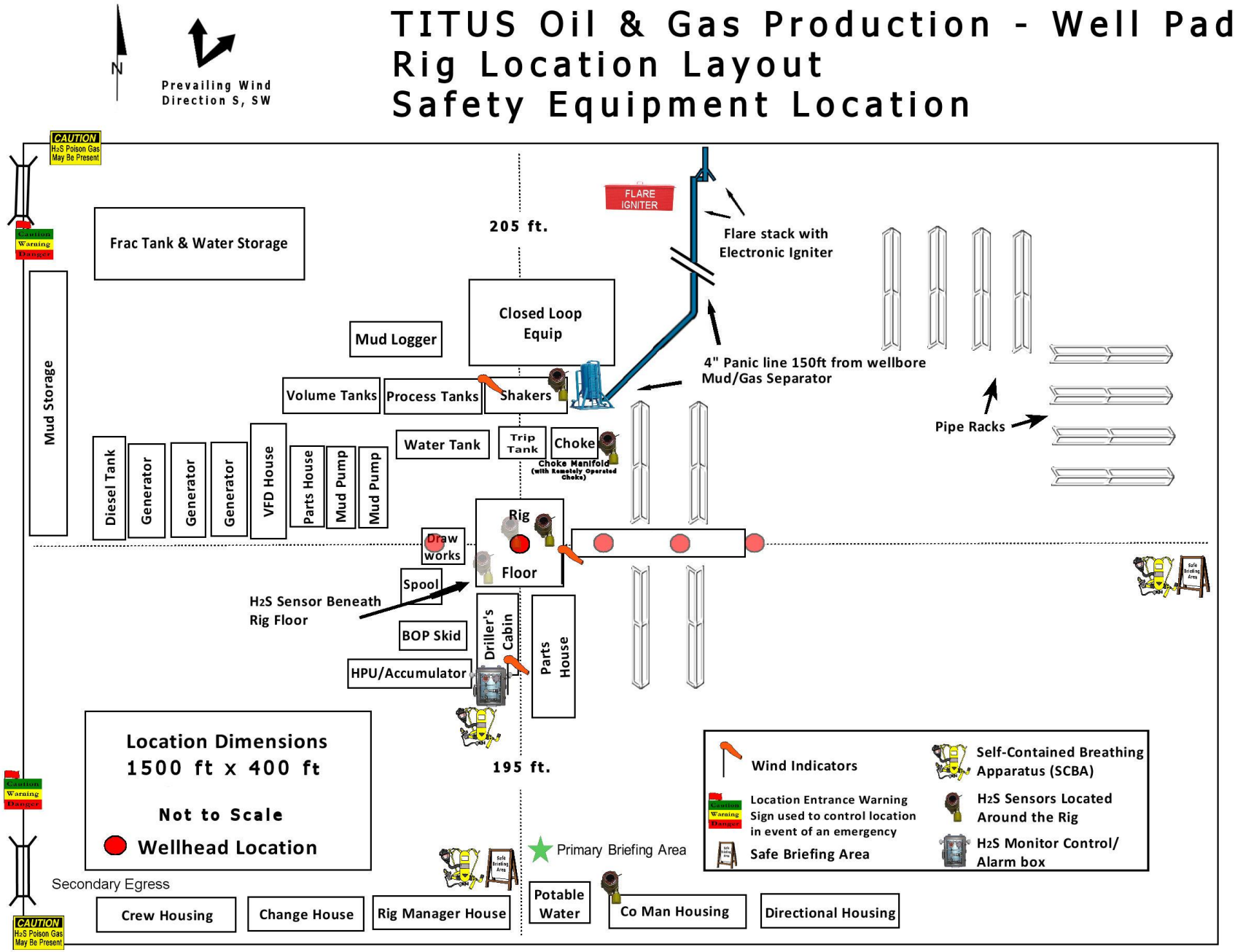
   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

Titus Oil & Gas Company Call List			
Drilling Supervisor –			
Ryan DeLong -	**Office** (817) 852-6370 **Mobile** (405) 664-5188		
Agency Call List			
Lea County (575)	**Hobbs**		
	Lea County Communication Authority		393-3981
	State Police		392-5588
	City Police		397-9265
	Sheriff's Office		393-2515
	Ambulance		**911**
	Fire Department		397-9308
	LEPC (Local Emergency Planning Committee)		393-2870
	NMOCD		393-6161
	US Bureau of Land Management		393-3612
Eddy County (575)	**Carlsbad**		
	State Police		885-3137
	City Police		885-2111
	Sheriff's Office		887-7551
	Ambulance		**911**
	Fire Department		885-3125
	LEPC (Local Emergency Planning Committee)		887-3798
	US Bureau of Land Management		887-6544
	NM Emergency Response Commission (Santa Fe)		(505) 476-9600
	24 HR		(505) 827-9126
	National Emergency Response Center		(800) 424-8802
	National Pollution Control Center: Direct		(703) 872-6000
	For Oil Spills		(800) 280-7118
	Emergency Services		
	Wild Well Control		(281) 784-4700
	Cudd Pressure Control	915-699-0139	(915) 563-3356
	Halliburton		(575) 746-2757
	B. J. Services		(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs		(575) 392-6429
	Flight For Life - Lubbock, TX		(806) 743-9911
	Aerocare - Lubbock, TX		(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM		(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-1222
	Poison Control (24/7)		(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service		(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov		

Prepared in conjunction with
Dave Small SHARP communications and consulting

TITUS Oil & Gas Production - Well Pad
Rig Location Layout
Safety Equipment Location



TITUS OIL GAS LLC

Project: Lea County, NM - (NAD83 NME)
Site: Wild Salsa 24-13
Well: 323H
Wellbore: OH
Design: Plan 1 08-15-19
Rig: Preliminary

T G M

Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.22°

Magnetic Field
Strength: 47923.5snT
Dip Angle: 59.94°
Date: 8/15/2019
Model: MVHD

PHOENIX TECHNOLOGY SERVICES

RKB @ 3745.50usft (Preliminary)
Ground Level: 3719.00

WELL DETAILS

Ground Level: 3719.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	466759.99	760619.59	32° 16' 52.334004 N	103° 37' 25.601664 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Wild Salsa 24-13 323H	12159.00	11209.06	-707.14	477969.05	759912.45	32° 18' 43.296048 N	103° 37' 32.977020 W
LTP - Wild Salsa 24-13 323H	12159.42	11109.06	-706.45	477869.05	759913.13	32° 18' 42.306460 N	103° 37' 32.976768 W
FTP - Wild Salsa 24-13 323H	12203.00	746.78	-637.14	467506.78	759982.45	32° 16' 59.765232 N	103° 37' 32.965752 W
PP - Wild Salsa 24-13 323H	12203.00	546.79	-635.86	467306.78	759983.73	32° 16' 57.786132 N	103° 37' 32.966220 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
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		KOP, Begin 2.00°/100' Build
3	1750.13	5.00	296.40	1749.81	4.85	-9.77	2.00	296.40	4.92		Hold 5.00° Inc at 296.40° Azm
4	8541.38	5.00	296.40	8515.19	268.15	-540.23	0.00	0.00	271.73		Begin 2.00°/100' Drop
5	8791.50	0.00	0.00	8765.00	273.00	-550.00	2.00	180.00	276.64		Begin Vertical Hold
6	11751.00	0.00	0.00	11724.50	273.00	-550.00	0.00	0.00	276.64		KOP2, Begin 12.00°/100' Build
7	12503.00	90.24	351.30	12201.96	746.95	-622.52	12.00	351.30	751.06		LP, Hold 90.24° Inc, Begin 4.00°/100' Turn
8	12710.98	90.24	359.62	12201.10	954.09	-638.97	4.00	90.02	958.31		Hold 359.62° Azm
9	22966.27	90.24	359.62	12159.00	11209.06	-707.14	0.00	0.00	11213.50	BHL - Wild Salsa 24-13 323H	TD at 22966.27

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well 323H, Grid North

Latitude: 32° 16' 52.334004 N
Longitude: 103° 37' 25.601664 W

Grid East: 760619.59
Grid North: 466759.99
Scale Factor: 1.000

Geomagnetic Model: MVHD
Sample Date: 15-Aug-19
Magnetic Declination: 6.60°
Dip Angle from Horizontal: 59.94°
Magnetic Field Strength: 47923.48199436nT

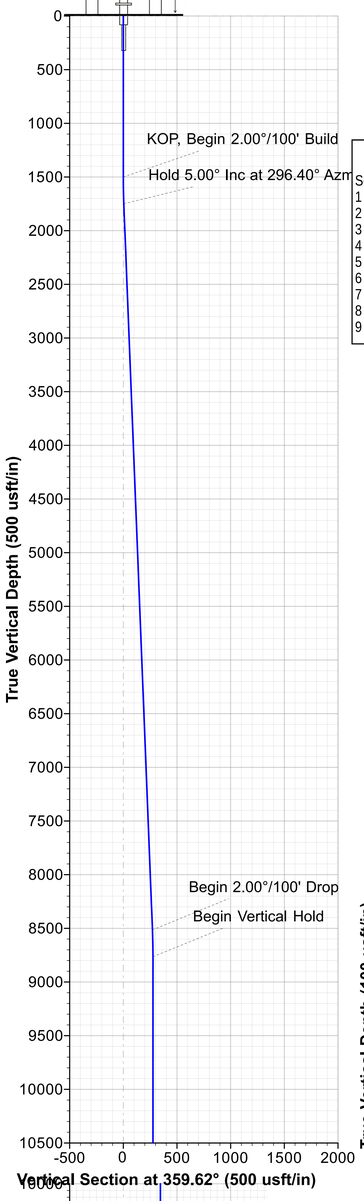
To convert a Magnetic Direction to a Grid Direction, Add 6.22°
To convert a Magnetic Direction to a True Direction, Add 6.60° East
To convert a True Direction to a Grid Direction, Subtract 0.38°

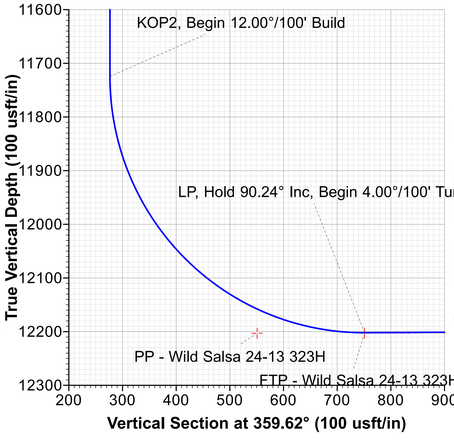
FORMATION TOP DETAILS

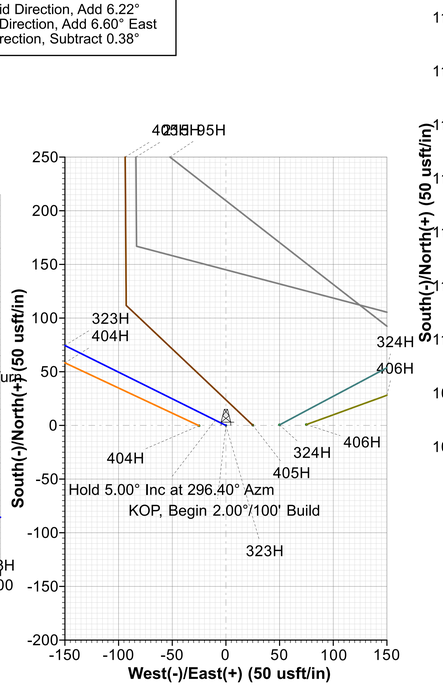
No formation data is available

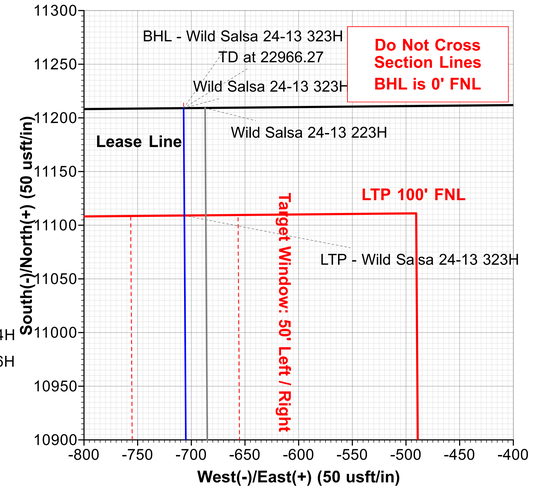
LEGEND

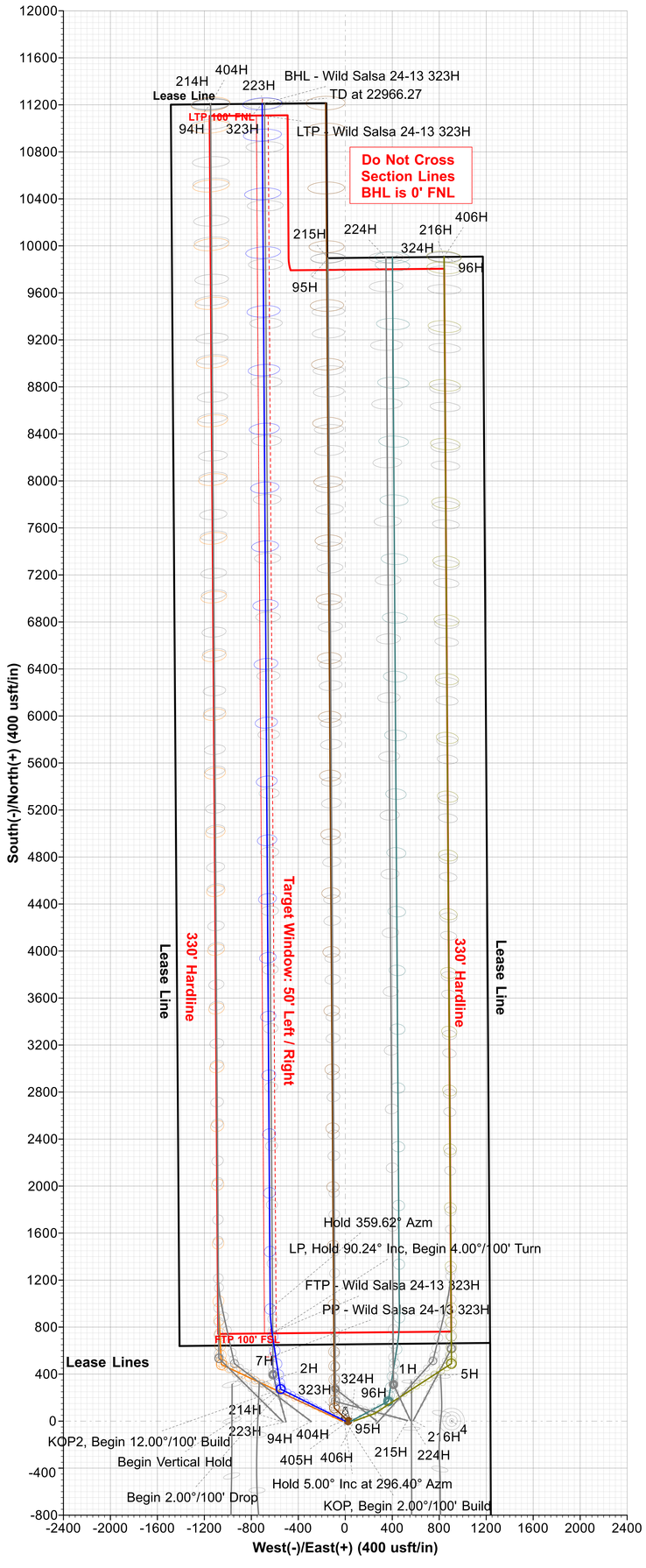
- 7H, OH, Surveys V0
- 404H, OH, Plan 3 08-15-19 V0
- 223H, OH, Plan 2 08-15-19 V0
- 95H, OH, Plan 1 08-15-19 V0
- 405H, OH, Plan 1 08-15-19 V0
- 5H, OH, Surveys V0
- 4, OH, Surveys V0
- 96H, OH, Plan 1 08-15-19 V0
- 324H, OH, Plan 1 08-15-19 V0
- 215H, OH, Plan 1 08-15-19 V0
- 2H, OH, Surveys V0
- 216H, OH, Plan 1 08-15-19 V0
- 1H, OH, Surveys (Cactus 104) V0
- 94H, OH, Plan 1 08-15-19 V0
- 406H, OH, Plan 1 08-15-19 V0
- 224H, OH, Plan 2 08-15-19 V0
- 214H, OH, Plan 1 08-15-19 V0
- Plan 1 08-15-19

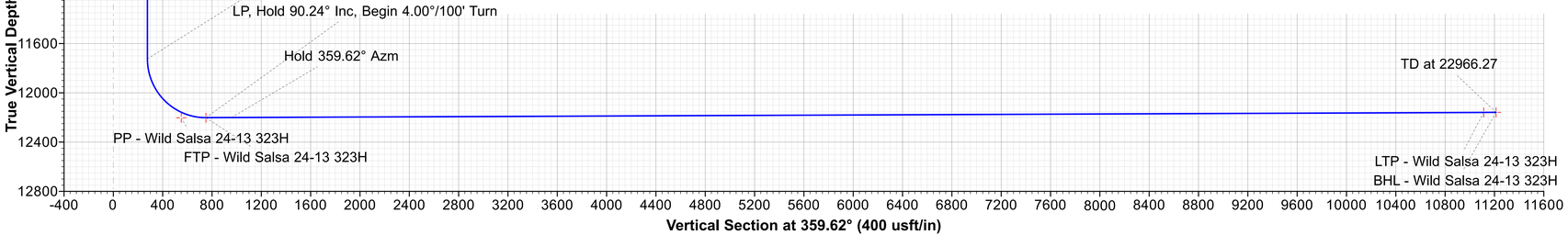












Created By: Tyler Carlson Date: 16:52, August 15 2019

PHOENIX
TECHNOLOGY SERVICES

Titus Oil & Gas Production, LLC

Lea County, NM - (NAD83 NME)
Wild Salsa 24-13
323H

OH

Plan: Plan 1 08-15-19

Standard Planning Report

15 August, 2019

TITUS
OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

Project Lea County, NM - (NAD83 NME)

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

Site Wild Salsa 24-13

Site Position:		**Northing:**	466,759.47 usft	**Latitude:**	32° 16' 52.363056 N
From:	Lat/Long	**Easting:**	760,096.73 usft	**Longitude:**	103° 37' 31.692000 W
Position Uncertainty:	1.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.38 °

Well 323H

Well Position	**+N/-S**	0.52 usft	**Northing:**	466,759.99 usft	**Latitude:**	32° 16' 52.334004 N
	+E/-W	522.86 usft	**Easting:**	760,619.58 usft	**Longitude:**	103° 37' 25.601664 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,719.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	8/15/2019	6.60	59.94	47,923.48199437

Design Plan 1 08-15-19

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	359.62

Plan Survey Tool Program **Date** 8/15/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,966.27	Plan 1 08-15-19 (OH)	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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,750.13	5.00	296.40	1,749.81	4.85	-9.77	2.00	2.00	0.00	296.40	
8,541.38	5.00	296.40	8,515.19	268.15	-540.23	0.00	0.00	0.00	0.00	
8,791.51	0.00	0.00	8,765.00	273.00	-550.00	2.00	-2.00	0.00	180.00	
11,751.01	0.00	0.00	11,724.50	273.00	-550.00	0.00	0.00	0.00	0.00	
12,503.01	90.24	351.30	12,201.96	746.95	-622.52	12.00	12.00	0.00	351.30	
12,710.98	90.24	359.62	12,201.10	954.09	-638.97	4.00	0.00	4.00	90.02	
22,966.27	90.24	359.62	12,159.00	11,209.06	-707.14	0.00	0.00	0.00	0.00	BHL - Wild Salsa 24

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

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
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
1,600.00	2.00	296.40	1,599.98	0.78	-1.56	0.79	2.00	2.00	0.00
1,700.00	4.00	296.40	1,699.84	3.10	-6.25	3.14	2.00	2.00	0.00
1,750.13	5.00	296.40	1,749.81	4.85	-9.77	4.92	2.00	2.00	0.00
Hold 5.00° Inc at 296.40° Azm									
1,800.00	5.00	296.40	1,799.49	6.79	-13.67	6.88	0.00	0.00	0.00
1,900.00	5.00	296.40	1,899.11	10.66	-21.48	10.80	0.00	0.00	0.00
2,000.00	5.00	296.40	1,998.73	14.54	-29.29	14.73	0.00	0.00	0.00
2,100.00	5.00	296.40	2,098.35	18.42	-37.10	18.66	0.00	0.00	0.00
2,200.00	5.00	296.40	2,197.97	22.29	-44.91	22.59	0.00	0.00	0.00
2,300.00	5.00	296.40	2,297.59	26.17	-52.72	26.52	0.00	0.00	0.00
2,400.00	5.00	296.40	2,397.21	30.05	-60.53	30.45	0.00	0.00	0.00
2,500.00	5.00	296.40	2,496.83	33.92	-68.35	34.38	0.00	0.00	0.00
2,600.00	5.00	296.40	2,596.45	37.80	-76.16	38.31	0.00	0.00	0.00
2,700.00	5.00	296.40	2,696.06	41.68	-83.97	42.23	0.00	0.00	0.00
2,800.00	5.00	296.40	2,795.68	45.56	-91.78	46.16	0.00	0.00	0.00
2,900.00	5.00	296.40	2,895.30	49.43	-99.59	50.09	0.00	0.00	0.00
3,000.00	5.00	296.40	2,994.92	53.31	-107.40	54.02	0.00	0.00	0.00
3,100.00	5.00	296.40	3,094.54	57.19	-115.21	57.95	0.00	0.00	0.00
3,200.00	5.00	296.40	3,194.16	61.06	-123.02	61.88	0.00	0.00	0.00
3,300.00	5.00	296.40	3,293.78	64.94	-130.83	65.81	0.00	0.00	0.00
3,400.00	5.00	296.40	3,393.40	68.82	-138.64	69.74	0.00	0.00	0.00
3,500.00	5.00	296.40	3,493.02	72.69	-146.45	73.66	0.00	0.00	0.00
3,600.00	5.00	296.40	3,592.64	76.57	-154.26	77.59	0.00	0.00	0.00
3,700.00	5.00	296.40	3,692.25	80.45	-162.08	81.52	0.00	0.00	0.00
3,800.00	5.00	296.40	3,791.87	84.33	-169.89	85.45	0.00	0.00	0.00
3,900.00	5.00	296.40	3,891.49	88.20	-177.70	89.38	0.00	0.00	0.00
4,000.00	5.00	296.40	3,991.11	92.08	-185.51	93.31	0.00	0.00	0.00
4,100.00	5.00	296.40	4,090.73	95.96	-193.32	97.24	0.00	0.00	0.00
4,200.00	5.00	296.40	4,190.35	99.83	-201.13	101.16	0.00	0.00	0.00
4,300.00	5.00	296.40	4,289.97	103.71	-208.94	105.09	0.00	0.00	0.00
4,400.00	5.00	296.40	4,389.59	107.59	-216.75	109.02	0.00	0.00	0.00
4,500.00	5.00	296.40	4,489.21	111.46	-224.56	112.95	0.00	0.00	0.00
4,600.00	5.00	296.40	4,588.83	115.34	-232.37	116.88	0.00	0.00	0.00
4,700.00	5.00	296.40	4,688.45	119.22	-240.18	120.81	0.00	0.00	0.00
4,800.00	5.00	296.40	4,788.06	123.10	-247.99	124.74	0.00	0.00	0.00
4,900.00	5.00	296.40	4,887.68	126.97	-255.80	128.67	0.00	0.00	0.00
5,000.00	5.00	296.40	4,987.30	130.85	-263.62	132.59	0.00	0.00	0.00
5,100.00	5.00	296.40	5,086.92	134.73	-271.43	136.52	0.00	0.00	0.00
5,200.00	5.00	296.40	5,186.54	138.60	-279.24	140.45	0.00	0.00	0.00
5,300.00	5.00	296.40	5,286.16	142.48	-287.05	144.38	0.00	0.00	0.00
5,400.00	5.00	296.40	5,385.78	146.36	-294.86	148.31	0.00	0.00	0.00
5,500.00	5.00	296.40	5,485.40	150.23	-302.67	152.24	0.00	0.00	0.00
5,600.00	5.00	296.40	5,585.02	154.11	-310.48	156.17	0.00	0.00	0.00
5,700.00	5.00	296.40	5,684.64	157.99	-318.29	160.10	0.00	0.00	0.00
5,800.00	5.00	296.40	5,784.26	161.87	-326.10	164.02	0.00	0.00	0.00
5,900.00	5.00	296.40	5,883.87	165.74	-333.91	167.95	0.00	0.00	0.00
6,000.00	5.00	296.40	5,983.49	169.62	-341.72	171.88	0.00	0.00	0.00
6,100.00	5.00	296.40	6,083.11	173.50	-349.53	175.81	0.00	0.00	0.00
6,200.00	5.00	296.40	6,182.73	177.37	-357.35	179.74	0.00	0.00	0.00
6,300.00	5.00	296.40	6,282.35	181.25	-365.16	183.67	0.00	0.00	0.00

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

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)
6,400.00	5.00	296.40	6,381.97	185.13	-372.97	187.60	0.00	0.00	0.00
6,500.00	5.00	296.40	6,481.59	189.00	-380.78	191.53	0.00	0.00	0.00
6,600.00	5.00	296.40	6,581.21	192.88	-388.59	195.45	0.00	0.00	0.00
6,700.00	5.00	296.40	6,680.83	196.76	-396.40	199.38	0.00	0.00	0.00
6,800.00	5.00	296.40	6,780.45	200.64	-404.21	203.31	0.00	0.00	0.00
6,900.00	5.00	296.40	6,880.07	204.51	-412.02	207.24	0.00	0.00	0.00
7,000.00	5.00	296.40	6,979.68	208.39	-419.83	211.17	0.00	0.00	0.00
7,100.00	5.00	296.40	7,079.30	212.27	-427.64	215.10	0.00	0.00	0.00
7,200.00	5.00	296.40	7,178.92	216.14	-435.45	219.03	0.00	0.00	0.00
7,300.00	5.00	296.40	7,278.54	220.02	-443.26	222.96	0.00	0.00	0.00
7,400.00	5.00	296.40	7,378.16	223.90	-451.07	226.88	0.00	0.00	0.00
7,500.00	5.00	296.40	7,477.78	227.77	-458.89	230.81	0.00	0.00	0.00
7,600.00	5.00	296.40	7,577.40	231.65	-466.70	234.74	0.00	0.00	0.00
7,700.00	5.00	296.40	7,677.02	235.53	-474.51	238.67	0.00	0.00	0.00
7,800.00	5.00	296.40	7,776.64	239.41	-482.32	242.60	0.00	0.00	0.00
7,900.00	5.00	296.40	7,876.26	243.28	-490.13	246.53	0.00	0.00	0.00
8,000.00	5.00	296.40	7,975.88	247.16	-497.94	250.46	0.00	0.00	0.00
8,100.00	5.00	296.40	8,075.49	251.04	-505.75	254.38	0.00	0.00	0.00
8,200.00	5.00	296.40	8,175.11	254.91	-513.56	258.31	0.00	0.00	0.00
8,300.00	5.00	296.40	8,274.73	258.79	-521.37	262.24	0.00	0.00	0.00
8,400.00	5.00	296.40	8,374.35	262.67	-529.18	266.17	0.00	0.00	0.00
8,500.00	5.00	296.40	8,473.97	266.54	-536.99	270.10	0.00	0.00	0.00
8,541.38	5.00	296.40	8,515.19	268.15	-540.23	271.73	0.00	0.00	0.00
Begin 2.00°/100' Drop									
8,600.00	3.83	296.40	8,573.64	270.16	-544.27	273.76	2.00	-2.00	0.00
8,700.00	1.83	296.40	8,673.51	272.35	-548.69	275.98	2.00	-2.00	0.00
8,791.50	0.00	296.40	8,765.00	273.00	-550.00	276.64	2.00	-2.00	0.00
Begin Vertical Hold									
11,751.00	0.00	0.00	11,724.50	273.00	-550.00	276.64	0.00	0.00	0.00
KOP2, Begin 12.00°/100' Build									
11,800.00	5.88	351.30	11,773.41	275.48	-550.38	279.13	12.00	12.00	0.00
11,900.00	17.88	351.30	11,871.09	295.79	-553.49	299.46	12.00	12.00	0.00
12,000.00	29.88	351.30	11,962.36	335.74	-559.60	339.44	12.00	12.00	0.00
12,100.00	41.88	351.30	12,043.24	393.56	-568.45	397.33	12.00	12.00	0.00
12,200.00	53.88	351.30	12,110.19	466.75	-579.65	470.58	12.00	12.00	0.00
12,300.00	65.88	351.30	12,160.28	552.10	-592.71	556.01	12.00	12.00	0.00
12,400.00	77.88	351.30	12,191.32	645.87	-607.06	649.88	12.00	12.00	0.00
12,500.00	89.88	351.30	12,201.96	743.98	-622.07	748.09	12.00	12.00	0.00
12,503.00	90.24	351.30	12,201.96	746.94	-622.52	751.06	12.00	12.00	0.00
LP, Hold 90.24° Inc, Begin 4.00°/100' Turn									
12,600.00	90.24	355.18	12,201.56	843.25	-633.94	847.44	4.00	0.00	4.00
12,700.00	90.24	359.18	12,201.14	943.11	-638.86	947.32	4.00	0.00	4.00
12,710.98	90.24	359.62	12,201.10	954.09	-638.97	958.30	4.00	0.00	4.00
Hold 359.62° Azm									
12,800.00	90.24	359.62	12,200.73	1,043.10	-639.57	1,047.32	0.00	0.00	0.00
12,900.00	90.24	359.62	12,200.32	1,143.10	-640.23	1,147.32	0.00	0.00	0.00
13,000.00	90.24	359.62	12,199.91	1,243.10	-640.89	1,247.32	0.00	0.00	0.00
13,100.00	90.24	359.62	12,199.50	1,343.09	-641.56	1,347.32	0.00	0.00	0.00
13,200.00	90.24	359.62	12,199.09	1,443.09	-642.22	1,447.32	0.00	0.00	0.00
13,300.00	90.24	359.62	12,198.68	1,543.09	-642.89	1,547.32	0.00	0.00	0.00
13,400.00	90.24	359.62	12,198.27	1,643.09	-643.55	1,647.32	0.00	0.00	0.00
13,500.00	90.24	359.62	12,197.86	1,743.08	-644.22	1,747.32	0.00	0.00	0.00
13,600.00	90.24	359.62	12,197.45	1,843.08	-644.88	1,847.32	0.00	0.00	0.00
13,700.00	90.24	359.62	12,197.04	1,943.08	-645.55	1,947.32	0.00	0.00	0.00

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

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)
13,800.00	90.24	359.62	12,196.63	2,043.07	-646.21	2,047.31	0.00	0.00	0.00
13,900.00	90.24	359.62	12,196.22	2,143.07	-646.88	2,147.31	0.00	0.00	0.00
14,000.00	90.24	359.62	12,195.81	2,243.07	-647.54	2,247.31	0.00	0.00	0.00
14,100.00	90.24	359.62	12,195.40	2,343.06	-648.21	2,347.31	0.00	0.00	0.00
14,200.00	90.24	359.62	12,194.98	2,443.06	-648.87	2,447.31	0.00	0.00	0.00
14,300.00	90.24	359.62	12,194.57	2,543.06	-649.54	2,547.31	0.00	0.00	0.00
14,400.00	90.24	359.62	12,194.16	2,643.06	-650.20	2,647.31	0.00	0.00	0.00
14,500.00	90.24	359.62	12,193.75	2,743.05	-650.86	2,747.31	0.00	0.00	0.00
14,600.00	90.24	359.62	12,193.34	2,843.05	-651.53	2,847.31	0.00	0.00	0.00
14,700.00	90.24	359.62	12,192.93	2,943.05	-652.19	2,947.31	0.00	0.00	0.00
14,800.00	90.24	359.62	12,192.52	3,043.04	-652.86	3,047.31	0.00	0.00	0.00
14,900.00	90.24	359.62	12,192.11	3,143.04	-653.52	3,147.31	0.00	0.00	0.00
15,000.00	90.24	359.62	12,191.70	3,243.04	-654.19	3,247.30	0.00	0.00	0.00
15,100.00	90.24	359.62	12,191.29	3,343.03	-654.85	3,347.30	0.00	0.00	0.00
15,200.00	90.24	359.62	12,190.88	3,443.03	-655.52	3,447.30	0.00	0.00	0.00
15,300.00	90.24	359.62	12,190.47	3,543.03	-656.18	3,547.30	0.00	0.00	0.00
15,400.00	90.24	359.62	12,190.06	3,643.02	-656.85	3,647.30	0.00	0.00	0.00
15,500.00	90.24	359.62	12,189.65	3,743.02	-657.51	3,747.30	0.00	0.00	0.00
15,600.00	90.24	359.62	12,189.24	3,843.02	-658.18	3,847.30	0.00	0.00	0.00
15,700.00	90.24	359.62	12,188.83	3,943.02	-658.84	3,947.30	0.00	0.00	0.00
15,800.00	90.24	359.62	12,188.42	4,043.01	-659.51	4,047.30	0.00	0.00	0.00
15,900.00	90.24	359.62	12,188.01	4,143.01	-660.17	4,147.30	0.00	0.00	0.00
16,000.00	90.24	359.62	12,187.60	4,243.01	-660.83	4,247.30	0.00	0.00	0.00
16,100.00	90.24	359.62	12,187.19	4,343.00	-661.50	4,347.30	0.00	0.00	0.00
16,200.00	90.24	359.62	12,186.77	4,443.00	-662.16	4,447.29	0.00	0.00	0.00
16,300.00	90.24	359.62	12,186.36	4,543.00	-662.83	4,547.29	0.00	0.00	0.00
16,400.00	90.24	359.62	12,185.95	4,642.99	-663.49	4,647.29	0.00	0.00	0.00
16,500.00	90.24	359.62	12,185.54	4,742.99	-664.16	4,747.29	0.00	0.00	0.00
16,600.00	90.24	359.62	12,185.13	4,842.99	-664.82	4,847.29	0.00	0.00	0.00
16,700.00	90.24	359.62	12,184.72	4,942.99	-665.49	4,947.29	0.00	0.00	0.00
16,800.00	90.24	359.62	12,184.31	5,042.98	-666.15	5,047.29	0.00	0.00	0.00
16,900.00	90.24	359.62	12,183.90	5,142.98	-666.82	5,147.29	0.00	0.00	0.00
17,000.00	90.24	359.62	12,183.49	5,242.98	-667.48	5,247.29	0.00	0.00	0.00
17,100.00	90.24	359.62	12,183.08	5,342.97	-668.15	5,347.29	0.00	0.00	0.00
17,200.00	90.24	359.62	12,182.67	5,442.97	-668.81	5,447.29	0.00	0.00	0.00
17,300.00	90.24	359.62	12,182.26	5,542.97	-669.48	5,547.28	0.00	0.00	0.00
17,400.00	90.24	359.62	12,181.85	5,642.96	-670.14	5,647.28	0.00	0.00	0.00
17,500.00	90.24	359.62	12,181.44	5,742.96	-670.80	5,747.28	0.00	0.00	0.00
17,600.00	90.24	359.62	12,181.03	5,842.96	-671.47	5,847.28	0.00	0.00	0.00
17,700.00	90.24	359.62	12,180.62	5,942.95	-672.13	5,947.28	0.00	0.00	0.00
17,800.00	90.24	359.62	12,180.21	6,042.95	-672.80	6,047.28	0.00	0.00	0.00
17,900.00	90.24	359.62	12,179.80	6,142.95	-673.46	6,147.28	0.00	0.00	0.00
18,000.00	90.24	359.62	12,179.39	6,242.95	-674.13	6,247.28	0.00	0.00	0.00
18,100.00	90.24	359.62	12,178.98	6,342.94	-674.79	6,347.28	0.00	0.00	0.00
18,200.00	90.24	359.62	12,178.57	6,442.94	-675.46	6,447.28	0.00	0.00	0.00
18,300.00	90.24	359.62	12,178.15	6,542.94	-676.12	6,547.28	0.00	0.00	0.00
18,400.00	90.24	359.62	12,177.74	6,642.93	-676.79	6,647.28	0.00	0.00	0.00
18,500.00	90.24	359.62	12,177.33	6,742.93	-677.45	6,747.27	0.00	0.00	0.00
18,600.00	90.24	359.62	12,176.92	6,842.93	-678.12	6,847.27	0.00	0.00	0.00
18,700.00	90.24	359.62	12,176.51	6,942.92	-678.78	6,947.27	0.00	0.00	0.00
18,800.00	90.24	359.62	12,176.10	7,042.92	-679.44	7,047.27	0.00	0.00	0.00
18,900.00	90.24	359.62	12,175.69	7,142.92	-680.11	7,147.27	0.00	0.00	0.00
19,000.00	90.24	359.62	12,175.28	7,242.91	-680.77	7,247.27	0.00	0.00	0.00
19,100.00	90.24	359.62	12,174.87	7,342.91	-681.44	7,347.27	0.00	0.00	0.00

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

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)
19,200.00	90.24	359.62	12,174.46	7,442.91	-682.10	7,447.27	0.00	0.00	0.00
19,300.00	90.24	359.62	12,174.05	7,542.91	-682.77	7,547.27	0.00	0.00	0.00
19,400.00	90.24	359.62	12,173.64	7,642.90	-683.43	7,647.27	0.00	0.00	0.00
19,500.00	90.24	359.62	12,173.23	7,742.90	-684.10	7,747.27	0.00	0.00	0.00
19,600.00	90.24	359.62	12,172.82	7,842.90	-684.76	7,847.27	0.00	0.00	0.00
19,700.00	90.24	359.62	12,172.41	7,942.89	-685.43	7,947.26	0.00	0.00	0.00
19,800.00	90.24	359.62	12,172.00	8,042.89	-686.09	8,047.26	0.00	0.00	0.00
19,900.00	90.24	359.62	12,171.59	8,142.89	-686.76	8,147.26	0.00	0.00	0.00
20,000.00	90.24	359.62	12,171.18	8,242.88	-687.42	8,247.26	0.00	0.00	0.00
20,100.00	90.24	359.62	12,170.77	8,342.88	-688.09	8,347.26	0.00	0.00	0.00
20,200.00	90.24	359.62	12,170.36	8,442.88	-688.75	8,447.26	0.00	0.00	0.00
20,300.00	90.24	359.62	12,169.94	8,542.88	-689.41	8,547.26	0.00	0.00	0.00
20,400.00	90.24	359.62	12,169.53	8,642.87	-690.08	8,647.26	0.00	0.00	0.00
20,500.00	90.24	359.62	12,169.12	8,742.87	-690.74	8,747.26	0.00	0.00	0.00
20,600.00	90.24	359.62	12,168.71	8,842.87	-691.41	8,847.26	0.00	0.00	0.00
20,700.00	90.24	359.62	12,168.30	8,942.86	-692.07	8,947.26	0.00	0.00	0.00
20,800.00	90.24	359.62	12,167.89	9,042.86	-692.74	9,047.26	0.00	0.00	0.00
20,900.00	90.24	359.62	12,167.48	9,142.86	-693.40	9,147.25	0.00	0.00	0.00
21,000.00	90.24	359.62	12,167.07	9,242.85	-694.07	9,247.25	0.00	0.00	0.00
21,100.00	90.24	359.62	12,166.66	9,342.85	-694.73	9,347.25	0.00	0.00	0.00
21,200.00	90.24	359.62	12,166.25	9,442.85	-695.40	9,447.25	0.00	0.00	0.00
21,300.00	90.24	359.62	12,165.84	9,542.84	-696.06	9,547.25	0.00	0.00	0.00
21,400.00	90.24	359.62	12,165.43	9,642.84	-696.73	9,647.25	0.00	0.00	0.00
21,500.00	90.24	359.62	12,165.02	9,742.84	-697.39	9,747.25	0.00	0.00	0.00
21,600.00	90.24	359.62	12,164.61	9,842.84	-698.06	9,847.25	0.00	0.00	0.00
21,700.00	90.24	359.62	12,164.20	9,942.83	-698.72	9,947.25	0.00	0.00	0.00
21,800.00	90.24	359.62	12,163.79	10,042.83	-699.38	10,047.25	0.00	0.00	0.00
21,900.00	90.24	359.62	12,163.38	10,142.83	-700.05	10,147.25	0.00	0.00	0.00
22,000.00	90.24	359.62	12,162.97	10,242.82	-700.71	10,247.25	0.00	0.00	0.00
22,100.00	90.24	359.62	12,162.56	10,342.82	-701.38	10,347.24	0.00	0.00	0.00
22,200.00	90.24	359.62	12,162.15	10,442.82	-702.04	10,447.24	0.00	0.00	0.00
22,300.00	90.24	359.62	12,161.74	10,542.81	-702.71	10,547.24	0.00	0.00	0.00
22,400.00	90.24	359.62	12,161.32	10,642.81	-703.37	10,647.24	0.00	0.00	0.00
22,500.00	90.24	359.62	12,160.91	10,742.81	-704.04	10,747.24	0.00	0.00	0.00
22,600.00	90.24	359.62	12,160.50	10,842.81	-704.70	10,847.24	0.00	0.00	0.00
22,700.00	90.24	359.62	12,160.09	10,942.80	-705.37	10,947.24	0.00	0.00	0.00
22,800.00	90.24	359.62	12,159.68	11,042.80	-706.03	11,047.24	0.00	0.00	0.00
22,900.00	90.24	359.62	12,159.27	11,142.80	-706.70	11,147.24	0.00	0.00	0.00
22,966.27	90.24	359.62	12,159.00	11,209.06	-707.14	11,213.50	0.00	0.00	0.00
TD at 22966.27									

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 323H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3745.50usft (Preliminary)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3745.50usft (Preliminary)
Site:	Wild Salsa 24-13	**North Reference:**	Grid
Well:	323H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 08-15-19		

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
BHL - Wild Salsa 24-1 - plan hits target center - Point	0.00	0.00	12,159.00	11,209.06	-707.14	477,969.05	759,912.45	32° 18' 43.296048 N	3° 37' 32.977020 W
LTP - Wild Salsa 24-1 - plan misses target center by 0.02usft at 22866.26usft MD (12159.41 TVD, 11109.06 N, -706.47 E) - Rectangle (sides W100.00 H10,362.51 D0.00)	-0.24	359.62	12,159.42	11,109.06	-706.45	477,869.05	759,913.13	32° 18' 42.306460 N	3° 37' 32.976769 W
FTP - Wild Salsa 24-1 - plan misses target center by 14.52usft at 12504.56usft MD (12201.95 TVD, 748.48 N, -622.76 E) - Point	0.00	0.00	12,203.00	746.78	-637.14	467,506.78	759,982.45	32° 16' 59.765232 N	3° 37' 32.965752 W
PP - Wild Salsa 24-13 - plan misses target center by 58.33usft at 12314.53usft MD (12166.01 TVD, 565.29 N, -594.73 E) - Point	0.00	0.00	12,203.00	546.79	-635.86	467,306.78	759,983.73	32° 16' 57.786132 N	3° 37' 32.966220 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.00	1,500.00	0.00	0.00	KOP, Begin 2.00°/100' Build
1,750.13	1,749.81	4.85	-9.77	Hold 5.00° Inc at 296.40° Azm
8,541.38	8,515.19	268.15	-540.23	Begin 2.00°/100' Drop
8,791.50	8,765.00	273.00	-550.00	Begin Vertical Hold
11,751.00	11,724.50	273.00	-550.00	KOP2, Begin 12.00°/100' Build
12,503.00	12,201.96	746.94	-622.52	LP, Hold 90.24° Inc, Begin 4.00°/100' Turn
12,710.98	12,201.10	954.09	-638.97	Hold 359.62° Azm
22,966.27	12,159.00	11,209.06	-707.14	TD at 22966.27

Titus Oil & Gas Production, LLC - Wild Salsa 24-13 Fed 323H

1. Geologic Formations

TVD of target	12,159' EOL	Pilot hole depth	NA
MD at TD:	22,966'	Deepest expected fresh water:	400'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1315	Water	
Top of Salt	1350	Salt	
Base of Salt	4817	Salt	
Lamar	5082	Salt Water	
Delaware	5097	Salt Water	
Bone Spring Lime	8862	Oil/Gas	
Leonard	9065	Oil/Gas	
1st Bone Spring Sand	10002	Oil/Gas	
2nd Bone Spring Sand	10622	Oil/Gas	
3rd Bone Spring Sand	11900	Target Oil/Gas	
Wolfcamp	12208	Not Penetrated	
X	X	Not Penetrated	
X	X	Not Penetrated	
X	X	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5”	0	1340	13.375”	54.5	J55	STC	1.84	1.25	7.04
12.25”	0	5110	9.625”	40	J55	LTC	0.95	0.84	2.54
8.75”	0	22,966	5.5”	17	P110	LTC	1.26	2.25	2.15
			BLM Minimum Safety Factor				1.125	1	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

Titus Oil & Gas Production, LLC - Wild Salsa 24-13 Fed 323H

	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.	N
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 3rd 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 2nd 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?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	610	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Inter.	970	12.7	2.0	9.6	16	Lead: 35:65:6 C Blend
	250	14.8	1.34	6.34	8	Tail: Class C
5.5 Prod	990	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	2880	14.4	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.

Casing String	TOC	% Excess
Surface	0’	50%
1st Intermediate	0’	50%
Production	4,610'	25% OH in Lateral (KOP to EOL) – 40% OH in Vertical

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
12-1/4”	13-5/8”	2M	Annular	x	2000 psi
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4”	13-5/8”	5M	Annular	x	50% testing pressure
			Blind Ram	x	5M
			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?
N	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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Saturated Brine	10 - 10.2	28-34	N/C
9-5/8" Int shoe	Lateral TD	Cut Brine	8.6 - 9.4	28-34	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	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5945 psi at 12159' TVD
Abnormal Temperature	NO 175 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?
N	Is casing pre-set?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

APD ID: 10400045840 **Submission Date:** 08/16/2019

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED **Well Number:** 323H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

06/25/2020

APD ID: 10400045840

Submission Date: 08/16/2019

Operator Name: TITUS OIL AND GAS PRODUCTION LLC

Well Name: WILD SALSA 24-13 FED

Well Number: 323H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001532

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

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

OCD – HOBBS
06/24/2020
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	17644	DIAMONDTAIL; BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
328507	WILD SALSA 24-13 FED	323H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373986	TITUS OIL & GAS PRODUCTION, LLC	3719'

[10] Surface Location

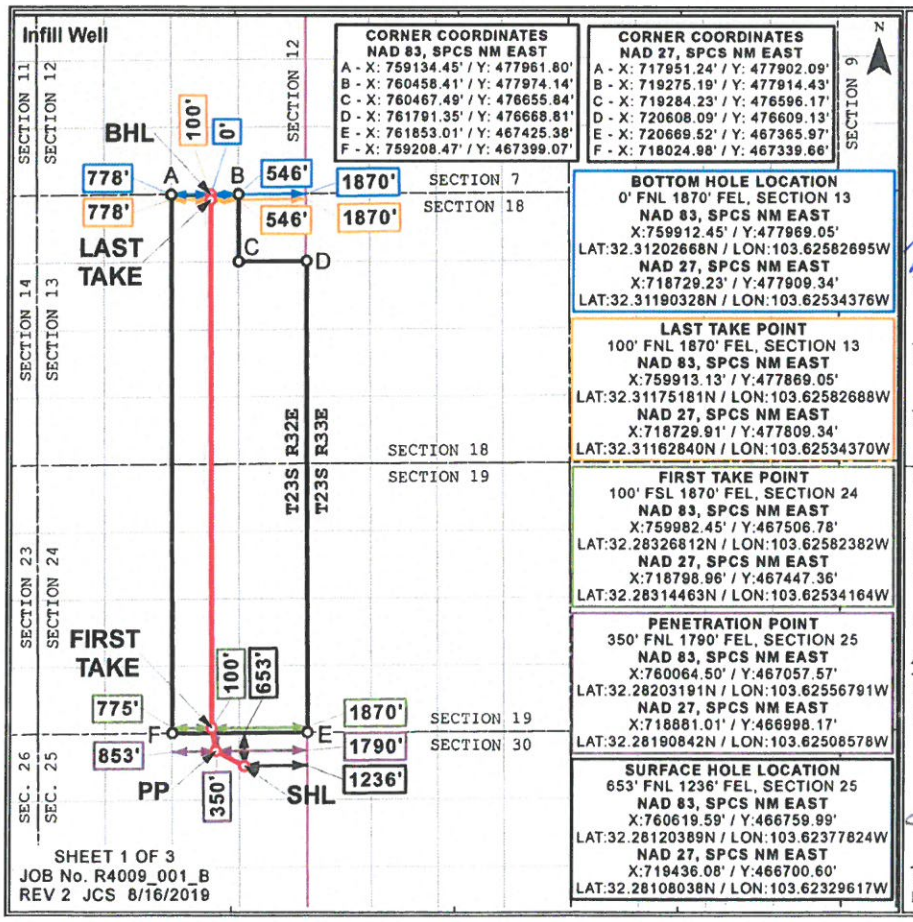
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	23S	32E		653	NORTH	1236	EAST	LEA

[11] 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
B	13	23S	32E		0	NORTH	1870	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
600.0			

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.



[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.

Marshall Hickey 8/16/2019
Signature Date

Marshall Hickey
Printed Name

mhickey@titusoil.com
E-mail Address

[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.

AUGUST 16, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

Certificate Number
DAVID W. MYERS 11403

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99996450 Convergence: 00°22'48.65002"

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original to Appropriate District Office

OCD – HOBBS
06/24/2020
RECEIVED

GAS CAPTURE PLAN

Date: 8/15/2019

☒ Original Operator & OGRID No.: 373986

☐ Amended - Reason for Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Wild Salsa 24-13 Fed 323H	30-025-47637	Sec 25, T23S, R32E	653' FNL & 1236' FEL			Wild Salsa CTB will be utilized
Wild Salsa 24-13 Fed 324H		Sec 25, T23S, R32E	653' FNL & 1186' FEL			Wild Salsa CTB will be utilized
Wild Salsa 24-13 Fed 404H		Sec 25, T23S, R32E	653' FNL & 1261' FEL			Wild Salsa CTB will be utilized
Wild Salsa 24-13 Fed 405H		Sec 25, T23S, R32E	653' FNL & 1211' FEL			Wild Salsa CTB will be utilized
Wild Salsa 24-13 Fed 406H		Sec 25, T23S, R32E	653' FNL & 1161' FEL			Wild Salsa CTB will be utilized

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility is dedicated to Lucid and is connected to a Lucid high pressure gathering system located in Lea County, New Mexico. Titus provides (periodically) to Lucid a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Titus and Lucid have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at a Lucid's Red Hills Plant located in Sec 13, T24S, R33E near Jal, NM. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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