Form 3160-3
(June 2015)

OCD – HOBBS
07/01/2020
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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.: NMNM108972

6. If Indian, Allotee or Tribe Name:

1a. Type of work: [✔] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [ ] Gas Well [✔] Other INJ-DIS

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.: MONSOON FEDERAL SWD [328506] 1

2. Name of Operator: PERMIAN OILFIELD PARTNERS LLC [328259]

9. API Well No.: 30-025-47362

3a. Address: 726 East Michigan Drive, Suite 206, Hobbs , NM 88241

3b. Phone No. *(include area code)*: (817) 600-8772

10. Field and Pool, or Exploratory: SWD/SWD; DEVONIAN-SILURIAN

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: SENE / 1700 FNL / 165 FEL / LAT 32.0895734 / LONG -103.6547982

At proposed prod. zone: SENE / 1700 FNL / 165 FEL / LAT 32.0895734 / LONG -103.6547982

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 34/T25S/R32E/NMP

14. Distance in miles and direction from nearest town or post office*: 28 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): 165 feet

16. No of acres in lease: 520

17. Spacing Unit dedicated to this well: 40.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1153 feet

19. Proposed Depth: 18522 feet / 18522 feet

20. BLM/BIA Bond No. in file: FED: NMB001780

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3361 feet

22. Approximate date work will start*: 06/01/2020

23. Estimated duration: 75 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)	GARY FISHER / Ph: (817) 600-8772	02/02/2020

Title: President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	06/25/2020

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.

APPROVED WITH CONDITIONS

KZ 07/01/2020

See BLM, SWD-2183 and NMOCD COA's

Approval Date: 06/25/2020

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**PERMIAN OILFIELD PARTNERS, LLC.**
WELL NAME & NO.:	**MONSOON FEDERAL SWD 1**
SURFACE HOLE FOOTAGE:	**1700'/N & 165'/E**
BOTTOM HOLE FOOTAGE:	**1700'/N & 165'/E**
LOCATION:	**Section 34, T.25 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	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☑ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **20** inch surface casing shall be set at approximately **1,017** 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 **13-3/8** inch intermediate casing which shall be set at approximately **4,650** 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.**

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

3. The minimum required fill of cement behind the **9-5/8** inch production casing is:

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

    a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

    b. Second stage above DV tool:

        - Cement to surface. If cement does not circulate see B.1.a, c-d above. Operator shall provide method of verification.

Production liner must be kept fluid filled to meet BLM minimum collapse requirement.

4. The minimum required fill of cement behind the **7-5/8** inch production liner is:

    - Cement should tie-back **100 feet** into the previous casing. 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 **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

D. SPECIAL REQUIREMENT (S)

WELL COMPLETION

The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated insitu water salinity based on open-hole logs. If hydrocarbon shows occur while drilling, the operator shall notify the BLM.

The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open hole logs from TD to top of Devonian

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. **Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.**
2. **Restrict the injection fluid to the approved formation.**
3. **If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval**

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

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.

JJP06162020

Please See Attached Intermediate & Production Casing Upgrades per Operator

[EXTERNAL] POP - Monsoon Federal SWD #1

spuryear@popmidstream.com <spuryear@popmidstream.com>
Tue 6/16/2020 11:41 AM

To: Porter, Jeromy J <jjporter@blm.gov>
Cc: 'Tyler Ledlow (POP)' <tledlow@popmidstream.com>; Gary E Fisher <GFISHER@POPMIDSTREAM.COM>

Jeromy,

Thanks for the call today regarding the Monsoon Federal SWD #1 COA's. As discussed, we intend to modify the submitted casing design to the following. We will review the final COA's & ensure the casing design matches what is spec'd.

- 13.375" 61# J55 casing will be upgraded to 13.375" 68# J55 BTC casing.
- 9.625" 40# HCL80 casing will be upgraded to 9.625" 40# HCP110 BTC casing

Please let me know if anything else need attention and I will get it corrected immediately. We are really under the gun on this project as we have a "first injection" date of August 31st, 2020.

Thank you for your help resolving these issues and I look forward to working with you on future projects.

Sean Puryear

Chief Executive Officer
Permian Oilfield Partners, LLC
PO Box 3329
Hobbs, NM 88241
(817) 600-8772
spuryear@popmidstream.com

[../../../../OneDrive/Desktop/POP%20Logo.jpg]

Approval Date: 06/25/2020

AFMSS

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

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: Gary Fisher **Signed on:** 08/20/2019

Title: President

Street Address: PO Box 3329

City: Hobbs **State:** NM **Zip:** 88241

Phone: (817)606-7630

Email address: gfisher@popmidstream.com

Field Representative

Representative Name: Sean Puryear

Street Address: 726 E Michigan Drive Suite 206

City: Hobbs **State:** NM **Zip:** 88240

Phone: (817)600-8772

Email address: spuryear@popmidstream.com

APD ID: 10400052085 **Submission Date:** 02/02/2020

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400052085 **Tie to previous NOS?** Y **Submission Date:** 02/02/2020

BLM Office: CARLSBAD **User:** Gary Fisher **Title:** President

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

Lease number: NMNM108972 **Lease Acres:** 520

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:** PERMIAN OILFIELD PARTNERS LLC

Operator letter of designation:

Operator Info

Operator Organization Name: PERMIAN OILFIELD PARTNERS LLC

Operator Address: 726 East Michigan Drive, Suite 206

Zip: 88241

Operator PO Box:

Operator City: Hobbs **State:** NM

Operator Phone: (817)600-8772

Operator Internet Address:

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: MONSOON FEDERAL SWD **Well Number:** 1 **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** SWD **Pool Name:** SWD; DEVONIAN-SILURIAN

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

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Is the proposed well in an area containing other mineral resources? USEABLE WATER,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: SINGLE WELL **Multiple Well Pad Name:** **Number:**

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

Well Work Type: Drill

Well Type: INJECTION - DISPOSAL

Describe Well Type:

Well sub-Type: INJECTION - DISPOSAL

Describe sub-type:

Distance to town: 28 Miles **Distance to nearest well:** 1153 FT **Distance to lease line:** 165 FT

Reservoir well spacing assigned acres Measurement: 40 Acres

Well plat: Monsoon_Federal_SWD_1_C102_20200507140826.pdf

Well work start Date: 06/01/2020 **Duration:** 75 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	1700	FNL	165	FEL	25S	32E	34	Aliquot SENE	32.0895734	-103.6547982	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108972	3361	0	0	N
BHL Leg #1	1700	FNL	165	FEL	25S	32E	34	Aliquot SENE	32.0895734	-103.6547982	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108972	-15161	18522	18522	N

APD ID: 10400052085 **Submission Date:** 02/02/2020

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **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
603869	QUATERNARY	3361	30	30	MUDSTONE, SANDSTONE	USEABLE WATER	N
603870	RUSTLER	2369	992	992	ANHYDRITE	NONE	N
603871	SALADO	2039	1322	1322	ANHYDRITE, SALT	NONE	N
603872	LAMAR	-1449	4810	4810	LIMESTONE	NONE	N
603873	BELL CANYON	-1472	4833	4833	SANDSTONE	OIL	N
603874	CHERRY CANYON	-2462	5823	5823	SANDSTONE	OIL	N
603875	BRUSHY CANYON	-4111	7472	7472	SANDSTONE	OIL	N
603876	BONE SPRING LIME	-5478	8839	8839	LIMESTONE	NONE	N
603877	BONE SPRING 1ST	-6538	9899	9899	SANDSTONE	NATURAL GAS, OIL	Y
603878	BONE SPRING 2ND	-7175	10536	10536	SANDSTONE	NATURAL GAS, OIL	Y
603879	BONE SPRING 3RD	-8235	11596	11596	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	Y
603880	WOLFCAMP	-8588	11949	11949	LIMESTONE, SHALE	NATURAL GAS, OIL	Y
603881	CANYON	-9602	12963	12963	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS	N
603882	STRAWN	-10497	13858	13858	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
603884	ATOKA	-10780	14141	14141	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
603883	MORROW	-11534	14895	14895	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
603885	MISSISSIPPIAN	-13160	16521	16521	LIMESTONE	NONE	N
603886	WOODFORD	-13513	16874	16874	SHALE	NONE	N

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
603887	DEVONIAN	-13702	17063	17063	DOLOMITE, LIMESTONE	NONE	Y
603888	FUSSELMAN	-14833	18194	18194	DOLOMITE	NONE	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 18922

Equipment: Annular, Pipe Ram, Pipe Ram, Blind Ram

Requesting Variance? YES

Variance request: A variance is requested for the use of a diverter while drilling the 17.5" hole. A variance is requested for the use of a 5000 psi annular BOP with the 10,000 psi BOP stack. A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. Anchors are not required by the manufacturer. See attached schematics
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 5M Annular BOP will be tested to 100% working pressure (5000 psi). 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 of 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.

Choke Diagram Attachment:

Flex_Line_Specs_20190822110051.pdf

10M_BOPE___Closed_Loop_Equipment_Schematic_20190821154038.pdf

BOP Diagram Attachment:

20in_Diverter___Closed_Loop_Equipment_Schematic_20190822110953.pdf

10M_BOP_Diagram_with_Valve_Sizes_20191125175300.pdf

20_in_Diverter_Variance_Request_20191219154921.pdf

10M_Annular_BOP_Variance_Request_Detail_20200202091705.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	26	20.0	NEW	API	N	0	1017	0	1017	3361	2344	1017	H-40	94	ST&C	1.13	1.53	DRY	6.078	DRY	11.26

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

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
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	1932	0	1932		1429	1932	J-55	54.5	ST&C	1.125	2.73	DRY	1.82	DRY	3.021
3	INTERMEDIATE	17.5	13.375	NEW	API	N	1932	4835	1932	4835	-1932	-1474	2903	J-55	61	ST&C	1.225	3.09	DRY	3.36	DRY	5.432
4	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5282	0	5282	0	-1921	5282	L-80	40	BUTT	1.125	5.75	DRY	1.973	DRY	1.908
5	INTERMEDIATE	12.25	9.625	NEW	API	N	5282	11999	5282	11999	-5282	-8638	6717	HCL-80	40	BUTT	1.356	5.75	DRY	3.878	DRY	3.409
6	LINER	8.75	7.625	NEW	NON API	N	11799	17098	11799	17098	-8438	-13737	5299	HCL-80	39	FJ	1.834	9.18	DRY	2.579	DRY	4.33
7	OPEN HOLE	6.5	9.625				17098	18522					1424	HCL-80		BUTT						

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Cement_Proposal_20200202084926.pdf

Monsoon_Federal_SWD_1___Surface_Casing_Assumptions_20200202085144.pdf

Monsoon_Federal_SWD_1___Casing_Design_for_Permit_20200202085757.pdf

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Int_1_Casing_Assumptions_20200202085330.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Int_1_Casing_Assumptions_20200202085252.pdf

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Int_2_Casing_Assumptions_20200202085436.pdf

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Casing Attachments

Casing ID: 5 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Int_2_Casing_Assumptions_20200202085514.pdf

Casing ID: 6 **String Type:** LINER

Inspection Document:

Spec Document:

Proprietary_Connections_Performance_Data_7.6250_39.0000_0.5000__L80_HC_20191219163514.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Monsoon_Federal_SWD_1___Int_3_Liner_Casing_Assumptions_20200202085646.pdf

Casing ID: 7 **String Type:** OPEN HOLE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Section 4 - Cement

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	717	1222	1.77	13.5	2159	100	Class C	Salt, Gel, Defoamer, LCM
SURFACE	Tail		717	1017	744	1.34	14.8	993	50	Class C	Defoamer
INTERMEDIATE	Lead		0	3835	2249	1.77	13.5	3973	50	Class C	Salt, Gel, Defoamer & LCM
INTERMEDIATE	Tail		3835	4835	814	1.33	14.8	1081	50	Class C	Retarder
INTERMEDIATE	Lead		0	3835	2249	1.77	13.5	3973	50	Class C	Salt, Gel, Defoamer & LCM
INTERMEDIATE	Tail		3835	4835	814	1.33	14.8	1081	50	Class C	Retarder
INTERMEDIATE	Lead	4935	0	3935	593	2.41	11.5	1428	50	Lite Class C (50:50:10)	Salt, Gel, Defoamer & LCM
INTERMEDIATE	Tail		3935	4935	282	1.33	14.8	374	50	Class C	Retarder
INTERMEDIATE	Lead	4935	4935	10999	1496	2.41	11.5	3609	50	Lite Class C (50:50:10)	Salt, Defoamer, Gel, Dispersant
INTERMEDIATE	Tail		10999	11999	282	1.18	15.6	333	50	Class H	Defoamer, Retarder, LCM
LINER	Lead		11799	17098	517	1.57	15.6	812	50	Class H	Salt, Defoamer, Retarder, LCM, Dispersant

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: Equipment for the circulating system will be in compliance with Onshore Order #2

Describe the mud monitoring system utilized: Visual Mud Monitoring Equipment, Pit Volume Totalizer, Stroke Counter, Flow Sensor in compliance with Onshore Order #2

Circulating Medium Table

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

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	1017	SPUD MUD	8.3	8.7							
4835	11999	OTHER : Cut Brine	9	10							
11999	17098	OTHER : Weighted Brine	11	12							
17098	18522	OTHER : Cut Brine	8.3	9							
1017	4835	OTHER : Saturated Brine	9.8	10.2							

Section 6 - Test, Logging, Coring

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

Will Run GR/CBL From TD (18522') to Surface

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

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,

Coring operation description for the well:

none

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8668 **Anticipated Surface Pressure:** 4593

Anticipated Bottom Hole Temperature(F): 290

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:

MONSOON_FEDERAL_SWD_1_H2S_OPERATION_PLAN_20191219170134.pdf

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

MONSOON_FEDERAL_SWD_1_H2S_LOCATION_DIAGRAM_20191219170826.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Other proposed operations facets description:

Other proposed operations facets attachment:

Monsoon_Federal_SWD_1___Cement_Proposal_20200202090043.pdf

Other Variance attachment:

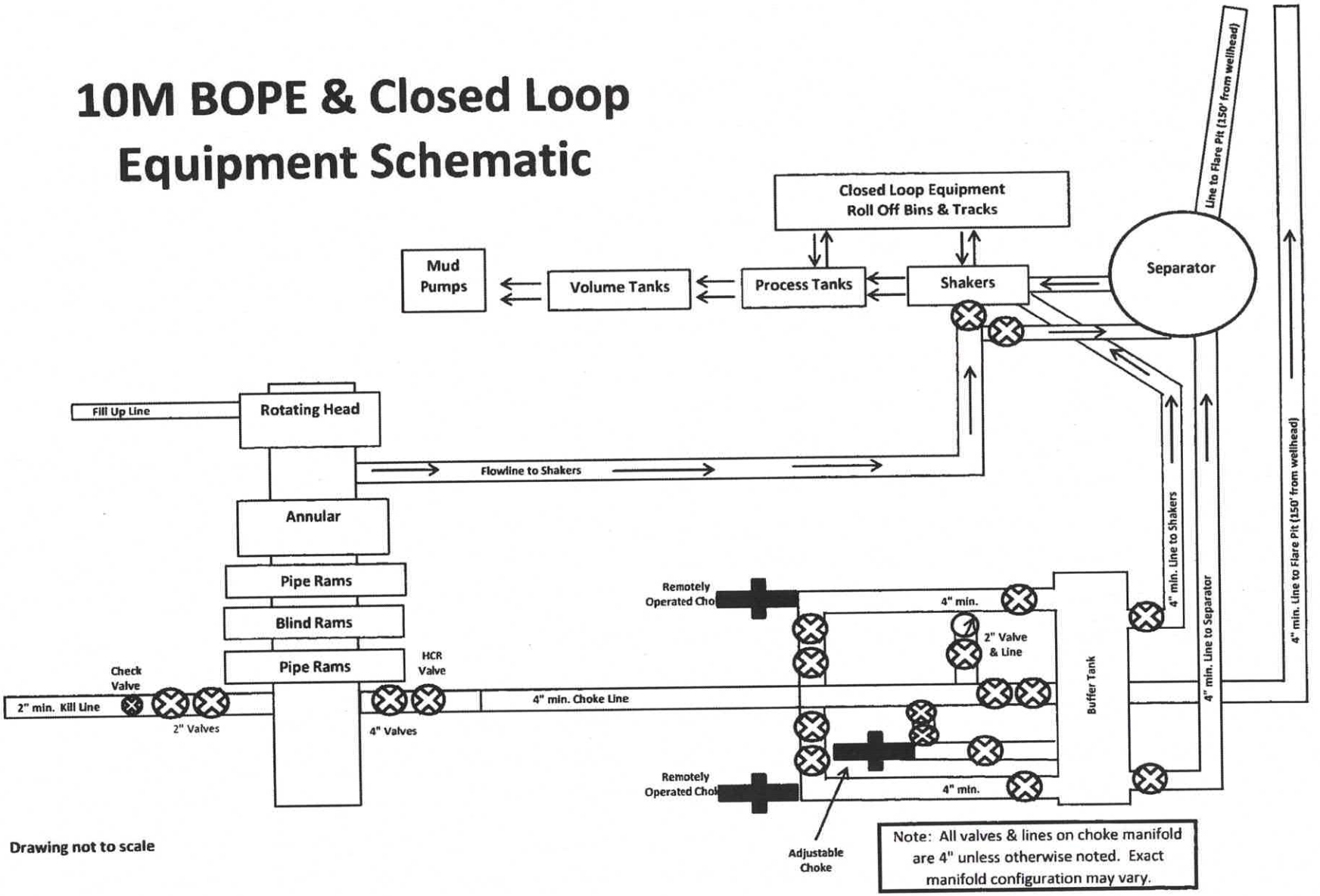
Continental

ContiTech

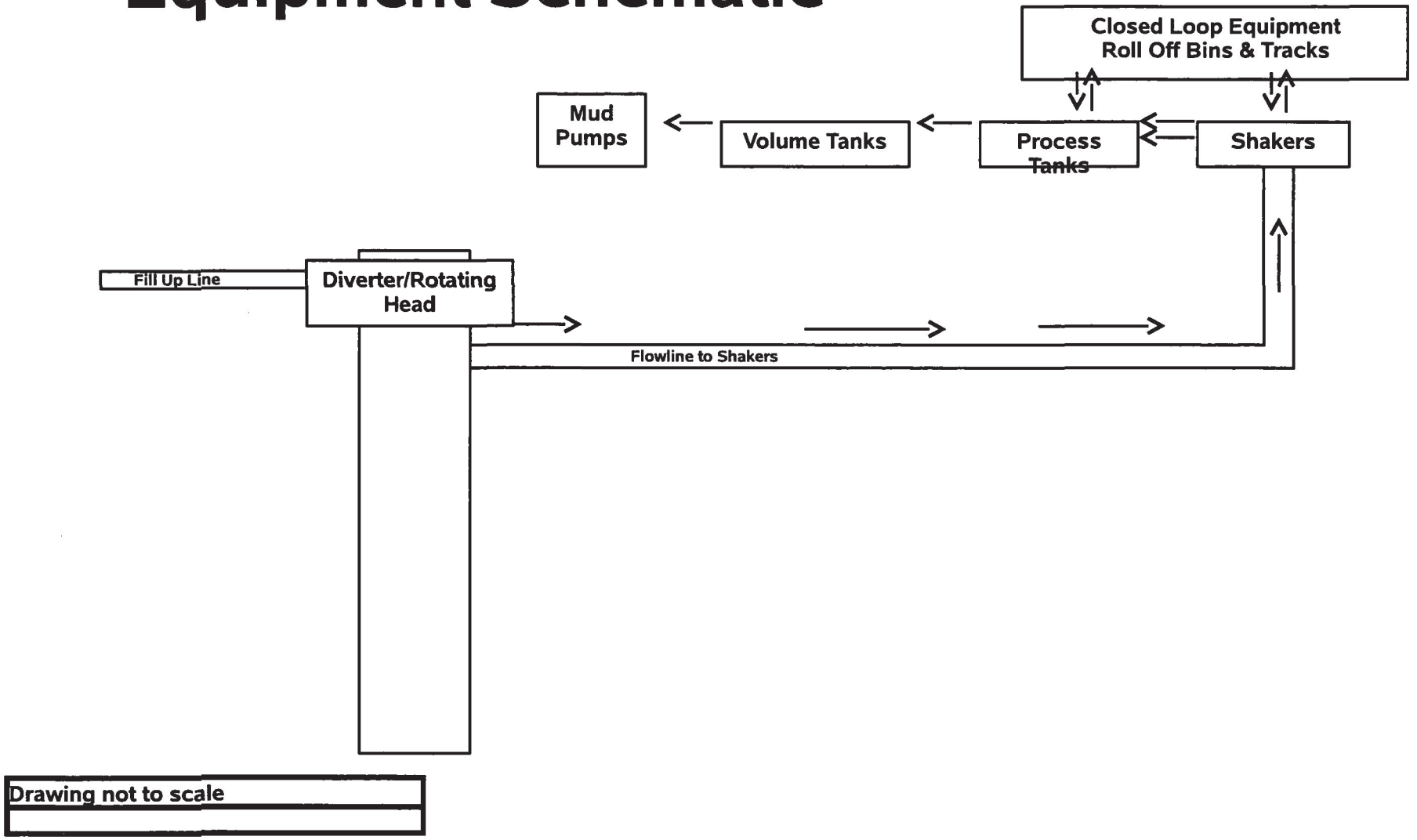
Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

10M BOPE & Closed Loop Equipment Schematic

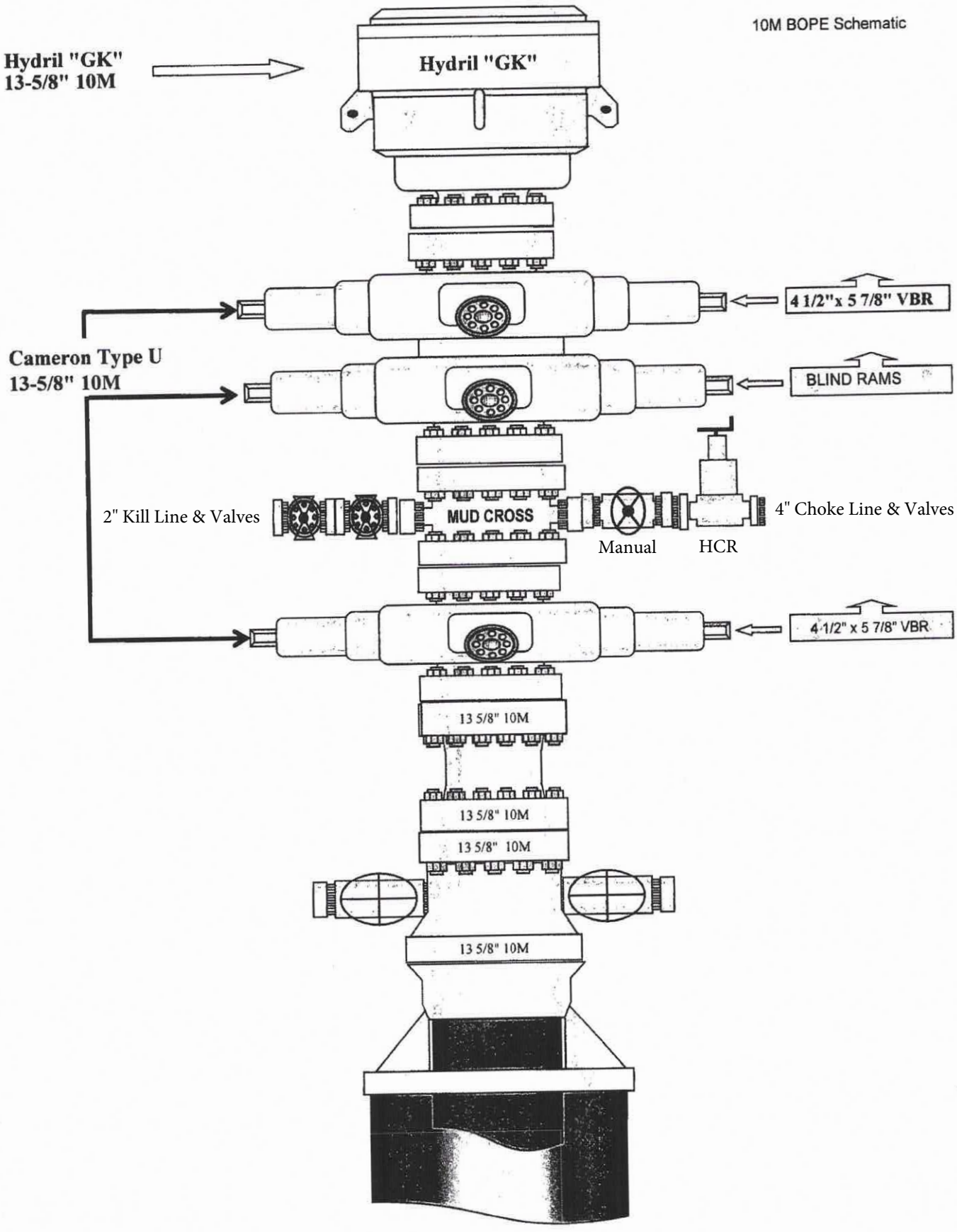


20" Diverter & Closed Loop Equipment Schematic



Drawing not to scale

10M BOPE Schematic



Monsoon Federal SWD #1

20" Diverter Variance Request

Permian Oilfield Partners requests a variance for the use of a 20" weld-on diverter to drill the 17 ½" hole to a depth of **4835'.** In this area, there has not been flammable gas encountered through this interval. Air pockets are common in the salt section and the diverter allows them to blow down safely to the pits without causing damage to the surface casing or cement.

10M Annular BOP Variance Request Detail

Permian Oilfield Partners request a variance to use a 5M annular BOP with a 10M BOP triple ram stack. The below listed compatibility tables paired with the general well control plans show how the 5M annular BOP will be isolated from pressure that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5M annular BOP).

The below listed Component & BOPE Compatibility Tables describe the tubulars, components & compatible preventers to be used. **This table, combined with the use of drilling fluid illustrates that at least two barriers to flow will be maintained at all times.**

12 ¼" INTERMEDIATE #2 HOLE SECTION 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	6.500" - 8.000"	Annular	5M	-	-
DC's	6.500" - 8.000"	Annular	5M	-	-
Drilling Motor	6.500" - 9.625"	Annular	5M	-	-
Casing	9.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

*VBR - Variable Bore Ram

8 ¾" INTERMEDIATE #3 HOLE SECTION 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
DC's	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Drilling Motor	4.750" - 6.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Casing	7.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

*VBR - Variable Bore Ram

6 ½" INTERMEDIATE #4 HOLE SECTION (Production) 10M PSI REQUIREMENT					
COMPONENT	**OD (in)**	**PRIMARY PREVENTER**	**RWP**	**ALTERNATE PREVENTER(S)**	**RWP**
Drillpipe	3.500" - 4.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
HWDP	3.500" - 4.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Jars	4.750" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
DC's	4.750" - 5.500"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Drilling Motor	4.750"	Annular	5M	Upper or Lower VBR (3.5" - 5.5")	10M
Open-Hole	-	Blind Rams	10M	-	-
Casing	NONE	-	-	-	-

*VBR - Variable Bore Ram

Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, while pipe is not in the hole and moving the BHA through the BOP's. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the Permian Oilfield Partners drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore Oil & Gas Order No. 2 with the exception of the **5M annular which will be tested to 100% of its RWP.** *Note: HCR valve and choke manifold will remain closed during all normal operations. Manipulation of such equipment will occur as part of the general well control proceedures.

General Well Control Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP&SICP
    b. Pit gain
    c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:

a. SIDPP&SICP
b. Pit gain
c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP&SICP
    b. Pit gain
    c. Time

8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time

6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:

    a. Perform flow check. If flowing, continue to (b).

b. Sound alarm (alert crew)
c. Stab full-opening safety valve and close
d. Space out drill string with tool joint just beneath the upper variable bore rams
e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
f. Confirm shut-in
g. Notify toolpusher/company representative
h. Read and record the following:
    i. SIDPP & SICP
    ii. Pit gain
    iii. Time
i. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:

a. Sound alarm (alert crew)
b. Stab crossover and full-opening safety valve and close
c. Space out drill string with upset just beneath the upper variable bore rams
d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
e. Confirm shut-in
f. Notify toolpusher/company representative
g. Read and record the following:
    i. SIDPP & SICP
    ii. Pit gain
    iii. Time
h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:

a. Sound alarm (alert crew)
b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
c. If impossible to pull string clear of the stack:
d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
e. Space out drill string with tooljoint just beneath the upper variable bore ram
f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
g. Confirm shut-in
h. Notify toolpusher/company representative
i. Read and record the following:
    i. SIDPP & SICP

ii. Pit gain
iii. Time

j. Regroup and identify forward plan

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 20.000 (in) | Surface

Hobbs | Dec 11,2019

PREPARED FOR	
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Job at a Glance

20" SURFACE @ 1,017'

Job Code	Surface
Depth (TVD) (ft)	1,017.000
Depth (MD) (ft)	1,017.000
Hole Size (in)	26.000
Casing Size (in)/Weight (lb/ft)	20.000 / 94.000
Pump Via	Casing
Total Mix Water Required (gals)	15,855.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	60.00	8.3400	
LEAD SLURRY : Class C Lead Slurry	384.40	13.5000	1.7669
TAIL SLURRY : Class C Tail Slurry	176.80	14.8000	1.3352
DISPLACEMENT : Displacement	345.30	8.3400	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Open Hole		26.000		1,017.000	1,017.000	100.000	
Casing	20.000	19.124	94.000	1,017.000	1,017.000		H-40

PARAMETERS

Landing Collar Depth (ft)	972.00
Mud Density (ppg)	8.80
Mud Type	Fresh Water
Estimated Static Temp (°F)	88.64
Estimated Circulating Temp (°F)	80.17

STAGES

STAGE #	MD

VOLUME CALCULATIONS

1017.000 ft x 1.50530 cf/ft with 100.00 % excess = 3061.780 cf
45.000 ft x 1.99468 cf/ft with 0 % excess = 89.761 cf

TOTAL SLURRY VOLUME = 3152 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		0.00				60.00
LEAD SLURRY : Class C Lead Slurry	13.5000	1.7669	0.00	717.00	2,159.00	1,222	384.40
CEMENT, CLASS C, HSR, 100.0000 PCT							
IntegraSeal CELLO, 0.1300 LBS/SK							
IntegraSeal KOL, 2.5000 LBS/SK							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
SALT,SODIUM CHLORIDE, A-5, 3.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.2000 BWOB							
RETARDER, R-3, 0.4000 BWOB							
EXTENDER, BENTONITE, 3.0000 BWOB							
TAIL SLURRY : Class C Tail Slurry	14.8000	1.3352	717.00	300.00	993.00	744	176.80
CEMENT, CLASS C, HSR, 100.0000 PCT							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS, 1.0000 BWOB							
DISPLACEMENT : Displacement	8.3400		0.00		0.00		345.30

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : Class C Lead Slurry	9.12	9.12				
TAIL SLURRY : Class C Tail Slurry	6.33	6.34				

Notes

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 13.375 (in) | Intermediate

Hobbs | Dec 11,2019

PREPARED FOR	
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Job at a Glance

13 3/8" 1ST INTERMEDIATE @ 4,835'

Job Code	Intermediate
Depth (TVD) (ft)	4,835.000
Depth (MD) (ft)	4,835.000
Hole Size (in)	17.500
Casing Size (in)/Weight (lb/ft)	13.375 / 54.500
Pump Via	Casing
Total Mix Water Required (gals)	25,618.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	30.00	8.3400	
LEAD SLURRY : lead	707.50	13.5000	1.7667
TAIL SLURRY : tail	192.50	14.8000	1.3283
DISPLACEMENT : 10.0 ppg (FW/CB)	740.50	10.0000	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	20.000	19.124	94.000	1,017.000	1,017.000		H-40
Open Hole		17.500		4,835.000	4,835.000	50.000	
Casing	13.375	12.615	54.500	4,835.000	4,835.000		J-55

PARAMETERS

Landing Collar Depth (ft)	4,790.00
Mud Density (ppg)	10.20
Mud Type	Brine Based
Estimated Static Temp (°F)	121.10
Estimated Circulating Temp (°F)	104.35

STAGES

STAGE #	MD

VOLUME CALCULATIONS

3818.000 ft x 0.69462 cf/ft with 50.00 % excess = 3978.089 cf
1017.000 ft x 1.01901 cf/ft with 0 % excess = 1036.333 cf
45.000 ft x 0.86794 cf/ft with 0 % excess = 39.057 cf

TOTAL SLURRY VOLUME = 5054 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		0.00				30.00
LEAD SLURRY : lead	13.5000	1.7667	0.00	3,835.00	3,973.00	2,249	707.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
IntegraSeal CELLO, 0.1300 LBS/SK							
IntegraSeal KOL, 2.5000 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 3.0000 BWOW							
RETARDER, R-3, 0.6500 BWOB							
EXTENDER, BENTONITE, 3.0000 BWOB							
TAIL SLURRY : tail	14.8000	1.3283	3,835.00	1,000.00	1,081.00	814	192.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
RETARDER, R-3, 0.5000 BWOB							
DISPLACEMENT : 10.0 ppg (FW/CB)	10.0000		0.00		0.00		740.50

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : lead	9.11	9.11				
TAIL SLURRY : tail	6.30	6.30				

Notes

For this string, lead and tail slurries needs to reach 500 psi CS in 8 hrs or less

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 9.625 (in) | Two-Stage/Multi-Stage Cement

Hobbs | Dec 11,2019

PREPARED FOR	
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Job at a Glance

9 5/8" 2 STAGE 2ND INTERMEDIATE @ 11,999'

Job Code	Two-Stage/Multi-Stage Cement
Depth (TVD) (ft)	11,999.000
Depth (MD) (ft)	11,999.000
Hole Size (in)	12.250
Casing Size (in)/Weight (lb/ft)	9.625 / 40.000
Pump Via	Casing
Total Mix Water Required (gals)	32,993.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	40.00	8.3400	
LEAD SLURRY : 1st Stage Lead Slurry	642.60	11.5000	2.4120
TAIL SLURRY : 1st Stage Tail	59.20	15.6000	1.1824
DISPLACEMENT : 1st Stage Displacement	902.00	10.0000	
SPACER : Fresh Water	40.00	8.3400	
LEAD SLURRY : 2nd Stage Lead	254.20	11.5000	2.4083
TAIL SLURRY : 2nd Stage Tail	66.50	14.8000	1.3273
DISPLACEMENT : Stage 2 Displacement	367.00	10.0000	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	13.375	12.615	54.500	4,835.000	4,835.000	0.000	J-55
Open Hole		12.250		4,935.000	4,935.000	50.000	
Open Hole		12.250		10,999.000	10,999.000	90.000	
Open Hole		12.250		11,999.000	11,999.000	0.000	
Casing	9.625	8.835	40.000	11,999.000	11,999.000		L-80

PARAMETERS

Landing Collar Depth (ft)	11,954.00
Mud Density (ppg)	9.50
Mud Type	Brine Based
Estimated Static Temp (°F)	199.99
Estimated Circulating Temp (°F)	156.99

STAGES

STAGE #	MD
2	4,935.00
1	11,999.00

VOLUME CALCULATIONS

1000.000 ft	x	0.31318 cf/ft	with	0.00 % excess	=	313.180 cf
6064.000 ft	x	0.31318 cf/ft	with	90.00 % excess	=	3608.335 cf
100.000 ft	x	0.31318 cf/ft	with	50.00 % excess	=	46.977 cf
4835.000 ft	x	0.36268 cf/ft	with	0.00 % excess	=	1753.558 cf
45.000 ft	x	0.42572 cf/ft	with	0 % excess	=	19.157 cf

TOTAL SLURRY VOLUME = 5742 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		4,303.00				40.00
LEAD SLURRY : 1st Stage Lead Slurry	11.5000	2.4120	4,935.00	6,064.00	3,609.00	1,496	642.60
IntegraCem POZ+, 50.0000 PCT							
CEMENT, CLASS C, HSR, 50.0000 PCT							
IntegraSeal CELLO, 0.2500 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 5.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.1000 BWOB							
FLUID LOSS, FL-52, 0.2000 BWOB							
RETARDER, R-21, 0.4500 BWOB							
EXTENDER, BENTONITE, 10.0000 BWOB							
TAIL SLURRY : 1st Stage Tail	15.6000	1.1824	10,999.00	1,000.00	333.00	282	59.20
CEMENT, CLASS H, HSR, 100.0000 PCT							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
RETARDER, R-21, 0.2500 BWOB							
FLUID LOSS, FL-25, 0.4000 BWOB							
DISPLACEMENT : 1st Stage Displacement	10.0000		0.00		0.00		902.00
SPACER : Fresh Water	8.3400		0.00				40.00
LEAD SLURRY : 2nd Stage Lead	11.5000	2.4083	0.00	3,935.00	1,428.00	593	254.20
IntegraCem POZ+, 50.0000 PCT							
CEMENT, CLASS C, HSR, 50.0000 PCT							
IntegraSeal CELLO, 0.2500 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 5.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.1000 BWOB							
FLUID LOSS, FL-52, 0.2000 BWOB							
EXTENDER, BENTONITE, 10.0000 BWOB							
TAIL SLURRY : 2nd Stage Tail	14.8000	1.3273	3,935.00	1,000.00	374.00	282	66.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
RETARDER, R-3, 0.3000 BWOB							
DISPLACEMENT : Stage 2 Displacement	10.0000			0.00	0.00	0	367.00

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : 1st Stage Lead Slurry	14.24	14.24				
TAIL SLURRY : 1st Stage Tail	5.19	5.20				
LEAD SLURRY : 2nd Stage Lead	14.24	14.24				
TAIL SLURRY : 2nd Stage Tail	6.31	6.31				

Notes

BJ Cementing Services | Quotation

Permian Oilfield Partners LLC | Monsoon Federal SWD 1 |

TBD | 7.625 (in) | Liner

Hobbs | Feb 01,2020

PREPARED FOR	
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Job at a Glance

7 5/8" LINER @ 17,098'

Job Code	Liner
Depth (TVD) (ft)	17,098.000
Depth (MD) (ft)	17,098.000
Hole Size (in)	8.750
Casing Size (in)/Weight (lb/ft)	
Pump Via	Drill Pipe
Total Mix Water Required (gals)	3,330.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : IntegraGuard ULTRA HV	40.00	15.0000	
CEMENT SLURRY : 15.6 ppg Class 'H'	144.60	15.6000	1.5713
DISPLACEMENT : Displacement	299.70	8.3400	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	9.625	8.835	40.000	11,999.000	11,999.000		L-80
Open Hole		8.750		17,098.000	17,098.000	50.000	
Liner	7.625	6.625	39.000	17,098.000	17,098.000		L-80
Drill Pipe	3.500	2.602	15.500	11,799.000	11,799.000		

PARAMETERS

Landing Collar Depth (ft)	17,008.00
Mud Density (ppg)	14.00
Mud Type	Water Based
Estimated Static Temp (°F)	285.18
Estimated Circulating Temp (°F)	234.37

STAGES

STAGE #	MD

VOLUME CALCULATIONS

5099.000 ft x 0.10047 cf/ft with 50.00 % excess = 768.445 cf
200.000 ft x 0.10863 cf/ft with 0 % excess = 21.726 cf
90.000 ft x 0.23938 cf/ft with 0 % excess = 21.544 cf

TOTAL SLURRY VOLUME = 812 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : IntegraGuard ULTRA HV	15.0000		9,732.00				40.00
IntegraGuard ULTRA HV, 100.0000 PCT							
ANTI SETTLING, ASA-301, 1.0000 PPB							
WEIGHTING ADDITIVE, BARITE, 394.0000 PPB							
FOAM PREVENTER, FP-6L, 0.1000 GPB							
SPACER SURFACTANT, S-5, 2.0000 GPB							
CEMENT SLURRY : 15.6 ppg Class 'H'	15.6000	1.5713	11,799.00	5,299.00	812.00	517	144.60
CEMENT, CLASS H, HSR, 100.0000 PCT							
ANTI STATIC ADDITIVE, STATIC FREE, 0.0050 BWOB							
Cement Additive, Sodium Metasilicate A-2, 0.2000 BWOB							
ANTI SETTLING, ASA-301, 0.4000 BWOB							
RETARDER, R-21, 0.5000 BWOB							
DISPERSANT, CD-32, 0.5000 BWOB							
BONDING AGENT, BA-10A, 0.5000 BWOB							
FLUID LOSS, FL-66, 0.8000 BWOB							
SAND, S-8C, SILICA, 100 MESH, 35.0000 BWOB							
DISPLACEMENT : Displacement	8.3400		0.00	0.00	0.00		299.70

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
CEMENT SLURRY : 15.6 ppg Class 'H'	6.44	6.44				

Notes

Surface Casing

General Dimensions & Capacities						
Bit Size	Verify Size	**Max Bit Size:**	**26** "	**PASS**	**26**	"
Casing Size	Verify Size	**Max Casing Size:**	**20** "	**PASS**	**20**	"
Setting Depth	Casing Design Type	**(Conventional)**			**1017**	'
Mud Weight	From Mud Program Sheet				**8.7**	ppg
Mud Weight	Pressure Applied on Casing				**460**	psi
Length	Conductor				**80**	'
Conductor Setting Depth	Conductor Setting Depth				**80**	'
Annular Capacity (Per ft)	Surface Casing to Conductor				**2.094**	ft³/ft
Annular Capacity	Surface Casing to Conductor				**167.55**	ft³
Annular Capacity	Intermediate 1 Casing to All Surface Casing				**168**	ft³
Int. 1 Csg. length Below Conductor	Surface Casing Shoe to Conductor Length (Open Hole)				**937**	'
Annular Capacity (Per ft)	Surface Casing Shoe to Conductor (Open Hole)				**1.51**	ft³/ft
Annular Capacity	Surface Casing Shoe to Conductor (Open Hole)				**1411**	ft³
Total Annular Capacity	Surface Casing to Open Hole & Surface Casing to Conductor				**1578**	ft³
ECP/DV Tool Present?	**NO**					

Cement Program		
Cement from Shoe to Surface		
Cmt Sks	Lead	**328** sks
	Tail	**744** sks
Cmt Yield	Lead	**1.77** ft³/sk
	Tail	**1.34** ft³/sk
Cmt ft³	Lead	**581** ft³
	Tail	**997** ft³
Cmt Weight	Lead	**13.5** ppg
	Tail	**14.8** ppg
Cmt Height	Lead	**355** '
	Tail	**662** '
Cmt Applied Wt.	Lead (Wet) -	**249** psi
	Tail (Wet)	**510** psi
	Total (Wet)	**759** psi
Constant	**0.052**	

Casing Design Safety Factors						
Surface Casing	Collapse	**BLM Minimum Safety Factors**			**Fully Evacuated - (100% Free Gas)**	**1.125**
Surface Casing	Burst	**(Applied or Hydrostatic)**		**1.0**		**1.0**
Surface Casing	Tension (Connection)	**Dry:**	**1.6**	**Wet:** **1.8**	**100%**	**1.6**
Surface Casing	Tension (Body)	**Dry:**	**1.6**	**Wet:** **1.8**		**1.6**

First Casing - Select Size & Specs		
First Casing	Type	Casing
First Casing	Size	**20.000** "
First Casing	Weight	**94** #
First Casing	ID	**19.124** "
First Casing	Drift	**18.936** "
First Casing	Connection	**STC**
First Casing	Grade	**H-40**
First Casing	Collapse	**520** psi
First Casing	Joint Yield	**581** klbs
First Casing	Body Yield	**1077** klbs
First Casing	Joint Burst	**1530** psi
First Casing	Tube Burst	**1530** psi
First Casing	**Max Running Depth Collapse**	**1022** '

Second Casing - (None)		
Second Casing	Type	**None**
Second Casing	Size	"
Second Casing	Weight	**106.5** #
Second Casing	ID	"
Second Casing	Drift	"
Second Casing	Connection	**STC**
Second Casing	Grade	**J-55**
Second Casing	Collapse	psi
Second Casing	Joint Yield	klbs
Second Casing	Body Yield	klbs
Second Casing	Joint Burst	psi
Second Casing	Tube Burst	psi
Second Casing	**Max Running Depth Collapse**	'

Third Casing - (None)		
Third Casing	Type	**None**
Third Casing	Size	"
Third Casing	Weight	**61** #
Third Casing	ID	"
Third Casing	Drift	"
Third Casing	Connection	**STC**
Third Casing	Grade	**J-55**
Third Casing	Collapse	psi
Third Casing	Joint Yield	klbs
Third Casing	Body Yield	klbs
Third Casing	Joint Burst	psi
Third Casing	Tube Burst	psi
Third Casing	**Max Running Depth Collapse**	'

Fourth Casing - (None)		
Fourth Casing	Type	**None**
Fourth Casing	Size	"
Fourth Casing	Weight	#
Fourth Casing	ID	"
Fourth Casing	Drift	"
Fourth Casing	Connection	
Fourth Casing	Grade	
Fourth Casing	Collapse	psi
Fourth Casing	Joint Yield	klbs
Fourth Casing	Body Yield	klbs
Fourth Casing	Joint Burst	psi
Fourth Casing	Tube Burst	psi
Fourth Casing	**Max Running Depth Collapse**	'

Collapse Design Verification														
First Casing	20.000	"	94	#	H-40	STC	Casing	=	**1017**	'	**Dp SF:**	**1.125**	**SF:**	**1.130**	**PASS**
Collapse Design									**1017**	'					**PASS**

Tension Design Verification															
First Casing	1017	'	94.0	#	H-40	STC	Casing	=	**95598**	lbs	**Dp SF:**	**1.6**	**(Conn)**	**SF:**	**6.078**	**PASS**
Tension Design									**95598**	lbs		**(AIR)**				**PASS**

Surface Casing Design															
First Casing	**1017**	'	**94.0**	#	**H-40**	**STC**	**Casing**	**ID: 19.124**	**Drift: 18.936**	**Weight: 82900.3**	**lbs (Fluid)**				

All cement volumes are for gauge hole. See attached cement recommendation for actual cement volumes.

WELLBORE SCHEMATIC

Permian Oilfield Partners, LLC.
Monsoon Federal SWD #1
1700' FNL, 165' FEL
Sec. 34, T25S, R32E, Lea Co. NM
Lat 32.0895734° N, Lon 103.6547982° W
GL 3361', RKB 3391'

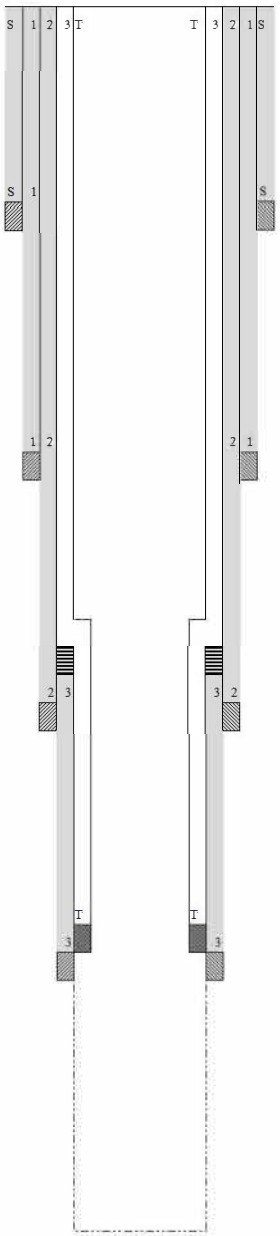
Surface - (Conventional)
Hole Size: 26"
Casing: 20" - 94# H-40 STC Casing
Depth Top: Surface
Depth Btm: 1017'
Cement: 1966 sks - Class C + Additives (100% Excess)
Cement Top: Surface - (Circulate)

Intermediate #1 - (Conventional)
Hole Size: 17.5"
Casing: 13.375" - 54.5# J-55 & 61# J-55 STC Casing
Depth Top: Surface
Depth Btm: 4835'
Cement: 3063 sks - Class C + Additives (50% Excess)
Cement Top: Surface - (Circulate)

Intermediate #2 - (Conventional)
Hole Size: 12.25"
Casing: 9.625" - 40# L-80 & 40# HCL-80 BTC Casing
Depth Top: Surface
Depth Btm: 11999'
Cement: 2653 sks - Class C + Additives (50% Excess)
Cement Top: Surface - (Circulate)
ECP/DV Tool: 4935'

Intermediate #3 - (Liner)
Hole Size: 8.75"
Casing: 7.625" - 39# HCL-80 FJ Casing
Depth Top: 11799'
Depth Btm: 17098'
Cement: 517 sks - Class H + Additives (50% Excess)
Cement Top: 11799' - (Circulate off Liner Top)

Intermediate #4 - (Open Hole)
Hole Size: 6.5"
Depth: 18522'
Inj. Interval: 17098' - 18522' (Open-Hole Completion)



Tubing - (Tapered)
Tubing Depth: 17053'
Tubing: 7" - 26# HCP-110 FJ Casing & 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
X/O Depth: 11799'
X/O: 7" 26# HCP-110 FJ Casing - X - 5.5" 17# HCL-80 FJ Casing (Fiberglass Lined)
Packer Depth: 17063'
Packer: 5.5" - Perma-Pak or Equivalent (Inconel)

Intermediate #1 Casing

General Dimensions & Capacities							
Bit Size	Verify Size	**Max Bit Size:**	18 7/8 "	PASS	17 1/2	"
Casing Size	Verify Size	**Max Casing Size:**	16 "	PASS	13 3/8	"
Setting Depth	Casing Design Type	**(Conventional)**			4835	'
Mud Weight	From Mud Program Sheet				10.0	ppg
Mud Weight	Pressure Applied on Casing				2514	psi
Length	Surface Casing 1				1017	'
Length	Surface Casing 2					'
Length	Surface Casing 3					'
Length	Surface Casing 4					'
Surface Casing Setting Depth	Sum of All Surface Casing's				1017	'
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 1				1.019	ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 2					ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 3					ft³/ft
Annular Capacity (Per ft)	Intermediate 1 Casing to Surface Casing 4					ft³/ft
Annular Capacity	Intermediate 1 Casing to Surface Casing 1				1036	ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 2					ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 3					ft³
Annular Capacity	Intermediate 1 Casing to Surface Casing 4					ft³
Annular Capacity	Intermediate 1 Casing to All Surface Casing				1036	ft³
Int. 1 Csg. length Below Surface Csg. Shoe	Intermediate 1 Casing Shoe to Surface Casing Length (Open Hole)				3818	'
Annular Capacity (Per ft)	Intermediate 1 Casing Shoe to Surface Casing Shoe (Open Hole)				0.69	ft³/ft
Annular Capacity	Intermediate 1 Casing Shoe to Surface Casing Shoe (Open Hole)				2652	ft³
Total Annular Capacity	Intermediate 1 Casing to Open Hole & Intermediate 1 Casing to Surface Casing				3688	ft³
ECP/DV Tool Present?	**NO**					

Cement Program		
Cement from Shoe to Surface		
Cmt Sks	Lead	1472 sks
	Tail	814 sks
Cmt Yield	Lead	1.77 ft³/sk
	Tail	1.33 ft³/sk
Cmt ft³	Lead	2606 ft³
	Tail	1083 ft³
Cmt Weight	Lead	13.5 ppg
	Tail	14.8 ppg
Cmt Height	Lead	3276 '
	Tail	1559 '
Cmt Applied Wt.	Lead (Wet) -	2300 psi
	Tail (Wet)	1199 psi
	Total (Wet)	3500 psi
Constant	0.052	

Casing Design Safety Factors						
Surface Casing	Collapse	**BLM Minimum Safety Factors**		**Partially Evacuated - % Free Gas**		1.125
Surface Casing	Burst	**(Applied or Hydrostatic)**	1.0			1.0
Surface Casing	Tension (Connection)	**Dry:** 1.6	**Wet:** 1.8	**50%**		1.6
Surface Casing	Tension (Body)	**Dry:** 1.6	**Wet:** 1.8			1.6

First Casing - Select Size & Specs		
First Casing	Type	Casing
First Casing	Size	13.375 "
First Casing	Weight	54.5 #
First Casing	ID	12.615 "
First Casing	Drift	12.459 "
First Casing	Connection	STC
First Casing	Grade	J-55
First Casing	Collapse	1130 psi
First Casing	Joint Yield	514 klbs
First Casing	Body Yield	853 klbs
First Casing	Joint Burst	2730 psi
First Casing	Tube Burst	2730 psi
First Casing	**Max Running Depth Collapse**	1932 '

Second Casing - Select Size & Specs		
Second Casing	Type	Casing
Second Casing	Size	13.375 "
Second Casing	Weight	61 #
Second Casing	ID	12.515 "
Second Casing	Drift	12.359 "
Second Casing	Connection	STC
Second Casing	Grade	J-55
Second Casing	Collapse	1540 psi
Second Casing	Joint Yield	595 klbs
Second Casing	Body Yield	962 klbs
Second Casing	Joint Burst	3090 psi
Second Casing	Tube Burst	3090 psi
Second Casing	**Max Running Depth Collapse**	4835 '

Third Casing - (None)		
Third Casing	Type	None
Third Casing	Size	"
Third Casing	Weight	95 #
Third Casing	ID	"
Third Casing	Drift	"
Third Casing	Connection	BTC
Third Casing	Grade	N-80
Third Casing	Collapse	psi
Third Casing	Joint Yield	klbs
Third Casing	Body Yield	klbs
Third Casing	Joint Burst	psi
Third Casing	Tube Burst	psi
Third Casing	**Max Running Depth Collapse**	'

Fourth Casing - (None)		
Fourth Casing	Type	None
Fourth Casing	Size	"
Fourth Casing	Weight	95 #
Fourth Casing	ID	"
Fourth Casing	Drift	"
Fourth Casing	Connection	BTC
Fourth Casing	Grade	HCN-80
Fourth Casing	Collapse	psi
Fourth Casing	Joint Yield	klbs
Fourth Casing	Body Yield	klbs
Fourth Casing	Joint Burst	psi
Fourth Casing	Tube Burst	psi
Fourth Casing	**Max Running Depth Collapse**	'

Collapse Design Verification						
First Casing	13.375 " 54.5 # J-55 STC Casing = 1932 '	**Dp SF:** 1.125	**SF:** 1.125	PASS
Second Casing	13.375 " 61.0 # J-55 STC Casing = 4835 '	**Dp SF:** 1.125	**SF:** 1.225	PASS
Collapse Design	4835 '			PASS

Tension Design Verification						
First Casing	1932 ' 54.5 # J-55 STC Casing = 105274 lbs	**Dp SF:** 1.6 (Conn)	**SF:** 1.820	PASS
Second Casing	2903 ' 61.0 # J-55 STC Casing = 177106 lbs	**Dp SF:** 1.6 (Conn)	**SF:** 3.360	PASS
Tension Design	282379 lbs	(AIR)		PASS

Intermediate #1 Casing Design									
First Casing	1932 ' 54.5 # J-55 STC Casing	ID: 12.615	Drift: 12.459	Weight: 89201.2 lbs (Fluid)
Second Casing	2903 ' 61.0 # J-55 STC Casing	ID: 12.515	Drift: 12.359	Weight: 150067 lbs (Fluid)

All cement volumes are for gauge hole. See attached cement recommendation for actual cement volumes.

Hydrogen Sulfide Drilling Operations Plan

Permian Oilfield Partners, LLC.

Monsoon Federal SWD #1
1700' FNL, 165' FEL
Sec. 34, T25S, R32E, Lea Co. NM
Lat 32.0895734˚ N, Lon 103.6547982˚W

1. General Requirements

Rule 118 does not apply to this well because POP has researched this area and no high concentrations of H2S were found. POP will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

1. **The hazards and characteristics of hydrogen sulfide gas.**
2. **The proper use of personal protective equipment and life support systems.**
3. **The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.**
4. **The proper techniques for first aid and rescue operations. Additionally, supervisory personnel will be trained in the following areas:**

    - The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
    - Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
    - The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a known hydrogen sulfide source. The initial training session shall include a review of the site-specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 13 3/8" intermediate #1 casing.

1. **Well Control Equipment**

    - Choke manifold with minimum of one adjustable choke.
    - Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

- Auxiliary equipment including annular type blowout preventer.

2. **Protective Equipment for Essential Personnel**

   - A Thirty-minute self-contained work unit located in the dog house and at briefing areas.
   - If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas.
   - If higher concentrations of H2S are detected the well will be shut in and POP will follow Onshore Order 6 and install a rotating head, mud/gas separator, remote choke and flare line with igniter.

3. **Hydrogen Sulfide Protection and Monitoring Equipment**

   - Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. **Visual Warning Systems**

   - Wind direction indicators as indicated on the wellsite diagram.
   - Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. Communications

State & County Officials phone numbers are posted on rig floor and supervisor's trailer. Communications in company vehicles and tool pushers are either two-way radios or cellular phones.

7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Lea County Sheriff's Office 911 or (575) 396-3611

Ambulance Service 911 or (575) 885-2111

Carlsbad Fire Dept 911 or (575) 885-2111

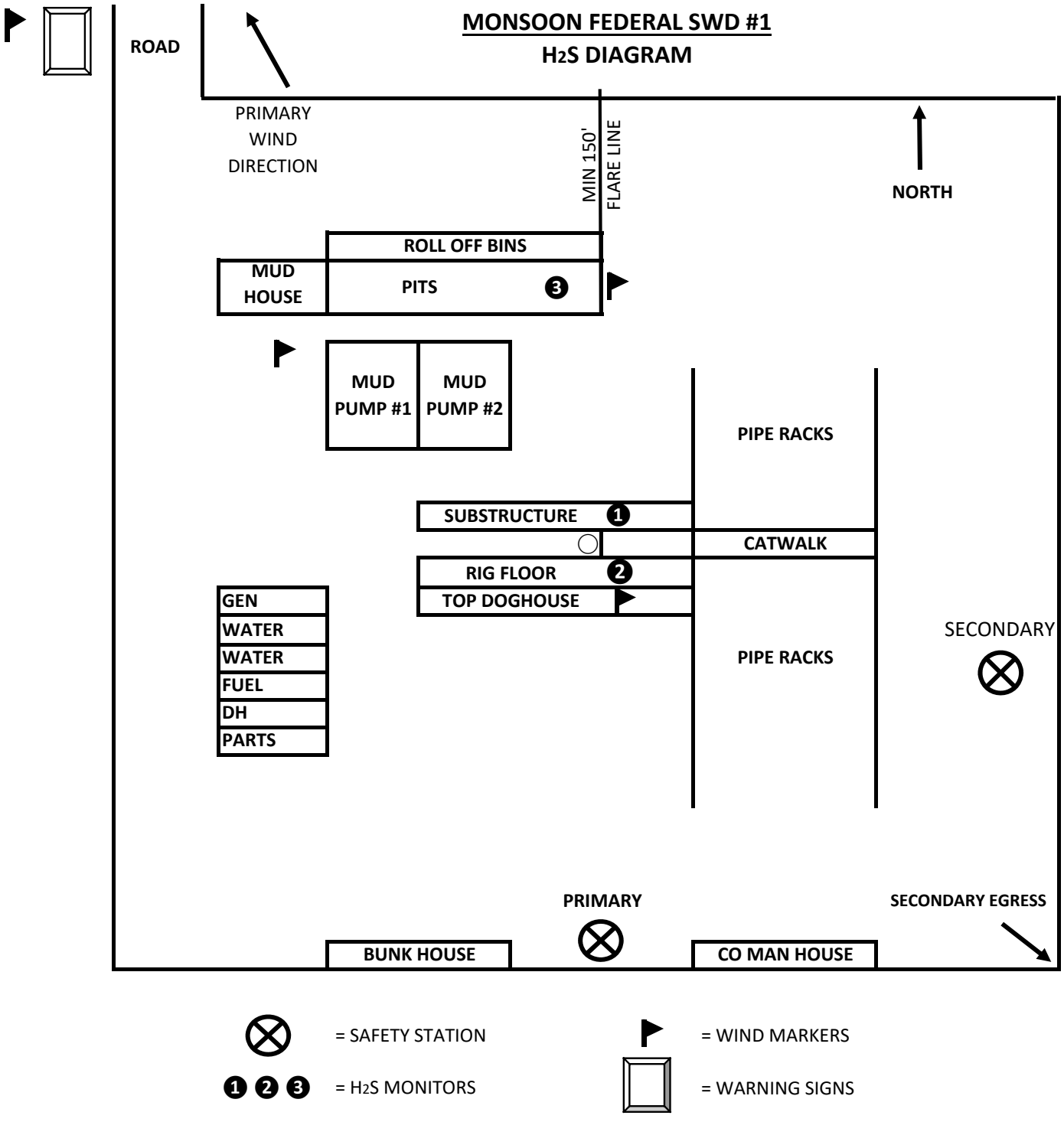
Closest Medical Facility - Columbia Medical Center of Carlsbad (575) 492-5000

Permian Oilfield Partners Hobbs Office (817) 606-7630

- Sean Puryear - (817) 600-8772
- Tyler Ledlow - (580) 603-1323
- Gary Fisher - (720) 315-8035

MONSOON FEDERAL SWD #1

H_2S DIAGRAM



= SAFETY STATION

= WIND MARKERS

1 2 3 = H_2S MONITORS

= WARNING SIGNS

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 20.000 (in) | Surface

Hobbs | Dec 11,2019

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Job at a Glance

20" SURFACE @ 1,017'

Job Code	Surface
Depth (TVD) (ft)	1,017.000
Depth (MD) (ft)	1,017.000
Hole Size (in)	26.000
Casing Size (in)/Weight (lb/ft)	20.000 / 94.000
Pump Via	Casing
Total Mix Water Required (gals)	15,855.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	60.00	8.3400	
LEAD SLURRY : Class C Lead Slurry	384.40	13.5000	1.7669
TAIL SLURRY : Class C Tail Slurry	176.80	14.8000	1.3352
DISPLACEMENT : Displacement	345.30	8.3400	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Open Hole		26.000		1,017.000	1,017.000	100.000	
Casing	20.000	19.124	94.000	1,017.000	1,017.000		H-40

PARAMETERS

Landing Collar Depth (ft)	972.00
Mud Density (ppg)	8.80
Mud Type	Fresh Water
Estimated Static Temp (°F)	88.64
Estimated Circulating Temp (°F)	80.17

STAGES

STAGE #	MD

VOLUME CALCULATIONS

1017.000 ft x 1.50530 cf/ft with 100.00 % excess = 3061.780 cf
45.000 ft x 1.99468 cf/ft with 0 % excess = 89.761 cf

TOTAL SLURRY VOLUME = 3152 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		0.00				60.00
LEAD SLURRY : Class C Lead Slurry	13.5000	1.7669	0.00	717.00	2,159.00	1,222	384.40
CEMENT, CLASS C, HSR, 100.0000 PCT							
IntegraSeal CELLO, 0.1300 LBS/SK							
IntegraSeal KOL, 2.5000 LBS/SK							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
SALT,SODIUM CHLORIDE, A-5, 3.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.2000 BWOB							
RETARDER, R-3, 0.4000 BWOB							
EXTENDER, BENTONITE, 3.0000 BWOB							
TAIL SLURRY : Class C Tail Slurry	14.8000	1.3352	717.00	300.00	993.00	744	176.80
CEMENT, CLASS C, HSR, 100.0000 PCT							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS, 1.0000 BWOB							
DISPLACEMENT : Displacement	8.3400		0.00		0.00		345.30

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : Class C Lead Slurry	9.12	9.12				
TAIL SLURRY : Class C Tail Slurry	6.33	6.34				

Notes

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 13.375 (in) | Intermediate

Hobbs | Dec 11,2019

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Job at a Glance

13 3/8" 1ST INTERMEDIATE @ 4,835'

Job Code	Intermediate
Depth (TVD) (ft)	4,835.000
Depth (MD) (ft)	4,835.000
Hole Size (in)	17.500
Casing Size (in)/Weight (lb/ft)	13.375 / 54.500
Pump Via	Casing
Total Mix Water Required (gals)	25,618.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	30.00	8.3400	
LEAD SLURRY : lead	707.50	13.5000	1.7667
TAIL SLURRY : tail	192.50	14.8000	1.3283
DISPLACEMENT : 10.0 ppg (FW/CB)	740.50	10.0000	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	20.000	19.124	94.000	1,017.000	1,017.000		H-40
Open Hole		17.500		4,835.000	4,835.000	50.000	
Casing	13.375	12.615	54.500	4,835.000	4,835.000		J-55

PARAMETERS

Landing Collar Depth (ft)	4,790.00
Mud Density (ppg)	10.20
Mud Type	Brine Based
Estimated Static Temp (°F)	121.10
Estimated Circulating Temp (°F)	104.35

STAGES

STAGE #	MD

VOLUME CALCULATIONS

3818.000 ft x 0.69462 cf/ft with 50.00 % excess = 3978.089 cf
1017.000 ft x 1.01901 cf/ft with 0 % excess = 1036.333 cf
45.000 ft x 0.86794 cf/ft with 0 % excess = 39.057 cf

TOTAL SLURRY VOLUME = 5054 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		0.00				30.00
LEAD SLURRY : lead	13.5000	1.7667	0.00	3,835.00	3,973.00	2,249	707.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
IntegraSeal CELLO, 0.1300 LBS/SK							
IntegraSeal KOL, 2.5000 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 3.0000 BWOW							
RETARDER, R-3, 0.6500 BWOB							
EXTENDER, BENTONITE, 3.0000 BWOB							
TAIL SLURRY : tail	14.8000	1.3283	3,835.00	1,000.00	1,081.00	814	192.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
RETARDER, R-3, 0.5000 BWOB							
DISPLACEMENT : 10.0 ppg (FW/CB)	10.0000		0.00		0.00		740.50

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : lead	9.11	9.11				
TAIL SLURRY : tail	6.30	6.30				

Notes

For this string, lead and tail slurries needs to reach 500 psi CS in 8 hrs or less

BJ Cementing Services | Quotation

Permian Oilfield Partners | Monsoon Federal SWD #1 |

TBD | 9.625 (in) | Two-Stage/Multi-Stage Cement

Hobbs | Dec 11,2019

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Job at a Glance

9 5/8" 2 STAGE 2ND INTERMEDIATE @ 11,999'

Job Code	Two-Stage/Multi-Stage Cement
Depth (TVD) (ft)	11,999.000
Depth (MD) (ft)	11,999.000
Hole Size (in)	12.250
Casing Size (in)/Weight (lb/ft)	9.625 / 40.000
Pump Via	Casing
Total Mix Water Required (gals)	32,993.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : Fresh Water	40.00	8.3400	
LEAD SLURRY : 1st Stage Lead Slurry	642.60	11.5000	2.4120
TAIL SLURRY : 1st Stage Tail	59.20	15.6000	1.1824
DISPLACEMENT : 1st Stage Displacement	902.00	10.0000	
SPACER : Fresh Water	40.00	8.3400	
LEAD SLURRY : 2nd Stage Lead	254.20	11.5000	2.4083
TAIL SLURRY : 2nd Stage Tail	66.50	14.8000	1.3273
DISPLACEMENT : Stage 2 Displacement	367.00	10.0000	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	13.375	12.615	54.500	4,835.000	4,835.000	0.000	J-55
Open Hole		12.250		4,935.000	4,935.000	50.000	
Open Hole		12.250		10,999.000	10,999.000	90.000	
Open Hole		12.250		11,999.000	11,999.000	0.000	
Casing	9.625	8.835	40.000	11,999.000	11,999.000		L-80

PARAMETERS

Landing Collar Depth (ft)	11,954.00
Mud Density (ppg)	9.50
Mud Type	Brine Based
Estimated Static Temp (°F)	199.99
Estimated Circulating Temp (°F)	156.99

STAGES

STAGE #	MD
2	4,935.00
1	11,999.00

VOLUME CALCULATIONS

1000.000 ft	x	0.31318 cf/ft	with	0.00 % excess	=	313.180 cf
6064.000 ft	x	0.31318 cf/ft	with	90.00 % excess	=	3608.335 cf
100.000 ft	x	0.31318 cf/ft	with	50.00 % excess	=	46.977 cf
4835.000 ft	x	0.36268 cf/ft	with	0.00 % excess	=	1753.558 cf
45.000 ft	x	0.42572 cf/ft	with	0 % excess	=	19.157 cf

TOTAL SLURRY VOLUME = 5742 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : Fresh Water	8.3400		4,303.00				40.00
LEAD SLURRY : 1st Stage Lead Slurry	11.5000	2.4120	4,935.00	6,064.00	3,609.00	1,496	642.60
IntegraCem POZ+, 50.0000 PCT							
CEMENT, CLASS C, HSR, 50.0000 PCT							
IntegraSeal CELLO, 0.2500 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 5.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.1000 BWOB							
FLUID LOSS, FL-52, 0.2000 BWOB							
RETARDER, R-21, 0.4500 BWOB							
EXTENDER, BENTONITE, 10.0000 BWOB							
TAIL SLURRY : 1st Stage Tail	15.6000	1.1824	10,999.00	1,000.00	333.00	282	59.20
CEMENT, CLASS H, HSR, 100.0000 PCT							
FOAM PREVENTER, FP-6L, 0.0050 GALS/SK							
RETARDER, R-21, 0.2500 BWOB							
FLUID LOSS, FL-25, 0.4000 BWOB							
DISPLACEMENT : 1st Stage Displacement	10.0000		0.00		0.00		902.00
SPACER : Fresh Water	8.3400		0.00				40.00
LEAD SLURRY : 2nd Stage Lead	11.5000	2.4083	0.00	3,935.00	1,428.00	593	254.20
IntegraCem POZ+, 50.0000 PCT							
CEMENT, CLASS C, HSR, 50.0000 PCT							
IntegraSeal CELLO, 0.2500 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 5.0000 BWOW							
Cement Additive, Sodium Metasilicate A-2, 0.1000 BWOB							
FLUID LOSS, FL-52, 0.2000 BWOB							
EXTENDER, BENTONITE, 10.0000 BWOB							
TAIL SLURRY : 2nd Stage Tail	14.8000	1.3273	3,935.00	1,000.00	374.00	282	66.50
CEMENT, CLASS C, HSR, 100.0000 PCT							
RETARDER, R-3, 0.3000 BWOB							
DISPLACEMENT : Stage 2 Displacement	10.0000			0.00	0.00	0	367.00

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
LEAD SLURRY : 1st Stage Lead Slurry	14.24	14.24				
TAIL SLURRY : 1st Stage Tail	5.19	5.20				
LEAD SLURRY : 2nd Stage Lead	14.24	14.24				
TAIL SLURRY : 2nd Stage Tail	6.31	6.31				

Notes

BJ Cementing Services | Quotation

Permian Oilfield Partners LLC | Monsoon Federal SWD 1 |

TBD | 7.625 (in) | Liner

Hobbs | Feb 01,2020

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Job at a Glance

7 5/8" LINER @ 17,098'

Job Code	Liner
Depth (TVD) (ft)	17,098.000
Depth (MD) (ft)	17,098.000
Hole Size (in)	8.750
Casing Size (in)/Weight (lb/ft)	
Pump Via	Drill Pipe
Total Mix Water Required (gals)	3,330.000

CEMENTING FLUIDS

FLUID	VOL (bbls)	DEN (ppg)	YIELD (Cu Ft/sk)
SPACER : IntegraGuard ULTRA HV	40.00	15.0000	
CEMENT SLURRY : 15.6 ppg Class 'H'	144.60	15.6000	1.5713
DISPLACEMENT : Displacement	299.70	8.3400	

Well Data

INNER / OUTER GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE
Previous Casing	9.625	8.835	40.000	11,999.000	11,999.000		L-80
Open Hole		8.750		17,098.000	17,098.000	50.000	
Liner	7.625	6.625	39.000	17,098.000	17,098.000		L-80
Drill Pipe	3.500	2.602	15.500	11,799.000	11,799.000		

PARAMETERS

Landing Collar Depth (ft)	17,008.00
Mud Density (ppg)	14.00
Mud Type	Water Based
Estimated Static Temp (°F)	285.18
Estimated Circulating Temp (°F)	234.37

STAGES

STAGE #	MD

VOLUME CALCULATIONS

5099.000 ft x 0.10047 cf/ft with 50.00 % excess = 768.445 cf
200.000 ft x 0.10863 cf/ft with 0 % excess = 21.726 cf
90.000 ft x 0.23938 cf/ft with 0 % excess = 21.544 cf

TOTAL SLURRY VOLUME = 812 cf

Fluid Specifications

	DEN (ppg)	YIELD (Cu Ft/sk)	PLN TOP OF FLUID (Ft)	LG (Ft)	VOL (Cu Ft)	VOL (sks)	VOL (bbls)
SPACER : IntegraGuard ULTRA HV	15.0000		9,732.00				40.00
IntegraGuard ULTRA HV, 100.0000 PCT							
ANTI SETTLING, ASA-301, 1.0000 PPB							
WEIGHTING ADDITIVE, BARITE, 394.0000 PPB							
FOAM PREVENTER, FP-6L, 0.1000 GPB							
SPACER SURFACTANT, S-5, 2.0000 GPB							
CEMENT SLURRY : 15.6 ppg Class 'H'	15.6000	1.5713	11,799.00	5,299.00	812.00	517	144.60
CEMENT, CLASS H, HSR, 100.0000 PCT							
ANTI STATIC ADDITIVE, STATIC FREE, 0.0050 BWOB							
Cement Additive, Sodium Metasilicate A-2, 0.2000 BWOB							
ANTI SETTLING, ASA-301, 0.4000 BWOB							
RETARDER, R-21, 0.5000 BWOB							
DISPERSANT, CD-32, 0.5000 BWOB							
BONDING AGENT, BA-10A, 0.5000 BWOB							
FLUID LOSS, FL-66, 0.8000 BWOB							
SAND, S-8C, SILICA, 100 MESH, 35.0000 BWOB							
DISPLACEMENT : Displacement	8.3400		0.00	0.00	0.00		299.70

Cement Properties

	MIX WATER (gals/sk)	MIX FLUID (gals/sk)	PUMP TIME - 70 BC	FREE WATER AT 90°	FREE WATER AT 45°	FLUID LOSS
CEMENT SLURRY : 15.6 ppg Class 'H'	6.44	6.44				

Notes

APD ID: 10400052085 **Submission Date:** 02/02/2020

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **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: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

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: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

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: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD **Well Number:** 1

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: 10400052085

Submission Date: 02/02/2020

Operator Name: PERMIAN OILFIELD PARTNERS LLC

Well Name: MONSOON FEDERAL SWD

Well Number: 1

Well Type: INJECTION - DISPOSAL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001780

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

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

[X] AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025- 47362	97869	SWD; DEVONIAN-SILURIAN

4 Property Code	5 Property Name	6 Well Number
328506	MONSOON FEDERAL SWD	1

7 OGRID NO.	8 Operator Name	9 Elevation
328259	PERMIAN OILFIELD PARTNERS, LLC	3361'

10 Surface Location

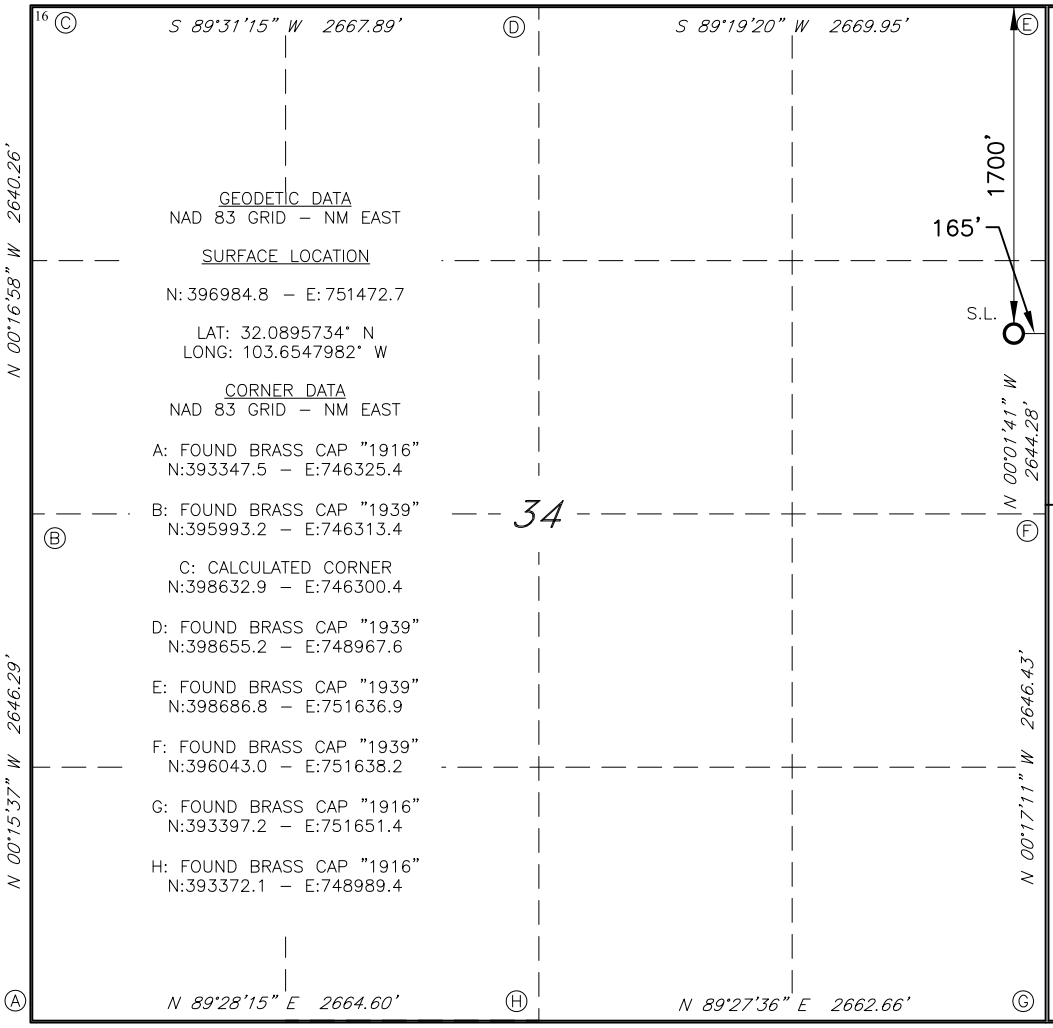
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
H	34	25S	32E		1700	NORTH	165	EAST	LEA

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

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

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



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.

Gary E Fisher 6-27-2019
Signature Date

Gary E Fisher
Printed Name

gfisher@popmidstream.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.

5-28-2019
Date of Survey

Signature and Seal of Professional Surveyor:

JEFFREY L. FANSLER
NEW MEXICO
10034
PROFESSIONAL SURVEYOR

10034
Certificate Number

Job No.: LS19030276R2