

Submit 1 Copy To Appropriate District Office  
District I - (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II - (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV - (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-44833
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Marathon Oil Permian LLC		6. State Oil & Gas Lease No.
3. Address of Operator 5555 San Felipe St., Houston, TX 77056		7. Lease Name or Unit Agreement Name Southern Comfort State 24 28 25 WD
4. Well Location Unit Letter J : 2423 feet from the line and 1748 feet from the East line Section 25 Township 24S Range 28E NMPM County Eddy		8. Well Number 9H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 2919' GR		9. OGRID Number 372098
		10. Pool name or Wildcat PURPLE SAGE; WOLFCAMP (GAS)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b> PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE <input type="checkbox"/> CLOSED-LOOP SYSTEM <input type="checkbox"/> OTHER: <input type="checkbox"/>	<b>SUBSEQUENT REPORT OF:</b> REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: <input type="checkbox"/>
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Marathon Oil Permian LLC is requesting to plug and abandon this well as follows:

1. Weld on 3' conductor Pup Joint to bring conductor to surface. (Custom Welding)
2. Fill 20" Conductor & Mousehole with API Class C cement. (50 bbls) GL-Top 146.5 Bottom. (Butch's will cement conductor)
3. Cover Mousehole & Weld Dry Hole Marker plate on top of conductor with following information (Custom Welding will weld conductor).
  - a. Operator: Marathon Oil Permian LLC
  - b. Lease: Southern Comfort State 24 28 25 WD
  - c. Well # 9H
  - d. API# 30-015-44833
  - e. Unit Letter: J
  - f. Section: 25
  - g. Township: 24S
  - h. Range: 28E

with dry hole marker welded on plate

Please see attachments.

Spud Date:

6/1/2018

Rig Release Date:

\* See Attached COA's

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE \_\_\_\_\_ TITLE CTR- Technician HES DATE 8/27/2018

Type or print name Adrian Covarrubias E-mail address: acovarrubias@marathonoil.com PHONE: 713-296-3368

For State Use Only

APPROVED BY: [Signature] TITLE Staff Mgr DATE 8-27-18

Conditions of Approval (if any):

## **Procedure**

**\*Procedure is subject to change prior to, or during operations**

- 1. Weld on 3' conductor Pup Joint to bring conductor to surface. (Custom Welding)**
- 2. Fill 20" Conductor & Mousehole with API Class C cement. (50 bbls) GL-Top 146.5 Bottom. (Butch's will cement conductor)**
- 3. Cover Mousehole & Weld Dry Hole Marker plate on top of conductor with following information (Custom Welding will weld conductor).**
  - a. Operator: Marathon Oil Permian LLC
  - b. Lease: Southern Comfort State 24 28 25 WD
  - c. Well # 9H
  - d. API# 30-015-44833
  - e. Unit Letter: J
  - f. Section: 25
  - g. Township: 24S
  - h. Range: 28E



MARATHON OIL Permian Basin Eddy County, NM			Southern Comfort State 24 28 25 WD 8H Wellbore Diagram (6/21/16) WHS: DO 181459 APR 20-18-4453			DE: 3427' TEL: 1146' TEL. S&B 3146 4296 Eddy County, NM DO: 3307' TEL: 3207' TEL. S&B 3146 4296 Eddy County, NM DO: 3307' TEL: 3207' TEL. S&B 3146 4296 Eddy County, NM			MAP 601
Formation	Casing	FTT (EAMV)	Depth (MD RIGB)	Casals 13546' TDM MBU 3T	Comment	MAF	BHA	Comments	
	30"		146'						
	1500 PIG Ties 13.546' 14.546' etc.	11.3 PPG	440'		Schulenberg Spacer: 20 bbl gal spacer Sweep hole every stand Single entry: 14.8 PPG Excess: 150% Displacement Fluid: 10 PPG Brine	Fresh water 8.4-8.8 PPG Sweep hole every stand Pump LCM as needed Sweep hole with EZ mud	Shenandoah 7" 710 4.0 LMA @ 1.5 degrees side- Brush Sub: -17" Sub: -6" NADC: -Hwyd' Sub + 6" NADC: + (2) 6" DC: -100' 6" NADP BE: Lateral 1815	Surveys will be sent post run for MSA. Read time below MSA	
Salado			571'		Schulenberg Spacer: 20 bbl gal spacer Land: 12.8 PPG (TDC 28.5) Tdc: 14.8 PPG (TOT 1.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Brine at 8.9-10.2 PPG Clear hole with flow rate Sweep only as needed. Corrosion claim in place the remainder of the well Excess: 148: 25% Displacement Fluid: 9.2 PPG Cld Brine	Shenandoah 7" 710 4.0 LMA @ 1.5 or 11.7° NSS SS: -11.7° Sub: -6" NADC Hwyd' sub: -11.7° Sub: - 6" NADC: -3 6" DC: -10 -30 bbl of NADP BE: Fluid 80819	RL/CS services Potential for tub deviation through salt and anhydrite stringers. Lure hole angle is <2.5°. wellbore drilling DL 8 to <27100'	
Castle			1,212'		Schulenberg Spacer: 20 bbl gal spacer Land: 12.8 PPG (TDC 28.5) Tdc: 14.8 PPG (TOT 1.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Brine at 8.9-10.2 PPG Clear hole with flow rate Sweep only as needed. Corrosion claim in place the remainder of the well Excess: 148: 25% Displacement Fluid: 9.2 PPG Cld Brine	Shenandoah 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819	Art. Corrosion risk with 80% Acetic acid Run to Metal Loggers and keep for end of well Potential for losses in weak formations Gummies in BHA: Log Gummies from D&B C&I	
Base of Salt	2900 PIG Ties Spacer: 20 bbl gal spacer	11.8 PPG	2,800'	12 1/4" hole	Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Lamar			2,895'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Red Canyon			2,723'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Grady Canyon			4,897'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Bone Spring			6,322'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
1st BS Sand			7,348'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
2nd BS Sand			8,106'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
3rd BS Sand			9,273'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Wellcamp X			9,600'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Wellcamp Y			9,681'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Wellcamp A			9,794'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		
Target (Wellcamp D)	4 1/2" 13.88 PIG Ties Roughneck		10,586'		Schulenberg Spacer: 20 bbl gal spacer Land: 11 PPG TDC 28.5) Tdc: 13.8 PPG (TOT 8.850) Excess: 150% Displacement Fluid: 9.2 PPG Cld Brine	Yardall Cld Brine @ 8.4-8.8 PPG 30-5000 sweeps as needed EZ mud sweep hole Tdc: 13.8 PPG Add fluids control and venturi C&C&C LCM to control sweeps and losses	Yardall BHA 7" 1.857 7.9 9.4: 4.25° NSS 8.25° Sub: -NADC + Hwyd' sub: -10.25° Sub + Hwyd' sub: -10.25° NADP BE: Fluid 80819		



## **CONDITIONS FOR PLUGGING AND ABANDONMENT**

### **District II / Artesia N.M.**

The following is a guide or checklist in preparation of a plugging program, this is not all inclusive and care must be exercised in establishing special plugging programs in unique and unusual cases, **Notify NMOCD District Office II at (575)-748-1283 at least 24 hours before beginning work.**

1. A notice of intent to plug and abandon a wellbore is required to be approved before plugging operations are conducted. A cement evaluation tool is required in order to ensure isolation of producing formations, protection of water and correlative rights. A cement bond log or other accepted cement evaluation tool is to be provided to the division for evaluation if one has not been previously run or if the well did not have cement circulated to surface during the original casing cementing job or subsequent cementing jobs.
2. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to a permitted disposal location.
3. Trucking companies being used to haul oilfield waste fluids to a disposal – commercial or private – shall have an approved NMOCD C-133 permit. A copy of this permit shall be available in each truck used to haul waste products. It is the responsibility of the operator as well as the contractor, to verify that this permit is in place prior to performing work. Drivers shall be able to produce a copy upon request of an NMOCD Field inspector.
4. Filing a subsequent C-103 will serve as notification that the well has been plugged.
5. A final C-103 shall be filed (and a site inspection by NMOCD Inspector to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to Meet NMOCD standards) before bonding can be released.
6. If the well is not plugged within 1
7. If work has not begun within 1 Year of the approval of this procedure, an extension request must be file stating the reason the well has not been plugged.
8. **Squeeze pressures are not to exceed 500 psi, unless approval is given by NMOCD.**
9. Produced water **will not** be used during any part of the plugging operation.
10. Mud laden fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
11. All cement plugs will be a minimum of 100' in length or a minimum of 25 sacks of cement, whichever is greater. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
12. **Class 'C' cement will be used above 7500 feet.**
13. **Class 'H' cement will be used below 7500 feet.**
14. **A cement plug is required to be set 50' above and 50' below, casing stubs, DV tools, attempted casing cut offs, cement tops outside casing, salt sections and anywhere the casing is perforated, these plugs require a 4 hour WOC and then will be tagged**
15. **All Casing Shoes Will Be Perforated 50' below shoe depth and Attempted to be Squeezed, cement needs to be 50' above and 50' Below Casing Shoe inside the Production Casing**

16. When setting the top out cement plug in production, intermediate and surface casing, wellbores should remain full at least 30 minutes after plugs are set
17. **A CIBP is to be set within 100' of production perforations, capped with 100' of cement, WOC 4 hours and tag.**
18. A CIBP with 35' of cement may be used in lieu of the 100' plug if set with a bailer. This plug will be placed within 100' of the top perforation, **(WOC 4 hrs and tag).**
19. **No more than 3000' is allowed between cement plugs in cased hole and 2000' in open hole.**
20. Some of the Formations to be isolated with cement plugs are: These plugs to be set to isolate formation tops
  - A) Fusselman
  - B) Devonian
  - C) Morrow
  - D) Wolfcamp
  - E) Bone Springs
  - F) Delaware
  - G) Any salt sections
  - H) Abo
  - I) Glorieta
  - J) Yates.
  - K) **Potash---** (In the R-111-P Area (Potash Mine Area), a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, **WOC 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.**
21. **If cement does not exist behind casing strings at recommended formation depths, the casing can be cut and pulled with plugs set at recommended depths. If casing is not pulled, perforations will be shot and cement squeezed behind casing, WOC and tagged. These plugs will be set 50' below formation bottom to 50' above formation top inside the casing**

#### **DRY HOLE MARKER REQUIREMENTS**

The operator shall mark the exact location of the plugged and abandoned well with a steel marker not less than four inches in diameter, 3' below ground level with a plate of at least ¼" welded to the top of the casing and the dry hole marker welded on the plate with the following information welded on the dry hole marker:

**1. Operator name 2. Lease and Well Number 3.API Number 4. Unit Letter 5. Quarter Section (feet from the North, South, East or West) 6. Section, Township and Range 7. Plugging Date 8. County (SPECIAL CASES)-----AGRICULTURE OR PRARIE CHICKEN BREEDING AREAS**

In these areas, a below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to NMOCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to NMOCD (We typically require a current survey to verify the GPS)



**Southern Comfort 24 28 25 WD 9H**  
**P&A Plan Forward**

**Surface Coordinates**

**Lat: 32.18743100 N**  
**Long: -104.03260419 W**  
**(NAD 27' Lat/Long)**  
**RKB: 2945'**

**General Information**

**Eddy County, NM**  
**API # 30-015-44833**  
**WBS # DD.18.001520.D1**  
**J-25-24S-28E 2423 FSL 1748 FEL**

**Prepared by: Chris Montan**



## Contents

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## Marathon Oil Personnel

Name	Title	Location	Cell	Email
Brent Evans	Drilling Manager	Houston	(832) 967-8474	bevans@marathonoil.com
Matt Rugaard	Drilling Supervisor	Houston	(281)-513-5163	mprugaard@marathonoil.com
Mark Bly	Drilling Superintendent	Carlsbad	(281) 840 0467	
Chris Montan	Drilling Engineer	Carlsbad	(281) 386 2170	cmontan@marathonoil.com
Kyle Schriner	Drilling Engineer	Houston	(210)-259-1709	kschriner@marathonoil.com
Nick Rogers	Permian HES Advisor	Carlsbad	(281) 659-3734	

## Emergency Telephone Contacts

Name	Title	Location	Office
Fire Department		Carlsbad, NM	575-236-6113
Ambulance			911
Sheriff office	Eddy County Sheriff	Carlsbad, NM	575-887-7551
Helicopter			
NMOCD		Hobbs, NM	505-476-3441

## Vendors List

Service	Vendor	Contact	Office	Cell
Cement	Butch's	Chris Northcutt		575-513-0014
Welders	Custom Welding		575-393-5904	575-390-3305

### **DIRECTIONS TO LOCATION:**

**FROM THE INTERSECTION OF U.S. HIGHWAY 62/WEST  
FROM 4111 S TIDWELL HEAD SOUTH ON TIDWELL ROAD  
TOWARDS U.S. HWY 285 . TURN LEFT ON TO U.S.. HWY  
285 S. FOR 14.4 MILES TO PULLEY RD. TURN LEFT ONTO  
PULLEY RD. HEADING EAST FOR 1.2 MILES TURN RIGHT  
ON TO LEASE ROAD HEADING SOUTH FOR 0.7 MILES.  
TURN INTO LOCATION ON RIGHT**

## **Objective**

Plug and Abandon well due to failed weld on conductor pipe.

## **Well Information**

The Southern Comfort 24 28 25 WD 9H was a proposed Wolfcamp well that was not drilled due to a failed weld in the 20" conductor.

When attempting to pass through conductor had to begin washing and reaming at 85' to 105'. When bit came out it was damaged and re-attempted to drill out with rollercone and still had no success. After moving off well, we investigated with a camera and determined that the weld between the 2<sup>nd</sup> and 3<sup>rd</sup> conductor joints failed.

### **Casing details:**

Conductor: 20" set @ 146.5' KB(KB 26.5)