

HOBBS OGD  
JAN 10 2019  
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FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

F/P

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER  
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other INJ-ER  
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone

5. Lease Serial No.  
NMNM018264

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

WEST EUMONT UNIT  
523

(320052)

9. API Well No.

30-025-45480

10. Field and Pool, or Exploratory

EUMONT / YATES-7RVRS-QUEEN (OIL)

(22800)

11. Sec., T. R. M. or Blk. and Survey or Area  
SEC 26 / T20S / R36E / NMP

2. Name of Operator  
FORTY ACRES ENERGY LLC

(371416)

3a. Address  
11777B Katy Freeway, Suite 305 Houston TX 77079

3b. Phone No. (include area code)  
(832)706-0051

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

At surface SESW / 10 FSL / 2481 FWL / LAT 32.536915 / LONG -103.325562

At proposed prod. zone SESW / 10 FSL / 2481 FWL / LAT 32.536915 / LONG -103.325562

14. Distance in miles and direction from nearest town or post office\*  
7 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)  
10 feet

16. No of acres in lease  
1200

17. Spacing Unit dedicated to this well  
0

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

19. Proposed Depth  
4500 feet / 4500 feet

20. BLM/BIA Bond No. in file  
FED: NMB001380

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3568 feet

22. Approximate date work will start\*  
07/01/2018

23. Estimated duration  
30 days

24. Attachments

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

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature  
(Electronic Submission)

Name (Printed/Typed)  
Brian Wood / Ph: (505)466-8120

Date  
06/01/2018

Title  
President

Approved by (Signature)  
(Electronic Submission)

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

Date  
12/07/2018

Title  
Assistant Field Manager Lands & Minerals

Office  
CARLSBAD

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.

CANNOT INJECT BEFORE C-108 APPROVAL  
REQUIRES MIT TEST

APPROVED WITH CONDITIONS  
Approval Date: 12/07/2018

K2  
01/10/19

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## **Additional Operator Remarks**

### **Location of Well**

1. SHL: SESW / 10 FSL / 2481 FWL / TWSP: 20S / RANGE: 36E / SECTION: 26 / LAT: 32.536915 / LONG: -103.325562 ( TVD: 0 feet, MD: 0 feet )

BHL: SESW / 10 FSL / 2481 FWL / TWSP: 20S / RANGE: 36E / SECTION: 26 / LAT: 32.536915 / LONG: -103.325562 ( TVD: 4500 feet, MD: 4500 feet )

## **BLM Point of Contact**

Name: Katrina Ponder

Title: Geologist

Phone: 5752345969

Email: kponder@blm.gov

## **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.



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

## Operator Certification Data Report

01/09/2019

### 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:** Brian Wood

**Signed on:** 05/31/2018

**Title:** President

**Street Address:** 37 Verano Loop

**City:** Santa Fe

**State:** NM

**Zip:** 87508

**Phone:** (505)466-8120

**Email address:** afmss@permitswest.com

### Field Representative

**Representative Name:** Jessica LaMarro

**Street Address:** 11777-B Katy Freeway, Suite 305

**City:** Houston

**State:** TX

**Zip:** 77079

**Phone:** (832)706-0051

**Email address:**



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

## Application Data Report

01/09/2019

**APD ID:** 10400030751

**Submission Date:** 06/01/2018

Highlighted data  
reflects the most  
recent changes

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

[Show Final Text](#)

**Well Type:** INJECTION - ENHANCED RECOVERY

**Well Work Type:** Drill

### Section 1 - General

**APD ID:** 10400030751

**Tie to previous NOS?**

**Submission Date:** 06/01/2018

**BLM Office:** CARLSBAD

**User:** Brian Wood

**Title:** President

**Federal/Indian APD:** FED

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

**Lease number:** NMNM018264

**Lease Acres:** 1200

**Surface access agreement in place?**

**Allotted?**

**Reservation:**

**Agreement in place?** NO

**Federal or Indian agreement:**

**Agreement number:**

**Agreement name:**

**Keep application confidential?** NO

**Permitting Agent?** YES

**APD Operator:** FORTY ACRES ENERGY LLC

**Operator letter of designation:**

### Operator Info

**Operator Organization Name:** FORTY ACRES ENERGY LLC

**Operator Address:** 11777B Katy Freeway, Suite 305

**Zip:** 77079

**Operator PO Box:**

**Operator City:** Houston

**State:** TX

**Operator Phone:** (832)706-0051

**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:** WEST EUMONT UNIT

**Well Number:** 523

**Well API Number:**

**Field/Pool or Exploratory?** Field and Pool

**Field Name:** EUMONT

**Pool Name:** YATES-7RVRS-  
QUEEN (OIL)

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

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** NO **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 - ENHANCED RECOVERY

**Describe Well Type:**

**Well sub-Type:** INJECTION - SECONDARY RECOVERY

**Describe sub-type:**

**Distance to town:** 7 Miles

**Distance to nearest well:** 820 FT

**Distance to lease line:** 10 FT

**Reservoir well spacing assigned acres Measurement:** 0 Acres

**Well plat:** WEumont\_523\_plat\_mjdedit\_09142018\_20180914100229.pdf

**Well work start Date:** 07/01/2018

**Duration:** 30 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 7977

	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
SHL Leg #1	10	FSL	248 1	FWL	20S	36E	26	Aliquot SESW 5	32.53691 5	- 103.3255 62	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 018264	356 8	0	0
BHL Leg #1	10	FSL	248 1	FWL	20S	36E	26	Aliquot SESW 5	32.53691 5	- 103.3255 62	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 018264	-932	450 0	450 0



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

## Drilling Plan Data Report

01/09/2019

APD ID: 10400030751

Submission Date: 06/01/2018

Operator Name: FORTY ACRES ENERGY LLC

Well Name: WEST EUMONT UNIT

Well Number: 523

[Show Final Text](#)

Well Type: INJECTION - ENHANCED RECOVERY

Well Work Type: Drill

### Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	—	3568	0	0	OTHER : Quaternary caliche	USEABLE WATER	No
2	RUSTLER ANHYDRITE	2203	1365	1365		NONE	No
3	TANSILL	805	2763	2763	SANDSTONE	NONE	No
4	YATES	648	2920	2920	SANDSTONE	NATURAL GAS,OIL,OTHER : Saltwater	No
5	SEVEN RIVERS	330	3238	3238	DOLOMITE	NATURAL GAS,OIL,OTHER : Saltwater	No
6	QUEEN	-135	3703	3703	DOLOMITE	NATURAL GAS,OIL,OTHER : Saltwater	No
7	GRAYBURG	-510	4078	4078	DOLOMITE	NATURAL GAS,OIL,OTHER : Saltwater	Yes

### Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M

Rating Depth: 5000

**Equipment:** BOP equipment will consist of the following: - Double ram with blind ram and pipe ram - Drilling spool, or blowout preventer with 2 side outlets (choke side and kill side will be greater than or equal to 2" diameter) - Kill line (greater than or equal to 2" diameter) and kill line valve (greater than or equal to 2" diameter) - greater than or equal to 2" diameter choke line with greater than or equal to 2" diameter valves - 2 chokes, at least one will be capable of remote operation - Pressure gauge on choke manifold - Upper Kelly cock valve with handle available - Safety valve and subs to fit all drill string connections in use - All BOPE connections subject to well pressure will be flanged, welded, or clamped - A fill-up line above the uppermost preventer

**Requesting Variance?** NO

**Variance request:**

**Testing Procedure:** A 2000 psi BOP stack and manifold system will be used. A typical 2000 psi system is attached. If the equipment changes, then a Sundry Notice will be filed. System will meet Onshore Orders 2 (BOP) and 6 (H2S) requirements. Blowout preventer equipment (BOP) will include a 2000 psi rated, "XLT" type, NOV double ram preventer that will be tested to a maximum pressure of 2000 psi. Unit will be hydraulically operated. Ram type preventer will be equipped with pipe rams on top and blind pipe rams on bottom. The 2M BOP will be installed on the 8.625" surface casing and used continuously until TD is reached. All casing strings will be tested per Onshore Order #2. This also includes a 30-day test, should the rig still be operating on the same well for 30 days. Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These function tests will be documented on the daily drilling logs.

**Choke Diagram Attachment:**



**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

WEumont\_523\_bop\_choke\_20180531135129.pdf

**BOP Diagram Attachment:**

WEumont\_523\_bop\_choke\_20180531135136.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	12.25	8.625	NEW	API	N	0	1650	0	1650	3568		1650	J-55	24	STC	1.91	4.11	DRY	6.26	DRY	6.26
2	PRODUCTION	7.865	5.5	NEW	API	N	0	4500	0	4500	3568		4500	J-55	15.5	LTC	1.73	2.06	DRY	3.11	DRY	3.11

### Casing Attachments

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

WEumont\_523\_casing\_design\_assumption\_20180531135049.pdf

Operator Name: FORTY ACRES ENERGY LLC

Well Name: WEST EUMONT UNIT

Well Number: 523

#### Casing Attachments

Casing ID: 2 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

WEumont\_523\_casing\_design\_assumption\_20180531135101.pdf

#### Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1475	650	1.72	13.5	609	100	Class C	4% bentonite gel + 0.4% defoamer + 0.25 lb/sk cellophane flakes
SURFACE	Tail		1475	1650	200	1.34	14.8	72	100	Class C	1% CaCl <sub>2</sub> + 0.25 lb/sk cellophane flakes
PRODUCTION	Lead		0	3000	235	3.22	11	520	20	50/50 poz C	5 bwow sodium chloride + 0.4% fluid loss additive + 3.5% accelerator/suspension aid + 0.4% de-foamer+ 3 lb/sk LCM
PRODUCTION	Tail		3000	4500	160	1.33	14.8	260	20	Class C	0.1% fluid loss additive + 0.2% dispersant + 3 lb/sk Kol Seal LCM

Operator Name: FORTY ACRES ENERGY LLC

Well Name: WEST EUMONT UNIT

Well Number: 523

### 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: Appropriate additives (bentonite, cedar bark) will be on site to manage any abnormal hole condition (lost circulation, pressure) that could be encountered while drilling this well. Circulation could be lost in the Grayburg.

Describe the mud monitoring system utilized: A PVT/Pason/visual mud monitoring system will be used.

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1700	4500	SALT SATURATED	9.7	10							
0	1700	SPUD MUD	9.4	9.9							

### Section 6 - Test, Logging, Coring

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

A Weatherford composite log, or its equivalent, will be run.

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

OTH

Other log type(s):

A Weatherford composite log, or its equivalent, will be run.

Coring operation description for the well:

No core or drill stem test is planned.

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 1925

**Anticipated Surface Pressure:** 935

**Anticipated Bottom Hole Temperature(F):** 100

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

WEumont\_523\_h2s\_plan\_20180531135741.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

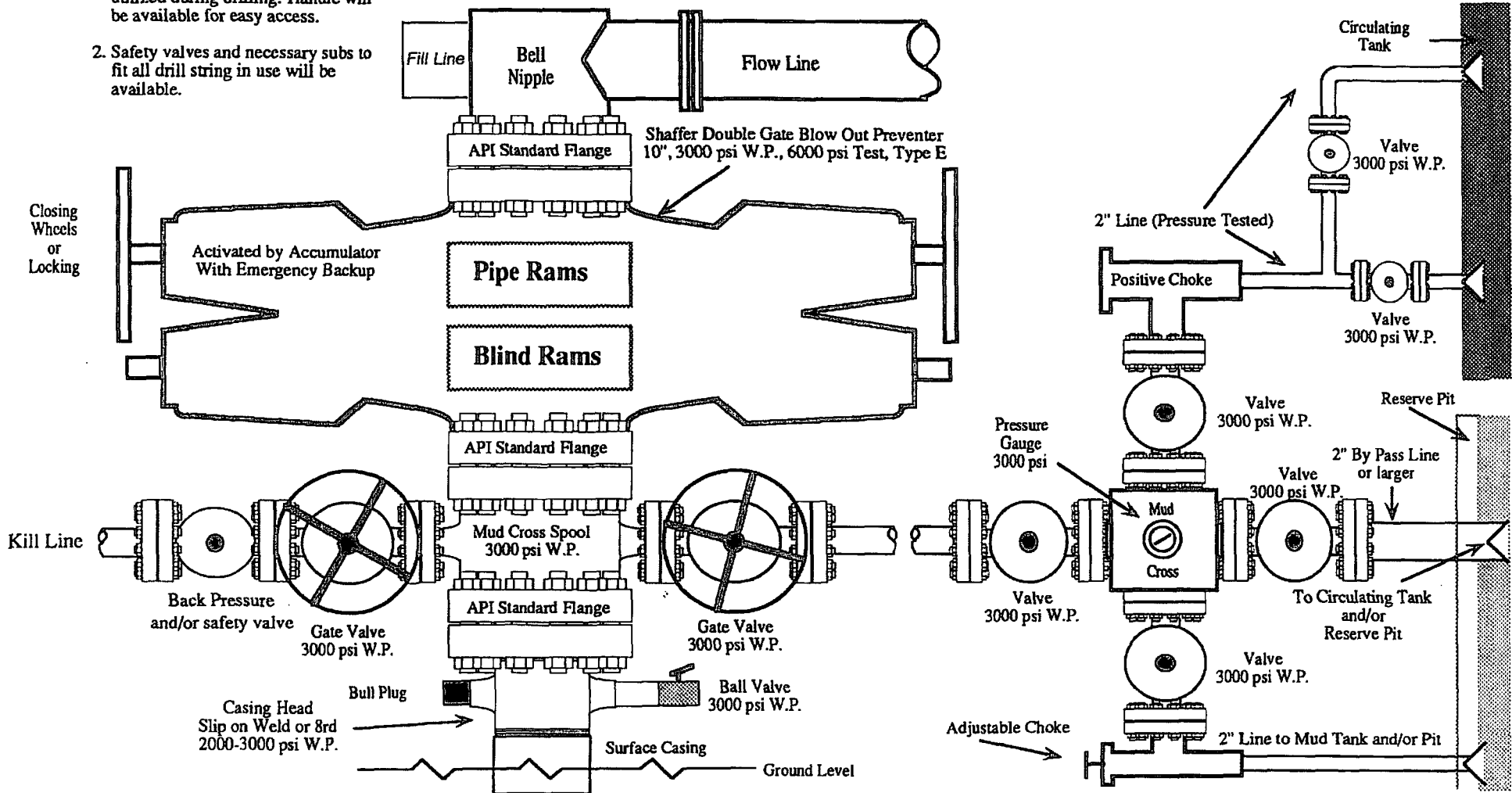
WEumont\_523\_drill\_plan\_20180531135815.pdf

**Other Variance attachment:**

# 2,000 PSI BOP SYSTEM

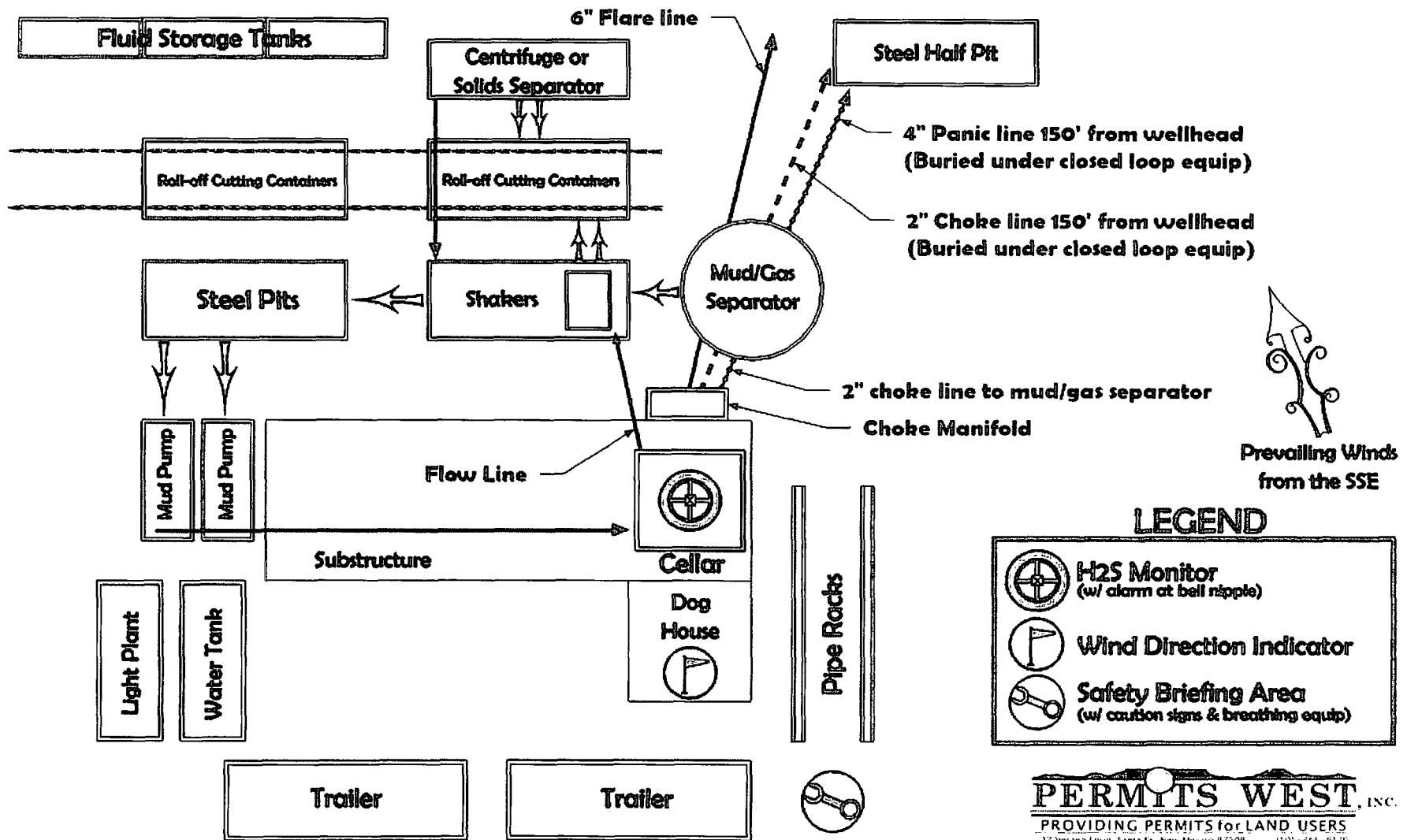
Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.

2. Safety valves and necessary subs to fit all drill string in use will be available.



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

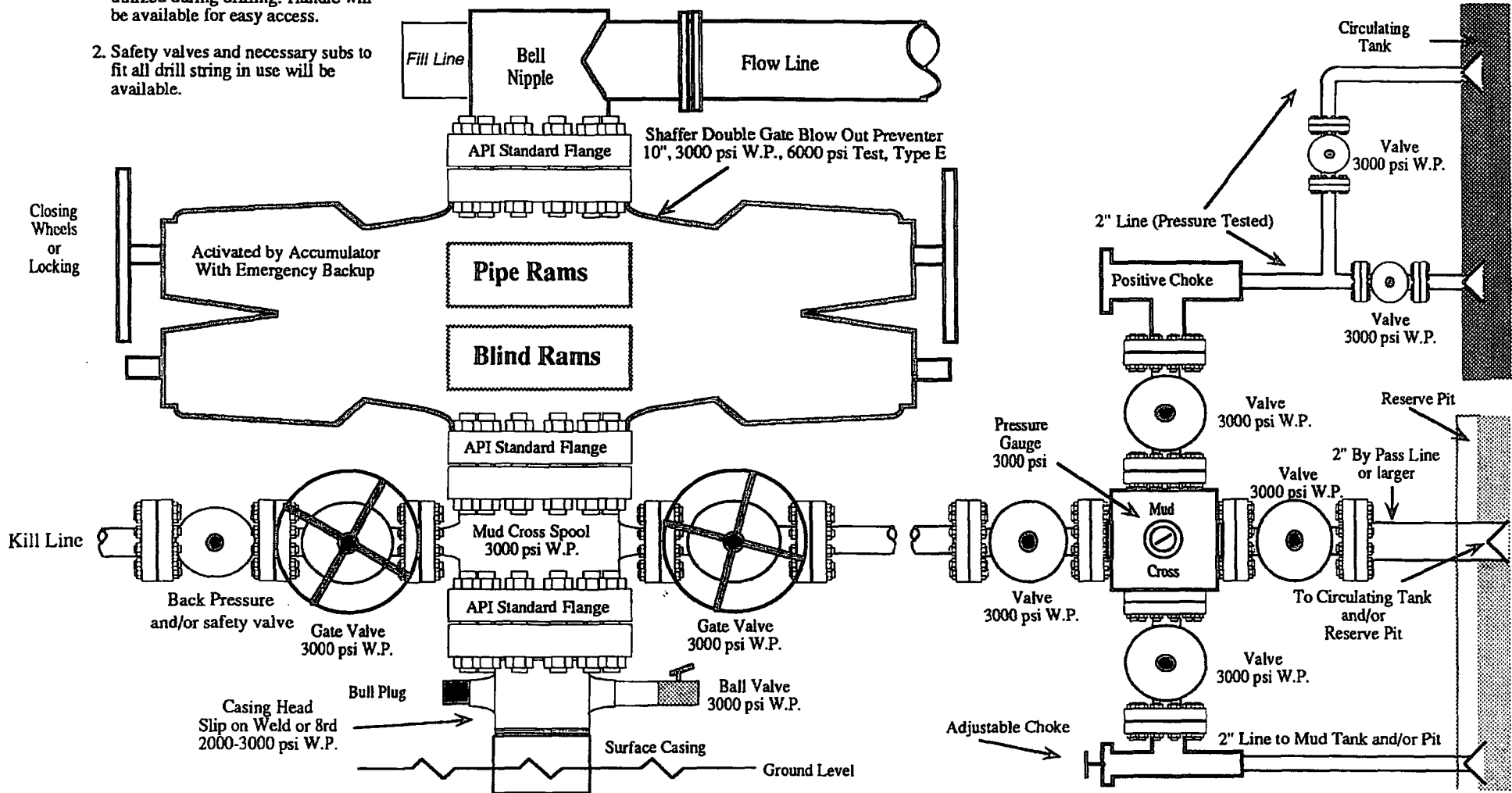
# Rig and Closed Loop System with H2S Safety Equipment Diagram



# 2,000 PSI BOP SYSTEM

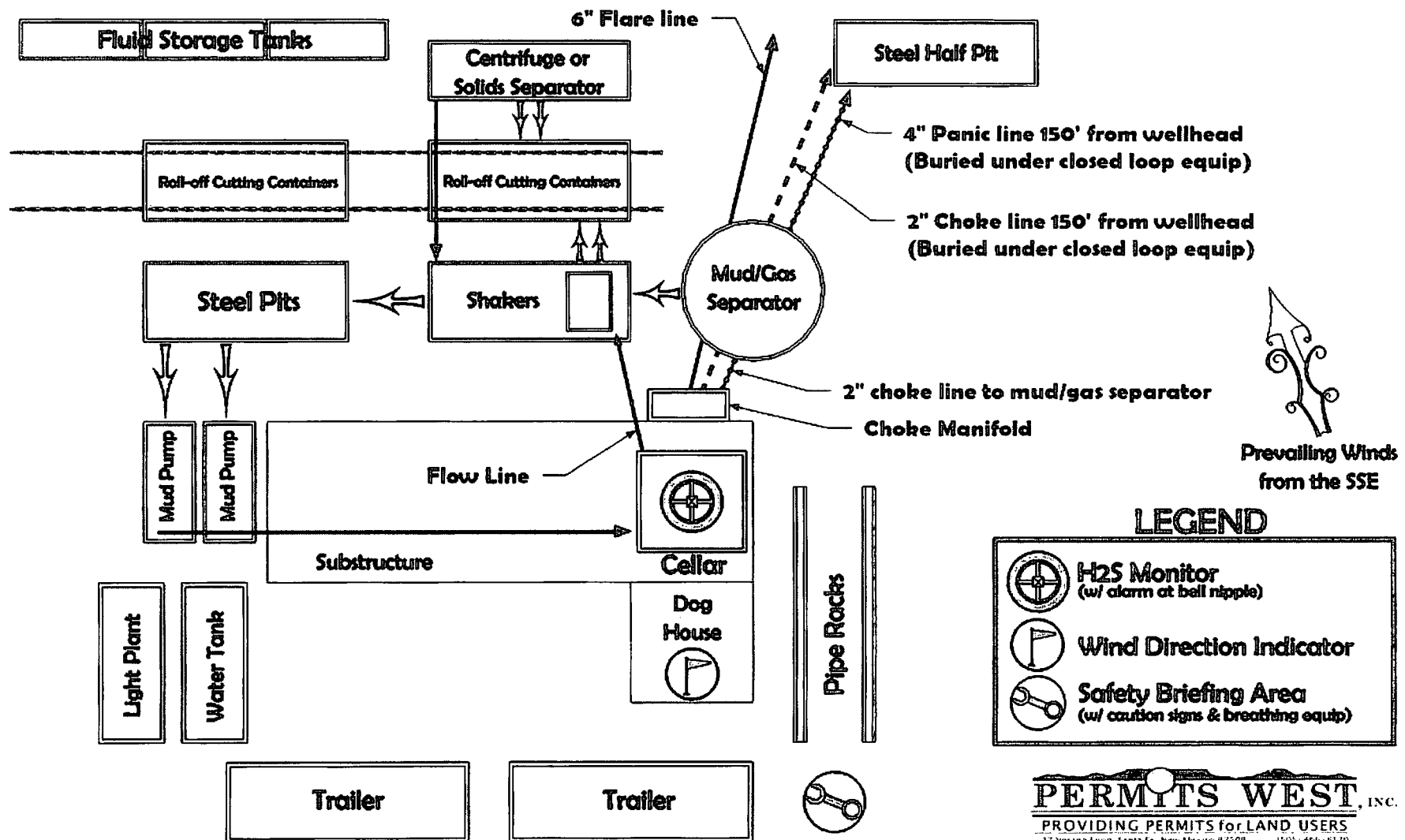
Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.

2. Safety valves and necessary subs to fit all drill string in use will be available.



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

# Rig and Closed Loop System with H2S Safety Equipment Diagram





	Hole OD	Casing OD	Casing ID	Weight	Grade	Connection	Burst	Collapse	Tensile	Length	String Weight	Mud Weight ppg	Mud Gradient psi/ft
Surface	12.250	8.625	8.097	24.0	J-55	STC	2,950	1,370	244,000	1,625	39,000	8.5	0.44
Production	7.875	5.500	4.950	15.5	J-55	LTC	4,810	4,040	217,000	4,500	69,750	10.0	0.52

Casing Parameters

Tensile

SF\_t = Tensile / String Weight ; must be greater than 2.0

	Casing OD	Tensile	String Weight	SF_t
Surface	8.625	244,000	39,000.00	6.26
Production	5.500	217,000	69,750.00	3.11

Collapse

SF\_c = Collapse / (mud gradient x TVD) ; must be greater than 1.18

	Casing OD	Collapse	Mud Gradient x TVD	SF_t
Surface	8.625	1,370	718.25	1.91
Production	5.500	4,040	2,340.00	1.73

Burst

SF\_b = Burst / (mud gradient x TVD) ; must be greater than 1.18

	Casing OD	Burst	Mud Gradient x TVD	SF_t
Surface	8.625	2,950	718.25	4.11
Production	5.500	4,810	2,340.00	2.06

	Hole OD	Casing OD	Casing ID	Weight	Grade	Connection	Burst	Collapse	Tensile	Length	String Weight	Mud Weight ppg	Mud Gradient psi/ft
Surface	12.250	8.625	8.097	24.0	J-55	STC	2,950	1,370	244,000	1,625	39,000	8.5	0.44
Production	7.875	5.500	4.950	15.5	J-55	LTC	4,810	4,040	217,000	4,500	69,750	10.0	0.52

Casing Parameters

Tensile

SF\_t = Tensile / String Weight ; must be greater than 2.0

	Casing OD	Tensile	String Weight	SF_t
Surface	8.625	244,000	39,000.00	6.26
Production	5.500	217,000	69,750.00	3.11

Collapse

SF\_c = Collapse / (mud gradient x TVD) ; must be greater than 1.18

	Casing OD	Collapse	Mud Gradient x TVD	SF_t
Surface	8.625	1,370	718.25	1.91
Production	5.500	4,040	2,340.00	1.73

Burst

SF\_b = Burst / (mud gradient x TVD) ; must be greater than 1.18

	Casing OD	Burst	Mud Gradient x TVD	SF_t
Surface	8.625	2,950	718.25	4.11
Production	5.500	4,810	2,340.00	2.06

Forty Acres Energy, LLC  
West Eumont Unit 523  
10' FSL & 2481' FWL  
Sec. 26, T. 20 S., R. 36 E.  
Lea County, NM

DRILLING PLAN PAGE 1

Drilling Program

1. ESTIMATED TOPS

<u>Name</u>	<u>TVD</u>	<u>Subsea</u>	<u>Content</u>
Quaternary caliche	0'	3568'	fresh water
Rustler anhydrite	1365'	2203'	barren
Tansill sandstone	2763'	805'	barren
Yates sandstone	2920'	648'	oil, gas, saltwater
Seven Rivers dolomite	3238'	330'	oil, gas, saltwater
Queen dolomite	3703'	-135'	oil, gas, saltwater
Grayburg dolomite	4078'	-510'	oil, gas, saltwater
Total Depth	4500'	-932'	oil, gas

2. NOTABLE ZONES

Water zones will be protected with casing, cement, and weighted mud. Closest water well (L 02584) is 2942' northeast. Water bearing strata was reported in that well at 290'. Grayburg will not be perforated.

3. PRESSURE CONTROL

A 2000 psi BOP stack and manifold system will be used. A typical 2000 psi system is attached. If the equipment changes, then a Sundry Notice will be filed. System will meet Onshore Orders 2 (BOP) and 6 (H<sub>2</sub>S) requirements.

Blowout preventer equipment (BOP) will include a 2000 psi rated, "XLT" type, NOV double ram preventer that will be tested to a maximum pressure of 2000 psi. Unit will be hydraulically operated. Ram type preventer will be equipped with pipe rams on top and blind pipe rams on bottom. The 2M BOP will be installed on the 8.625" surface casing and used continuously until TD is reached. All

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West Eumont Unit 523  
10' FSL & 2481' FWL  
Sec. 26, T. 20 S., R. 36 E.  
Lea County, NM

DRILLING PLAN PAGE 2

casing strings will be tested per Onshore Order #2. This also includes a 30-day test, should the rig still be operating on the same well for 30 days.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These function tests will be documented on the daily drilling logs.

BOP equipment will consist of the following:

- Double ram with blind ram and pipe ram
- Drilling spool, or blowout preventer with 2 side outlets (choke side and kill side will be  $\geq 2$ " diameter)
- Kill line ( $\geq 2$ " diameter) & kill line valve ( $\geq 2$ " diameter)
- $\geq 2$ " diameter choke line with  $\geq 2$ " diameter valves
- 2 chokes, at least one will be capable of remote operation
- Pressure gauge on choke manifold
- Upper Kelly cock valve with handle available
- Safety valve and subs to fit all drill string connections in use
- All BOPE connections subject to well pressure will be flanged, welded, or clamped
- A fill-up line above the uppermost preventer

#### 4. CASING & CEMENT

All casing will be new and API. Centralizers will be installed as required by Onshore Order 2.

Type	Setting Depth	Hole	Casing	#/ft	Grade	Joint	Burst	Collapse	Tension
Surface	1650'	12.25"	8.625"	24	J-55	ST&C	2950	1370	244,000
Production	4500'	7.875"	5.5"	15.5	J-55	LT&C	4810	4040	217,000

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 West Eumont Unit 523  
 10' FSL & 2481' FWL  
 Sec. 26, T. 20 S., R. 36 E.  
 Lea County, NM

DRILLING PLAN PAGE 3

casing	depth range	sacks cement	density (ppg)	yield (cu ft per sack)	total cu ft	% excess	Type	Additives
Surface lead	GL - 1475'	650	13.5	1.72	609	100	Class C	4% bentonite gel + 0.4% defoamer + 0.25 lb/sk cellophane flakes
Surface tail	1475' - 1650'	200	14.8	1.34	72	100	Class C	1% CaCl <sub>2</sub> + 0.25 lb/sk cellophane flakes
Production lead	GL - 3000'	235	11.0	3.22	520	20	50/50 poz C	5 bwow sodium chloride + 0.4% fluid loss additive + 3.5% accelerator/suspension aid + 0.4% defoamer + 3 lb/sk LCM
Production tail	3000' - 4500'	160	14.8	1.33	260	20	Class C	0.1% fluid loss additive + 0.2% dispersant + 3 lb/sk Kol Seal LCM

Cement volumes will be adjusted based on caliper log volumes and casing depths and adjusted proportionately as needed.

## 5. MUD PROGRAM

A PVT/Pason/visual mud monitoring system will be used. Appropriate additives (bentonite, cedar bark) will be on site to manage any abnormal hole condition (lost circulation, pressure) that could be encountered while drilling this well. Circulation could be lost in the Grayburg. A closed loop system will be used.

Type	Interval	lb/gal	Viscosity	Fluid Loss
Spud mud	0' - 1700'	9.4 - 9.9	30	N/C
Salt saturated	1700' - 4500'	9.7 - 10.0	32	N/C

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West Eumont Unit 523  
10' FSL & 2481' FWL  
Sec. 26, T. 20 S., R. 36 E.  
Lea County, NM

DRILLING PLAN PAGE 4

#### 6. CORES, TESTS, & LOGS

No core or drill stem test is planned. A Weatherford composite log, or its equivalent, will be run.

#### 7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is 1925 psi. Maximum expected bottom hole temperature is 100°F. H<sub>2</sub>S could be encountered. H<sub>2</sub>S monitoring equipment will be on the rig floor and air packs will be available before drilling out of the surface casing. The mud logger will use a gas trap to detect H<sub>2</sub>S. If H<sub>2</sub>S is detected, then the mud weight will be increased and H<sub>2</sub>S inhibitors will be added to control the gas. An H<sub>2</sub>S drilling operations contingency plan is attached.

#### 8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take ≈1 month to drill and complete the well.



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## SUPO Data Report

01/09/2019

**APD ID:** 10400030751

**Submission Date:** 06/01/2018

Highlighted data  
reflects the most  
recent changes

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

[Show Final Text](#)

**Well Type:** INJECTION - ENHANCED RECOVERY

**Well Work Type:** Drill

### Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

WEumont\_523\_road\_map\_20180531135915.pdf

**Existing Road Purpose:** ACCESS

**Row(s) Exist?** NO

**ROW ID(s)**

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

### Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

WEumont\_523\_new\_road\_map\_20180531135939.pdf

**New road type:** RESOURCE

**Length:** 674.8

Feet

**Width (ft.):** 30

**Max slope (%):** 0

**Max grade (%):** 1

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 14

**New road access erosion control:** Crowned and ditched

**New road access plan or profile prepared?** NO

**New road access plan attachment:**

**Access road engineering design?** NO

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Grader

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** Crowned and ditched

**Road Drainage Control Structures (DCS) description:** None

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

**Additional Attachment(s):**

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

WEumont\_523\_well\_map\_20180531140118.pdf

**Existing Wells description:**

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** An 4050.6' long buried water pipeline (826.1' of 2" + 3224.5' of 4") will be built north from Forty Acres WEU water injection plant. Plant is now under construction. No power line is needed. Only surface equipment on the pad will be the wellhead.

**Production Facilities map:**

WEumont\_523\_production\_facilities\_20180531140134.pdf

## Section 5 - Location and Types of Water Supply



**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**Water source use type:** DUST CONTROL,  
INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE  
CASING

**Water source type:** OTHER

**Describe type:** Water tank

**Source longitude:**

**Source latitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Source land ownership:** PRIVATE

**Water source transport method:** TRUCKING

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 10000

**Source volume (acre-feet):** 1.288931

**Source volume (gal):** 420000

**Water source and transportation map:**

WEumont\_523\_water\_source\_map\_20180531140459.pdf

**Water source comments:**

**New water well?** NO

### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

## Section 6 - Construction Materials

**Construction Materials description:** NM One Call (811) will be notified before construction starts. Top 6" of soil and brush will be stockpiled north of the pad. V-door will face east. Closed loop drilling system will be used. Caliche will be hauled from an existing caliche pit on private (Cooper) land in N2SW4 26-20s-36e.

**Construction Materials source location attachment:**

WEumont\_523\_construction\_methods\_materials\_20180531140523.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drill cuttings, mud, salts, and other chemicals

**Amount of waste:** 1000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** Steel tanks

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** R360's state approved (NM-01-0006) disposal site at Halfway, NM

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

## Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** YES

**Description of cuttings location** Steel tanks on pad

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

## Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

WEumont\_523\_well\_site\_layout\_20180601123818.pdf

**Comments:**

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:**

**Multiple Well Pad Number:**

**Recontouring attachment:**

WEumont\_523\_recontour\_plat\_20180601123723.pdf

**Drainage/Erosion control construction:** Crowned and ditched

**Drainage/Erosion control reclamation:** Harrowed on the contour

<b>Well pad proposed disturbance (acres):</b> 1.43	<b>Well pad interim reclamation (acres):</b> 0.51	<b>Well pad long term disturbance (acres):</b> 0.92
<b>Road proposed disturbance (acres):</b> 0.46	<b>Road interim reclamation (acres):</b> 0	<b>Road long term disturbance (acres):</b> 0.46
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 2.79	<b>Pipeline interim reclamation (acres):</b> 2.79	<b>Pipeline long term disturbance (acres):</b> 0
<b>Other proposed disturbance (acres):</b> 0	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0
<b>Total proposed disturbance:</b> 4.68	<b>Total interim reclamation:</b> 3.3	<b>Total long term disturbance:</b> 1.38

**Disturbance Comments:**

**Reconstruction method:** Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad 36% (0.51 acre) by removing caliche and reclaiming a 25' wide swath on all sides of the pad.

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with surface owner's requirements.

**Topsoil redistribution:** Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the well is plugged, then the rest of the pad and new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

**Soil treatment:** None

**Existing Vegetation at the well pad:**

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:**

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:**

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:**

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Well Number: 523**

**Proposed seeding season:**

**Total pounds/Acre:**

## Pounds/Acre

### Operator Contact/Responsible Official Contact Info

**Email:**

**Pit closure attachment:**

## Section 11 - Surface Ownership

**COE Local Office:**

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Fee Owner:** Dale Cooper Family Trust

**Fee Owner Address:** PO Box 6 Monument NM 88265

**Phone:** (575)390-7996

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** See attached at end of SUPO section

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Disturbance type:** OTHER

**Describe:** Water lines

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Fee Owner:** Dale Cooper Family Trust

**Fee Owner Address:** PO Box 6 Monument NM 88265

**Phone:** (575)390-7996

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** See attached at end of SUPO section

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** FORTY ACRES ENERGY LLC

**Well Name:** WEST EUMONT UNIT

**Well Number:** 523

**Fee Owner:** Dale Cooper Family Trust

**Fee Owner Address:** PO Box 6 Monument NM 88265

**Phone:** (575)390-7996

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** See attached at end of SUPO section

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

## ROW Applications

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** On site inspection was held with Jesse Bassett (BLM) on March 26, 2018. Lone Mountain inspected and filed archaeology reports NMCRIS-139931 (well and road) and NMCRIS 139916 (pipelines) in late February 2018.

## Other SUPO Attachment

WEumont\_523\_surface\_use\_agreement\_20180531141156.pdf

WEumont\_523\_suppo\_20180531141309.pdf





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## PWD Data Report

01/09/2019

### 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? NO

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:

Describe 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:

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:

### **Section 3 - Unlined Pits**

**Would you like to utilize Unlined Pit PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Describe 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?**

**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? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**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? NO**

**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? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



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

## Bond Info Data Report

01/09/2019

### Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** NMB001380

**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:**