Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM014164 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: Oil Well 1b. Type of Well: Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing Single Zone ✓ Multiple Zone SAKER 6-7 FEDERAL COM [330848] 32H 2. Name of Operator 9. API Well No. 30-025-48933 [16696] **OXY USA INCORPORATED** 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory [2200] P O BOX 50250, MIDLAND, TX 79710 (143) 268-5571 ANTELOPE RIDGE; BONE SPRING/ANT 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 6/T24S/R35E/NMP At surface LOT 1 / 180 FNL / 950 FEL / LAT 32.253324 / LONG -103.401217 At proposed prod. zone SWSE / 20 FSL / 2306 FEL / LAT 32.224839 / LONG -103.405521 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State I FA NM 27.7 miles 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 20 feet location to nearest property or lease line, ft. 640.06 (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 30 feet 11850 feet / 21947 feet FED: ESB000226 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 3450 feet 03/01/2021 45 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature LESLIE REEVES / Ph: (713) 366-5716 08/25/2020 (Electronic Submission) Title Advisor Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) Cody Layton / Ph: (575) 234-5959 04/21/2021 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

GCP Rec 04/26/2021

APPROVED WITH CONDITIONS

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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(Continued on page 2)

\*(Instructions on page 2)

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: OXY USA INC.
LEASE NO.: NMNM014164

LOCATION: Section 6, T.24 S., R.35 E., NMP

**COUNTY:** Lea County, New Mexico

**WELL NAME & NO.:** | SAKER 6-7 FEDERAL COM 31H

**SURFACE HOLE FOOTAGE:** 200'/N & 1960'/W **BOTTOM HOLE FOOTAGE** 20'/S & 1000'/W

WELL NAME & NO.: SAKER 6-7 FEDERAL COM 32H

**SURFACE HOLE FOOTAGE:** 180'/N & 950'/E **BOTTOM HOLE FOOTAGE** 20'/S & 2306'/E

**WELL NAME & NO.:** | SAKER 6-7 FEDERAL COM 33H

**SURFACE HOLE FOOTAGE:** 180'/N & 885'/E **BOTTOM HOLE FOOTAGE** 20'/S & 1000'/E

**WELL NAME & NO.:** | SAKER 6-7 FEDERAL COM 34H

**SURFACE HOLE FOOTAGE:** 200'/N & 1930'/W **BOTTOM HOLE FOOTAGE** 20'/S & 660'/W

WELL NAME & NO.: SAKER 6-7 FEDERAL COM 35H

**SURFACE HOLE FOOTAGE:** 200'/N & 1995'/W **BOTTOM HOLE FOOTAGE** 20'/S & 1640'/W

**WELL NAME & NO.:** | SAKER 6-7 FEDERAL COM 36H

**SURFACE HOLE FOOTAGE:** 200'/N & 2030'/W **BOTTOM HOLE FOOTAGE** 20'/S & 2301'/W

WELL NAME & NO.: | SAKER 6-7 FEDERAL COM 37H

**SURFACE HOLE FOOTAGE:** 190'/N & 920'/E **BOTTOM HOLE FOOTAGE** 20'/S & 1640'/E

WELL NAME & NO.: | SAKER 6-7 FEDERAL COM 38H

**SURFACE HOLE FOOTAGE:** 180'/N & 850'/E **BOTTOM HOLE FOOTAGE** 20'/S & 331'/E

COA

H2S	C Yes	⊙ No	
Potash	• None	© Secretary	C 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		Pilot Hole
Special Requirements	Water Disposal	<b>☑</b> 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**

#### **Casing Design:**

- 1. The 10-3/4 inch surface casing shall be set at approximately 998 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 **7-5/8** inch intermediate casing shall be set at approximately **10851** feet. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

#### **Option 1 (Single Stage):**

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

#### Option 2:

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, contact the appropriate BLM office.

Operator has proposed to pump down 10-3/4" X 7-5/8" annulus. Operator must run a CBL or ECHO-METER from TD of the 7-5/8" casing to surface. Submit results to BLM.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

#### **Option 1 (Single Stage):**

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

#### Option 2:

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

#### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

#### **Option 1:**

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

#### **Option 2:**

- 1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

• The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

#### **Offline Cementing**

• Contact the BLM prior to the commencement of any offline cementing procedure.

#### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted (575-393-3612 Lea County) 4 hours prior to BOPE tests
- As a minimum, a full BOPE test shall be performed at 21-day intervals. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

#### **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 CountyCall 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 2<sup>nd</sup> 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
  - 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.

NMK04122021

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

# **Application Data Report**

APD ID: 10400060717

**Operator Name: OXY USA INCORPORATED** 

Well Name: SAKER 6-7 FEDERAL COM

Well Type: OIL WELL

Submission Date: 08/25/2020

Well Number: 32H

Well Work Type: Drill

Highlighted data reflects the most

recent changes

**Show Final Text** 

#### Section 1 - General

APD ID: 10400060717 Tie to previous NOS? N

Submission Date: 08/25/2020

**BLM Office: CARLSBAD** 

**User: LESLIE REEVES** 

Title: Advisor Regulatory

Federal/Indian APD: FED

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

Lease number: NMNM014164

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

**Zip:** 77046

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

**Permitting Agent?** NO

**APD Operator: OXY USA INCORPORATED** 

Operator letter of designation:

SAKER 32H 8 25 20 20200827062814.pdf

#### **Operator Info**

**Operator Organization Name: OXY USA INCORPORATED** 

Operator Address: 5 Greenway Plaza, Suite 110

Operator PO Box:

**Operator City:** Houston

State: TX

**Operator Phone:** (713)366-5716

**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: SAKER 6-7 FEDERAL COM

Well Number: 32H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: ANTELOPE RIDGE; Pool Name: ANTELOPE

**BONE SPRING** 

RIDGE; BONE SPRING

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

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

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: MULTIPLE WELL Multiple Well Pad Name: Number: 32H, 37H, 33H, 38H,

Well Class: HORIZONTAL SAKER 6-7 FEDERAL COM 4H, 5H, 6H

Number of Legs: 1

Well Work Type: Drill
Well Type: OIL WELL
Describe Well Type:
Well sub-Type: INFILL
Describe sub-type:

Distance to town: 27.7 Miles Distance to nearest well: 30 FT Distance to lease line: 20 FT

Reservoir well spacing assigned acres Measurement: 640.06 Acres

**Well plat:** Saker6\_7FdCom32H\_C102\_20200821095905.pdf

Saker6 7FdCom32H SitePlan 20200821100014.pdf

#### **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	180	FNL	950	FEL	24S	35E	6	Lot 1	32.25332 4	- 103.4012 17	l	NEW MEXI CO		F	NMNM 14164	345 0	0	0	Ν
KOP Leg #1	50	FNL	230 6	FEL	24S	35E	6	Lot 2	32.25367 8	- 103.4056 05	LEA		NEW MEXI CO	IL.	NMNM 14164	- 751 0	111 07	109 60	N

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

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?
PPP Leg #1-1	100	FNL	230 6	FEL	24S	35E	6	Lot 2	32.25354 1	103.4056 04	LEA	NEW MEXI CO		F	NMNM 14164	- 808 2	120 04	115 32	Y
PPP Leg #1-2	4	FSL	231 1	FEL	24S	35E	7	Aliquot NWSE	32.23931	- 103.4055 66	LEA	NEW MEXI CO	—	F	FEE	- 823 1	166 79	116 81	Y
PPP Leg #1-3	262 6	FNL	230 9	FEL	24S	35E	7	Aliquot NWSE	32.23205 4	- 103.4055 45	LEA	NEW MEXI CO	—	F	NMNM 14164	- 831 6	193 21	117 66	Y
EXIT Leg #1	100	FSL	230 6	FEL	24S	35E	7	Aliquot SWSE	32.22505 8	- 103.4055 22	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 14164	- 839 6	218 67	118 46	Y
BHL Leg #1	20	FSL	230 6	FEL	24S	35E	7	Aliquot SWSE	32.22483 9	- 103.4055 21	LEA	NEW MEXI CO	NEW MEXI CO	F		- 840 0	219 47	118 50	N

#### Reeves, Leslie T

From: notification@pay.gov

Sent: Tuesday, August 25, 2020 8:56 PM

**To:** Reeves, Leslie T

**Subject:** [EXTERNAL] Pay.gov Payment Confirmation: BLM Oil and Gas Online Payment

WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.



An official email of the United States government



Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact BLM OC CBS Customer Service at (303) 236-6795 or BLM\_OC\_CBS\_Customer\_Service@blm.gov.

Application Name: BLM Oil and Gas Online Payment

Pay.gov Tracking ID: 26PPEBB9 Agency Tracking ID: 76027609140

Transaction Type: Sale

Transaction Date: 08/25/2020 09:56:25 PM EDT

Account Holder Name: LESLIE REEVES

Transaction Amount: \$10,230.00

Card Type: MasterCard

Card Number: \*\*\*\*\*\*\*\*8059

Company: OXY USA INC APD IDs: 10400060717

Lease Numbers: NMNM014164

Well Numbers: 32H

Note: You will need your Pay.gov Tracking ID to complete your APD transaction in AFMSS II.

Please ensure you write this number down upon completion of payment.

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.



Pay.gov is a program of the U.S. Department of the Treasury, Bureau of the Fiscal Service



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

Well Name: SAKER 6-7 FEDERAL COM

## Drilling Plan Data Report

Submission Date: 08/25/2020

Highlighted data reflects the most recent changes

Operator Name: OXY USA INCORPORATED

Well Number: 32H

**Show Final Text** 

Well Type: OIL WELL

**APD ID**: 10400060717

Well Work Type: Drill

#### **Section 1 - Geologic Formations**

Formation	Farmation Name	Floretion	True Vertical			Mineral Description	Producing
	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	
832964	RUSTLER	3450	797	797	ANHYDRITE, DOLOMITE, SHALE	USEABLE WATER	N
832965	SALADO	2392	1058	1058	ANHYDRITE, DOLOMITE, HALITE, SHALE	OTHER: SALT	Y
832973	CASTILE	65	3385	3385	ANHYDRITE	OTHER: SALT	N
832966	DELAWARE	-1804	5254	5254	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	N
832956	BELL CANYON	-1854	5304	5304	SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	N
832957	CHERRY CANYON	-2742	6192	6195	SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	N
832958	BRUSHY CANYON	-4106	7556	7600	SANDSTONE, SILTSTONE	NONE	Y
832963	BONE SPRING	-5292	8742	8821	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
832962	BONE SPRING 1ST	-6426	9876	9990	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
832961	BONE SPRING 2ND	-6874	10324	10452	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
832970	BONE SPRING 3RD	-7896	11346	11543	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y

#### **Section 2 - Blowout Prevention**

Pressure Rating (PSI): 5M Rating Depth: 11849

Equipment: 13-5/8" 5M Annular, Blind Ram, Double Ram

Requesting Variance? YES

Variance request: Request for the use of a flexible choke line from the BOP to Choke Manifold.

**Testing Procedure:** OXY will utilize a 5M annular with a 10M BOPE stack. BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

manifold. A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. BOP Break Testing Request Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. A separate sundry will be sent prior to spud that reflects the pad based break testing plan. BOP break test under the following conditions: After a full BOP test is conducted - When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower. - When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper. If the kill line is broken prior to skid, two tests will be performed. 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams 2) Wellhead flange, HCR valve, check valve, upper pipe rams If the kill line is not broken prior to skid, only one test will be performed. 1) Wellhead flange, co-flex hose, check valve, upper pipe rams

#### **Choke Diagram Attachment:**

Saker6 7FdCom32H ChokeManifold 20200825190333.pdf

#### **BOP Diagram Attachment:**

Saker6\_7FdCom32H\_BOP\_20200825190341.PDF Saker6\_7FdCom32H\_FlexHoseCert\_20200825190350.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	14.7 5	10,75	NEW	API	N	0	998	0	998	3450	2452	998	J-55	40.5	BUTT	1.12 5	1.2	BUOY	1.4	BUOY	1.4
2	INTERMED IATE	9.87 5	7.625	NEW	API	N	0	11007	0	10851		-7401	11007	HCL -80	26.4	BUTT	1.12 5	1.2	BUOY	1.4	BUOY	1.4
3	PRODUCTI ON	6.75	5.5	NEW	API	N	0	21947	0	11850		-8400	21947	P- 110		OTHER - DQX/DQW/ SFTORQ	1.12 5	1.2	BUOY	1.4	BUOY	1.4

#### **Casing Attachments**

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

C!	A 44 l	
Casing	Attachm	ents

Casing ID: 1 String Type: SURFACE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Saker6\_7FdCom32H\_CsgCriteria\_20200825190434.pdf

Casing ID: 2 String Type: INTERMEDIATE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Saker6\_7FdCom32H\_CsgCriteria\_20200825190650.pdf

Casing ID: 3 String Type: PRODUCTION

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Saker6\_7FdCom32H\_CsgCriteria\_20200825190725.pdf

**Section 4 - Cement** 

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	998	822	1.33	14.8	1093	100	Class C Cement	Accelerator
INTERMEDIATE	Lead	2	0	7806	960	1.92	12.9	1843	10	Class C	Acclerator
INTERMEDIATE	Lead	2	7806	1100 7	445	1.65	13.2	734	5	Class H	Retarder, Dispersant, Salt
PRODUCTION	Lead		1050 7	2194 7	839	1.38	13.2	1158	20	Class H Cement	Retarder, Dispersant, Salt

#### **Section 5 - Circulating Medium**

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CaCl2.

Describe the mud monitoring system utilized: PVT/MD Totco/Visual Monitoring

#### **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	HA	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
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Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
998	1100 7	OTHER: Saturated Brine- Based Mud or Oil-Based Mud	8	10							
0	998	WATER-BASED MUD	8.6	8.8							
1100 7	2194 7	OTHER : Water- Based Mud and/or Oil-Based Mud	9.5	12							

#### **Section 6 - Test, Logging, Coring**

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

GR from TD to surface (horizontal well vertical portion of hole). Mud Log from Intermediate casing shoe to TD.

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

GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,DIRECTIONAL SURVEY.

Coring operation description for the well:

No coring is planned at this time.

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 7394 Anticipated Surface Pressure: 4787

**Anticipated Bottom Hole Temperature(F):** 175

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

Describe:

**Contingency Plans geoharzards description:** 

**Contingency Plans geohazards attachment:** 

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Saker6\_7FdCom32H\_H2S1\_20200825192952.pdf Saker6\_7FdCom32H\_H2S2\_20200825192959.pdf

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Saker6\_7FdCom32H\_H2SEmerCont\_20200825193040.pdf

#### **Section 8 - Other Information**

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

Saker6\_7FdCom32H\_DirectPlan\_20200825193130.pdf Saker6\_7FdCom32H\_DirectPlot\_20200825193235.pdf

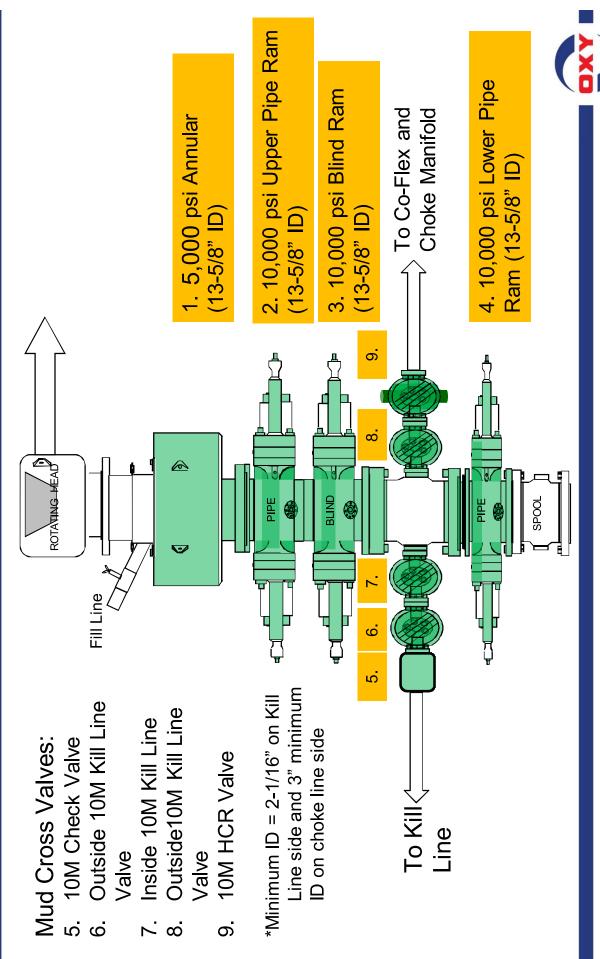
Other proposed operations facets description:

#### Other proposed operations facets attachment:

Saker6\_7FdCom32H\_DrillPlan\_20200825193255.pdf Saker6\_7FdCom32H\_SpudRigData\_20200825193320.pdf

Other Variance attachment:

# 5/10M BOP Stack







#

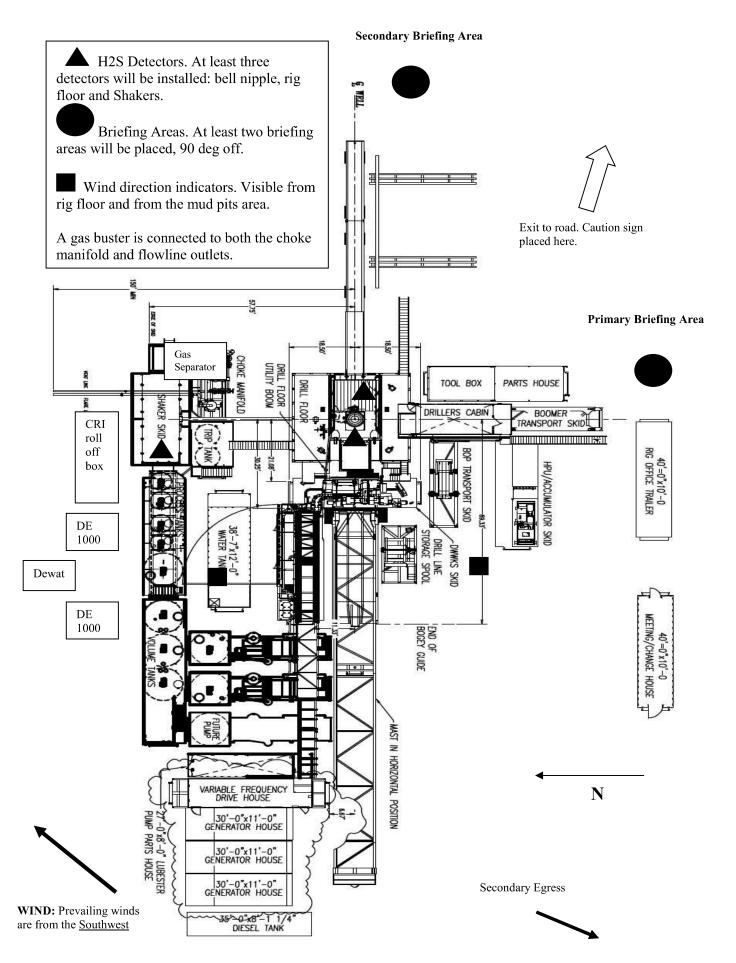


# Permian Drilling Hydrogen Sulfide Drilling Operations Plan Saker 6\_7 Fed Com 32H

Open drill site. No homes or buildings are near the proposed location.

#### 1. Escape

Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.





# Permian Drilling Hydrogen Sulfide Drilling Operations Plan New Mexico

#### **Scope**

This contingency plan establishes guidelines for the public, all company employees, and contract employees who's work activities may involve exposure to hydrogen sulfide (H2S) gas.

While drilling this well, it is possible to encounter H2S bearing formations. At all times, the first barrier to control H2S emissions will be the drilling fluid, which will have a density high enough to control influx.

#### **Objective**

- 1. Provide an immediate and predetermined response plan to any condition when H2S is detected. All H2S detections in excess of 10 parts per million (ppm) concentration are considered an Emergency.
- 2. Prevent any and all accidents, and prevent the uncontrolled release of hydrogen sulfide into the atmosphere.
- 3. Provide proper evacuation procedures to cope with emergencies.
- 4. Provide immediate and adequate medical attention should an injury occur.

#### **Discussion**

Implementation: This plan with all details is to be fully implemented

before drilling to commence.

Emergency response

Procedure:

This section outlines the conditions and denotes steps

to be taken in the event of an emergency.

Emergency equipment

Procedure:

This section outlines the safety and emergency

equipment that will be required for the drilling of this

well.

Training provisions: This section outlines the training provisions that must

be adhered to prior to drilling.

Drilling emergency call lists: Included are the telephone numbers of all persons to

be contacted should an emergency exist.

Briefing: This section deals with the briefing of all people

involved in the drilling operation.

Public safety: Public safety personnel will be made aware of any

potential evacuation and any additional support

needed.

Check lists: Status check lists and procedural check lists have been

included to insure adherence to the plan.

General information: A general information section has been included to

supply support information.

#### **Hydrogen Sulfide Training**

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

- 1. The hazards and characteristics of H2S.
- 2. Proper use and maintenance of personal protective equipment and life support systems.
- 3. H2S detection.
- 4. Proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
- 5. Proper techniques for first aid and rescue procedures.
- 6. Physical effects of hydrogen sulfide on the human body.
- 7. Toxicity of hydrogen sulfide and sulfur dioxide.
- 8. Use of SCBA and supplied air equipment.
- 9. First aid and artificial respiration.
- 10. Emergency rescue.

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

- 1. The effects of H2S on metal components. If high tensile strength tubular is to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling a well, blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan.

H2S training refresher must have been taken within one year prior to drilling the well. Specifics on the well to be drilled will be discussed during the pre-spud meeting. H2S and well control (choke) drills will be performed while drilling the well, at least on a weekly basis. This plan shall be available in the well site. All personnel will be required to carry the documentation proving that the H2S training has been taken.

#### Service company and visiting personnel

- A. Each service company that will be on this well will be notified if the zone contains H2S.
- B. Each service company must provide for the training and equipment of their employees before they arrive at the well site.
- C. Each service company will be expected to attend a well site briefing

#### **Emergency Equipment Requirements**

#### 1. <u>Well control equipment</u>

The well shall have hydraulic BOP equipment for the anticipated pressures. Equipment is to be tested on installation and follow Oxy Well Control standard, as well as BLM Onshore Order #2.

#### Special control equipment:

- A. Hydraulic BOP equipment with remote control on ground. Remotely operated choke.
- B. Rotating head
- C. Gas buster equipment shall be installed before drilling out of surface pipe.

#### 2. <u>Protective equipment for personnel</u>

- A. Four (4) 30-minute positive pressure air packs (2 at each briefing area) on location.
- B. Adequate fire extinguishers shall be located at strategic locations.
- C. Radio / cell telephone communication will be available at the rig.
  - Rig floor and trailers.
  - Vehicle.

#### 3. Hydrogen sulfide sensors and alarms

- A. H2S sensor with alarms will be located on the rig floor, at the bell nipple, and at the flow line. These monitors will be set to alarm at 10 ppm with strobe light, and audible alarm.
- B. Hand operated detectors with tubes.
- C. H2S monitor tester (to be provided by contract Safety Company.)
- D. There shall be one combustible gas detector on location at all times.

#### 4. <u>Visual Warning Systems</u>

A. One sign located at each location entrance with the following language:

Caution – potential poison gas Hydrogen sulfide No admittance without authorization

#### *Wind sock – wind streamers:*

- A. One 36" (in length) wind sock located at protection center, at height visible from rig floor.
- B. One 36" (in length) wind sock located at height visible from pit areas.

#### Condition flags

A. One each condition flag to be displayed to denote conditions.

```
green – normal conditions
yellow – potential danger
red – danger, H2S present
```

B. Condition flag shall be posted at each location sign entrance.

#### 5. <u>Mud Program</u>

The mud program is designed to minimize the risk of having H2S and other formation fluids at surface. Proper mud weight and safe drilling practices will be applied. H2S scavengers will be used to minimize the hazards while drilling. Below is a summary of the drilling program.

*Mud inspection devices:* 

Garrett gas train or hatch tester for inspection of sulfide concentration in mud system.

#### 6. <u>Metallurgy</u>

- A. Drill string, casing, tubing, wellhead, blowout preventers, drilling spools or adapters, kill lines, choke manifold, lines and valves shall be suitable for the H2S service.
- B. All the elastomers, packing, seals and ring gaskets shall be suitable for H2S service.

#### 7. Well Testing

No drill stem test will be performed on this well.

#### 8. Evacuation plan

Evacuation routes should be established prior to well spud for each well and discussed with all rig personnel.

#### 9. <u>Designated area</u>

- A. Parking and visitor area: all vehicles are to be parked at a predetermined safe distance from the wellhead.
- B. There will be a designated smoking area.
- C. Two briefing areas on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds perpendicularly, or at a 45-degree angle if wind direction tends to shift in the area.

#### **Emergency procedures**

- A. In the event of any evidence of H2S level above 10 ppm, take the following steps:
  - 1. The Driller will pick up off bottom, shut down the pumps, slow down the pipe rotation.
  - 2. Secure and don escape breathing equipment, report to the upwind designated safe briefing / muster area.
  - 3. All personnel on location will be accounted for and emergency search should begin for any missing, the Buddy System will be implemented.
  - 4. Order non-essential personnel to leave the well site, order all essential personnel out of the danger zone and upwind to the nearest designated safe briefing / muster area.
  - 5. Entrance to the location will be secured to a higher level than our usual "Meet and Greet" requirement, and the proper condition flag will be displayed at the entrance to the location.
  - 6. Take steps to determine if the H2S level can be corrected or suppressed and, if so, proceed as required.

#### B. If uncontrollable conditions occur:

1. Take steps to protect and/or remove any public in the down-wind area from the rig – partial evacuation and isolation. Notify necessary public safety personnel and appropriate regulatory entities (i.e. BLM) of the situation.

- 2. Remove all personnel to the nearest upwind designated safe briefing / muster area or off location.
- 3. Notify public safety personnel of safe briefing / muster area.
- 4. An assigned crew member will blockade the entrance to the location. No unauthorized personnel will be allowed entry to the location.
- 5. Proceed with best plan (at the time) to regain control of the well. Maintain tight security and safety procedures.

#### C. Responsibility:

- 1. Designated personnel.
  - a. Shall be responsible for the total implementation of this plan.
  - b. Shall be in complete command during any emergency.
  - c. Shall designate a back-up.

- 1. On alarm, don escape unit and report to the nearest upwind designated safe briefing / muster area upw
- 2. Check status of personnel (buddy system).
- 3. Secure breathing equipment.
- 4. Await orders from supervisor.

Drill site manager:

- 1. Don escape unit if necessary and report to nearest upwind designated safe briefing / muster area.
- 2. Coordinate preparations of individuals to return to point of release with tool pusher and driller (using the buddy system).
- 3. Determine H2S concentrations.
- 4. Assess situation and take control measures.

Tool pusher:

- 1. Don escape unit Report to up nearest upwind designated safe briefing / muster area.
- 2. Coordinate preparation of individuals to return to point of release with tool pusher drill site manager (using the buddy system).
- 3. Determine H2S concentration.
- 4. Assess situation and take control measures.

Driller:

1. Don escape unit, shut down pumps, continue

- rotating DP.
- 2. Check monitor for point of release.
- 3. Report to nearest upwind designated safe briefing / muster area.
- 4. Check status of personnel (in an attempt to rescue, use the buddy system).
- 5. Assigns least essential person to notify Drill Site Manager and tool pusher by quickest means in case of their absence.
- 6. Assumes the responsibilities of the Drill Site Manager and tool pusher until they arrive should they be absent.

Derrick man Floor man #1 Floor man #2 1. Will remain in briefing / muster area until instructed by supervisor.

Mud engineer:

- 1. Report to nearest upwind designated safe briefing / muster area.
- 2. When instructed, begin check of mud for ph and H2S level. (Garett gas train.)

Safety personnel:

1. Mask up and check status of all personnel and secure operations as instructed by drill site manager.

#### Taking a kick

When taking a kick during an H2S emergency, all personnel will follow standard Well control procedures after reporting to briefing area and masking up.

#### **Open-hole logging**

All unnecessary personnel off floor. Drill Site Manager and safety personnel should monitor condition, advise status and determine need for use of air equipment.

#### Running casing or plugging

Following the same "tripping" procedure as above. Drill Site Manager and safety personnel should determine if all personnel have access to protective equipment.

#### **Ignition procedures**

The decision to ignite the well is the responsibility of the operator (Oxy Drilling Management). The decision should be made only as a last resort and in a situation where it is clear that:

- 1. Human life and property are endangered.
- 2. There is no hope controlling the blowout under the prevailing conditions at the well.

#### Instructions for igniting the well

- 1. Two people are required for the actual igniting operation. They must wear self-contained breathing units and have a safety rope attached. One man (tool pusher or safety engineer) will check the atmosphere for explosive gases with the gas monitor. The other man is responsible for igniting the well.
- 2. Primary method to ignite: 25 mm flare gun with range of approximately 500 feet.
- 3. Ignite upwind and do not approach any closer than is warranted.
- 4. Select the ignition site best for protection, and which offers an easy escape route.
- 5. Before firing, check for presence of combustible gas.
- 6. After lighting, continue emergency action and procedure as before.
- 7. All unassigned personnel will remain in briefing area until instructed by supervisor or directed by the Drill Site Manager.

**Remember**: After well is ignited, burning hydrogen sulfide will convert to sulfur dioxide, which is also highly toxic. **Do not assume the area is safe after the well is ignited.** 

#### **Status check list**

Note: All items on this list must be completed before drilling to production casing point.

- 1. H2S sign at location entrance.
- 2. Two (2) wind socks located as required.
- 3. Four (4) 30-minute positive pressure air packs (2 at each Briefing area) on location for all rig personnel and mud loggers.
- 4. Air packs inspected and ready for use.
- 5. Cascade system and hose line hook-up as needed.
- 6. Cascade system for refilling air bottles as needed.
- 7. Condition flag on location and ready for use.
- 8. H2S detection system hooked up and tested.
- 9. H2S alarm system hooked up and tested.
- 10. Hand operated H2S detector with tubes on location.
- 11. 1 100' length of nylon rope on location.
- 12. All rig crew and supervisors trained as required.
- 13. All outside service contractors advised of potential H2S hazard on well.
- 14. No smoking sign posted and a designated smoking area identified.
- 15. Calibration of all H2S equipment shall be noted on the IADC report.

Checked by:	Date:	

## Procedural check list during H2S events

#### Perform each tour:

- 1. Check fire extinguishers to see that they have the proper charge.
- 2. Check breathing equipment to ensure that it in proper working order.
- 3. Make sure all the H2S detection system is operative.

#### Perform each week:

- 1. Check each piece of breathing equipment to make sure that demand or forced air regulator is working. This requires that the bottle be opened and the mask assembly be put on tight enough so that when you inhale, you receive air or feel air flow.
- 2. BOP skills (well control drills).
- 3. Check supply pressure on BOP accumulator stand by source.
- 4. Check breathing equipment mask assembly to see that straps are loosened and turned back, ready to put on.
- 5. Check pressure on breathing equipment air bottles to make sure they are charged to full volume. (Air quality checked for proper air grade "D" before bringing to location)
- 6. Confirm pressure on all supply air bottles.
- 7. Perform breathing equipment drills with on-site personnel.
- 8. Check the following supplies for availability.
  - A. Emergency telephone list.
  - B. Hand operated H2S detectors and tubes.

#### **General evacuation plan**

- 1. When the company approved supervisor (Drill Site Manager, consultant, rig pusher, or driller) determines the H2S gas cannot be limited to the well location and the public will be involved, he will activate the evacuation plan.
- 2. Drill Site Manager or designee will notify local government agency that a hazardous condition exists and evacuation needs to be implemented.
- 3. Company or contractor safety personnel that have been trained in the use of H2S detection equipment and self-contained breathing equipment will monitor H2S concentrations, wind directions, and area of exposure. They will delineate the outer perimeter of the hazardous gas area. Extension to the evacuation area will be determined from information gathered.
- 4. Law enforcement personnel (state police, police dept., fire dept., and sheriff's dept.) Will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.
- 5. After the discharge of gas has been controlled, company safety personnel will determine when the area is safe for re-entry.

<u>Important:</u> Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

## **Emergency actions**

## Well blowout – if emergency

- 1. Evacuate all personnel to "Safe Briefing / Muster Areas" or off location if needed.
- 2. If sour gas evacuate rig personnel.
- 3. If sour gas evacuate public within 3000 ft radius of exposure.
- 4. Don SCBA and shut well in if possible using the buddy system.
- 5. Notify Drilling Superintendent and call 911 for emergency help (fire dept and ambulance) if needed.
- 6. Implement the Blowout Contingency Plan, and Drilling Emergency Action Plan.
- 6. Give first aid as needed.

## Person down location/facility

- 1. If immediately possible, contact 911. Give location and wait for confirmation.
- 2. Don SCBA and perform rescue operation using buddy system.

## Toxic effects of hydrogen sulfide

Hydrogen sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 ppm, which is .001% by volume. Hydrogen sulfide is heavier than air (specific gravity – 1.192) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is almost as toxic as hydrogen cyanide and is between five and six times more toxic than carbon monoxide. Toxicity data for hydrogen sulfide and various other gases are compared in table i. Physical effects at various hydrogen sulfide exposure levels are shown in table ii.

Table i Toxicity of various gases

Common name	Chemical formula	Specific gravity (sc=1)	Threshold limit (1)	Hazardous limit (2)	Lethal concentration (3)
Hydrogen Cyanide	Hen	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H2S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	So2	2.21	5 ppm	-	1000 ppm
Chlorine	C12	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	Co	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	Co2	1.52	5000 ppm	5%	10%
Methane	Ch4	0.55	90,000 ppm	Combustibl	e above 5% in air

- 1) threshold limit concentration at which it is believed that all workers may be repeatedly exposed day after day without adverse effects.
- 2) hazardous limit concentration that will cause death with short-term exposure.
- 3) lethal concentration concentration that will cause death with short-term exposure.

## Toxic effects of hydrogen sulfide

Table ii Physical effects of hydrogen sulfide

		<b>Concentration</b>	Physical effects
Percent (%)	<u>Ppm</u>	Grains	
	_	100 std. Ft3*	
0.001	<10	00.65	Obvious and unpleasant odor.

0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kill smell in $3 - 15$ minutes. May sting eyes and throat.
0.020	200	12.96	Kills smell shortly; stings eyes and throat.
0.050	500	32.96	Dizziness; breathing ceases in a few minutes; needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; death will result if not rescued promptly.
0.100	1000	64.30	Unconscious at once; followed by death within minutes.

<sup>\*</sup>at 15.00 psia and 60'f.

## **Use of self-contained breathing equipment (SCBA)**

- 1. Written procedures shall be prepared covering safe use of SCBA's in dangerous atmosphere, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available SCBA.
- 2 SCBA's shall be inspected frequently at random to insure that they are properly used, cleaned, and maintained.
- 3. Anyone who may use the SCBA's shall be trained in how to insure proper facepiece to face seal. They shall wear SCBA's in normal air and then wear them in a
  test atmosphere. (note: such items as facial hair {beard or sideburns} and
  eyeglasses will not allow proper seal.) Anyone that may be reasonably expected
  to wear SCBA's should have these items removed before entering a toxic
  atmosphere. A special mask must be obtained for anyone who must wear
  eyeglasses or contact lenses.
- 4. Maintenance and care of SCBA's:
  - a. A program for maintenance and care of SCBA's shall include the following:
    - 1. Inspection for defects, including leak checks.
    - 2. Cleaning and disinfecting.
    - 3. Repair.
    - 4. Storage.
  - b. Inspection, self-contained breathing apparatus for emergency use shall be inspected monthly.
    - 1. Fully charged cylinders.
    - 2. Regulator and warning device operation.
    - 3. Condition of face piece and connections.
    - 4. Rubber parts shall be maintained to keep them pliable and prevent deterioration.
  - c. Routinely used SCBA's shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.
- 5. Persons assigned tasks that requires use of self-contained breathing equipment shall be certified physically fit (medically cleared) for breathing equipment usage at least annually.
- 6. SCBA's should be worn when:
  - A. Any employee works near the top or on top of any tank unless test reveals less than 10 ppm of H2S.

- B. When breaking out any line where H2S can reasonably be expected.
- C. When sampling air in areas to determine if toxic concentrations of H2S exists.
- D. When working in areas where over 10 ppm H2S has been detected.
- E. At any time there is a doubt as to the H2S level in the area to be entered.

## Rescue First aid for H2S poisoning

#### Do not panic!

Remain calm – think!

- 1. Don SCBA breathing equipment.
- 2. Remove victim(s) utilizing buddy system to fresh air as quickly as possible. (go up-wind from source or at right angle to the wind. Not down wind.)
- 3. Briefly apply chest pressure arm lift method of artificial respiration to clean the victim's lungs and to avoid inhaling any toxic gas directly from the victim's lungs.
- 4. Provide for prompt transportation to the hospital, and continue giving artificial respiration if needed.
- 5. Hospital(s) or medical facilities need to be informed, before-hand, of the possibility of H2S gas poisoning no matter how remote the possibility is.
- 6. Notify emergency room personnel that the victim(s) has been exposed to H2S gas.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration.

Revised CM 6/27/2012

# OXY

PRD NM DIRECTIONAL PLANS (NAD 1983) Saker 6\_7 Saker 6\_7 Fed Com 32H

Wellbore #1

Plan: Permitting Plan

# **Standard Planning Report**

29 January, 2020

#### **Planning Report**

Database: HOPSPP

Company: ENGINEERING DESIGNS

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site:

Saker 6\_7

Well:

Saker 6 7 Fed Com 32H

Wellbore: Wellbore #1

Design: Permitting Plan

Local Co-ordinate Reference:

TVD Reference:

North Reference: Survey Calculation Method: Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

Minimum Curvature

Project PRD NM DIRECTIONAL PLANS (NAD 1983)

Map System: U

Map Zone:

US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone System Datum:

Mean Sea Level

Using geodetic scale factor

Site Saker 6\_7

Northing: 457,094.74 usft Site Position: Latitude: 32° 15' 11.741857 N From: Мар Easting: 826,474.44 usft Longitude: 103° 24' 39.507225 W **Position Uncertainty:** 1.00 ft Slot Radius: **Grid Convergence:** 0.49 13.200 in

Well Saker 6 7 Fed Com 32H

 Well Position
 +N/-S
 48.78 ft
 Northing:
 457,143.52 usft
 Latitude:
 32° 15′ 11.966746 N

 +E/-W
 3,016.23 ft
 Easting:
 829,490.67 usft
 Longitude:
 103° 24′ 4.381493 W

Position Uncertainty 1.00 ft Wellhead Elevation: Ground Level: 3,450.00 ft

Wellbore Wellbore #1 Declination Dip Angle **Field Strength** Magnetics **Model Name** Sample Date (°) (°) (nT) HDGM FILE 47,831.20000000 12/31/2019 6.60 59.87

Permitting Plan Design **Audit Notes:** Version: Phase: **PROTOTYPE** Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 186.82

Plan Survey Tool Program Date 1/29/2020

Depth From Depth To

(ft) (ft) Survey (Wellbore) Tool Name Remarks

0.00 21,947.04 Permitting Plan (Wellbore #1) B001Mb\_MWD+HRGM

OWSG MWD + HRGM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,685.00	0.00	0.00	5,685.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,385.00	14.00	275.55	6,378.06	8.23	-84.70	2.00	2.00	0.00	275.55	
11,107.29	14.00	275.55	10,960.07	118.72	-1,221.77	0.00	0.00	0.00	0.00	
12,004.45	88.17	179.36	11,531.50	-437.74	-1,352.66	10.00	8.27	-10.72	-96.45	
21,947.04	88.17	179.36	11,849.50	-10,374.62	-1,241.18	0.00	0.00	0.00	0.00 PI	BHL (Saker 6_7

## **Planning Report**

Database: HOPSPP ENGINEE

ENGINEERING DESIGNS

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

Wellbore: Wellbore #1

Design: Permitting Plan

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	E00.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
			1,400.00						
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
			•						
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
•	0.00		2,800.00						
2,800.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3.300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00		0.00	0.00	0.00
						0.00			
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

## Planning Report

Database: HOPSPP Company: ENGINEE

**ENGINEERING DESIGNS** 

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

Wellbore: Wellbore #1

Design: Permitting Plan

Local Co-ordinate Reference:

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**Survey Calculation Method:** 

Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

Design:	Permitting Pla	an							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,685.00	0.00	0.00	5,685.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.30	275.55	5,700.00	0.00	-0.04	0.00	2.00	2.00	0.00
5,800.00	2.30	275.55	5,799.97	0.22	-2.30	0.05	2.00	2.00	0.00
5,900.00	4.30	275.55	5,899.80	0.78	-8.03	0.18	2.00	2.00	0.00
6,000.00	6.30	275.55	5,999.37	1.67	-17.22	0.38	2.00	2.00	0.00
6,100.00	8.30	275.55	6,098.55	2.90	-29.87	0.67	2.00	2.00	0.00
6,200.00	10.30	275.55	6,197.23	4.46	-45.95	1.02	2.00	2.00	0.00
6,300.00	12.30	275.55	6,295.29	6.36	-65.45	1.46	2.00	2.00	0.00
6,385.00	14.00	275.55	6,378.06	8.23	-84.70	1.89	2.00	2.00	0.00
6,400.00	14.00	275.55	6,392.61	8.58	-88.31	1.97	0.00	0.00	0.00
6,500.00	14.00	275.55	6,489.64	10.92	-112.39	2.51	0.00	0.00	0.00
6,600.00	14.00	275.55	6,586.67	13.26	-136.47	3.04	0.00	0.00	0.00
6,700.00	14.00	275.55	6,683.70	15.60	-160.55	3.58	0.00	0.00	0.00
6,800.00	14.00	275.55	6,780.73	17.94	-184.62	4.12	0.00	0.00	0.00
6,900.00	14.00	275.55	6,877.76	20.28	-208.70	4.66	0.00	0.00	0.00
7,000.00	14.00	275.55	6,974.79	22.62	-232.78	5.19	0.00	0.00	0.00
7,100.00	14.00	275.55	7,071.82	24.96	-256.86	5.73	0.00	0.00	0.00
7,200.00	14.00	275.55	7,168.85	27.30	-280.94	6.27	0.00	0.00	0.00
7,300.00	14.00	275.55	7,265.88	29.64	-305.02	6.80	0.00	0.00	0.00
7,400.00	14.00	275.55	7,362.91	31.98	-329.10	7.34	0.00	0.00	0.00
7,500.00	14.00	275.55	7,459.94	34.32	-353.18	7.88	0.00	0.00	0.00
7,600.00	14.00	275.55	7,556.96	36.66	-377.25	8.42	0.00	0.00	0.00
7,700.00	14.00	275.55	7,653.99	39.00	-401.33	8.95	0.00	0.00	0.00
7,800.00	14.00	275.55	7,751.02	41.34	-425.41	9.49	0.00	0.00	0.00
7,900.00	14.00	275.55	7,848.05	43.68	-449.49	10.03	0.00	0.00	0.00
8,000.00	14.00	275.55	7,945.08	46.02	-473.57	10.56	0.00	0.00	0.00
8,100.00	14.00	275.55	8,042.11	48.36	-497.65	11.10	0.00	0.00	0.00
8,200.00	14.00	275.55	8,139.14	50.70	-521.73	11.64	0.00	0.00	0.00
8,300.00	14.00	275.55	8,236.17	53.04	-545.81	12.18	0.00	0.00	0.00
8,400.00	14.00	275.55	8,333.20	55.38	-569.89	12.71	0.00	0.00	0.00
8,500.00	14.00	275.55	8,430.23	57.72	-593.96	13.25	0.00	0.00	0.00
8,600.00	14.00	275.55	8,527.26	60.06	-618.04	13.79	0.00	0.00	0.00
8,700.00	14.00	275.55	8,624.29	62.39	-642.12	14.32	0.00	0.00	0.00
8,800.00	14.00	275.55	8,721.32	64.73	-666.20	14.86	0.00	0.00	0.00
8,900.00	14.00	275.55	8,818.35	67.07	-690.28	15.40	0.00	0.00	0.00
9,000.00	14.00	275.55	8,915.38	69.41	-714.36	15.94	0.00	0.00	0.00
9,100.00	14.00	275.55	9,012.41	71.75	-738.44	16.47	0.00	0.00	0.00
9,200.00	14.00	275.55	9,109.44	74.09	-762.52	17.01	0.00	0.00	0.00
9,300.00	14.00	275.55	9,206.47	76.43	-786.59	17.55	0.00	0.00	0.00
9,400.00	14.00	275.55	9,303.50	78.77	-810.67	18.08	0.00	0.00	0.00
9,500.00	14.00	275.55	9,400.53	81.11	-834.75	18.62	0.00	0.00	0.00
9,600.00	14.00	275.55	9,497.56	83.45	-858.83	19.16	0.00	0.00	0.00
9,700.00	14.00	275.55	9,594.59	85.79	-882.91	19.70	0.00	0.00	0.00
9,800.00	14.00	275.55	9,691.62	88.13	-906.99	20.23	0.00	0.00	0.00
9,900.00	14.00	275.55	9,788.64	90.47	-931.07	20.77	0.00	0.00	0.00
10,000.00	14.00	275.55	9,885.67	92.81	-955.15	21.31	0.00	0.00	0.00
10,100.00	14.00	275.55	9,982.70	95.15	-979.22	21.84	0.00	0.00	0.00
10,200.00	14.00	275.55	10,079.73	97.49	-1,003.30	22.38	0.00	0.00	0.00
10,300.00	14.00	275.55	10,176.76	99.83	-1,027.38	22.92	0.00	0.00	0.00
10,400.00	14.00	275.55	10,273.79	102.17	-1,051.46	23.45	0.00	0.00	0.00
10,500.00	14.00	275.55	10,370.82	104.51	-1,075.54	23.99	0.00	0.00	0.00

## **Planning Report**

Database: Company:

HOPSPP

**ENGINEERING DESIGNS** 

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

Wellbore: Wellbore #1

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**Survey Calculation Method:** 

Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

Design:	Permitting Pla	an							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,600.00	14.00	275.55	10,467.85	106.85	-1,099.62	24.53	0.00	0.00	0.00
10,700.00	14.00	275.55	10,564.88	109.19	-1,123.70	25.07	0.00	0.00	0.00
10,800.00	14.00	275.55	10,661.91	111.53	-1,147.78	25.60	0.00	0.00	0.00
10,900.00	14.00	275.55	10,758.94	113.87	-1,171.85	26.14	0.00	0.00	0.00
11,000.00	14.00	275.55	10,855.97	116.21	-1,195.93	26.68	0.00	0.00	0.00
11,100.00	14.00	275.55	10,953.00	118.55	-1,220.01	27.21	0.00	0.00	0.00
11,107.29	14.00	275.55	10,960.07	118.72	-1,221.77	27.25	0.00	0.00	0.00
11,200.00	15.85	239.66	11,049.84	113.40	-1,243.90	35.17	10.00	1.99	-38.72
11,300.00	22.35	215.95	11,144.43	91.05	-1,266.90	60.08	10.00	6.50	-23.71
11,400.00	30.72	203.54	11,233.88	52.15	-1,288.31	101.26	10.00	8.37	-12.41
11,500.00	39.79	196.20	11,315.49	-2.13	-1,307.49	157.43	10.00	9.07	-7.34
11,600.00	49.18	191.26	11,386.78	-70.15	-1,323.85	226.91	10.00	9.39	-4.94
11,700.00	58.72	187.56	11,445.57	-149.82	-1,336.88	307.57	10.00	9.54	-3.70
11,800.00	68.35	184.54	11,490.08	-238.74	-1,346.21	396.96	10.00	9.63	-3.01
11,900.00	78.03	181.91	11,518.97	-334.20	-1,351.53	492.38	10.00	9.68	-2.63
12,000.00	87.73	179.46	11,531.34	-433.29	-1,352.70	590.91	10.00	9.70	-2.45
12,004.45	88.17	179.36	11,531.50	-437.74	-1,352.66	595.32	10.00	9.71	-2.41
12,100.00	88.17	179.36	11,534.56	-533.23	-1,351.58	690.01	0.00	0.00	0.00
12,200.00	88.17	179.36	11,537.76	-633.18	-1,350.46	789.11	0.00	0.00	0.00
12,300.00	88.17	179.36	11,540.95	-733.12	-1,349.34	888.21	0.00	0.00	0.00
12,400.00	88.17	179.36	11,544.15	-833.06	-1,348.22	987.32	0.00	0.00	0.00
12,500.00	88.17	179.36	11,547.35	-933.00	-1,347.10	1,086.42	0.00	0.00	0.00
12,600.00	88.17	179.36	11,550.55	-1,032.95	-1,345.98	1,185.52	0.00	0.00	0.00
12,700.00	88.17	179.36	11,553.75	-1,132.89	-1,344.86	1,284.62	0.00	0.00	0.00
12,800.00	88.17	179.36	11,556.95	-1,232.83	-1,343.74	1,383.72	0.00	0.00	0.00
12,900.00	88.17	179.36	11,560.14	-1,332.77	-1,342.61	1,482.83	0.00	0.00	0.00
13,000.00	88.17	179.36	11,563.34	-1,432.72	-1,341.49	1,581.93	0.00	0.00	0.00
13,100.00	88.17	179.36	11,566.54	-1,532.66	-1,340.37	1,681.03	0.00	0.00	0.00
13,200.00	88.17	179.36	11,569.74	-1,632.60	-1,339.25	1,780.13	0.00	0.00	0.00
13,300.00	88.17	179.36	11,572.94	-1,732.54	-1,338.13	1,879.23	0.00	0.00	0.00
13,400.00	88.17	179.36	11,576.14	-1,832.49	-1,337.01	1,978.33	0.00	0.00	0.00
13,500.00	88.17	179.36	11,579.33	-1,932.43	-1,335.89	2,077.44	0.00	0.00	0.00
13,600.00	88.17	179.36	11,582.53	-2,032.37	-1,334.77	2,176.54	0.00	0.00	0.00
13,700.00	88.17	179.36	11,585.73	-2,132.31	-1,333.64	2,275.64	0.00	0.00	0.00
13,800.00	88.17	179.36	11,588.93	-2,232.26	-1,332.52	2,374.74	0.00	0.00	0.00
13,900.00	88.17	179.36	11,592.13	-2,332.20	-1,331.40	2,473.84	0.00	0.00	0.00
14,000.00	88.17	179.36	11,595.33	-2,432.14	-1,330.28	2,572.94	0.00	0.00	0.00
14,100.00	88.17	179.36	11,598.52	-2,532.08	-1,329.16	2,672.05	0.00	0.00	0.00
14,200.00	88.17	179.36	11,601.72	-2,632.03	-1,328.04	2,771.15	0.00	0.00	0.00
14,300.00	88.17	179.36	11,604.92	-2,731.97	-1,326.92	2,870.25	0.00	0.00	0.00
14,400.00	88.17	179.36	11,608.12	-2,831.91	-1,325.80	2,969.35	0.00	0.00	0.00
14,500.00	88.17	179.36	11,611.32	-2,931.86	-1,324.67	3,068.45	0.00	0.00	0.00
14,600.00	88.17	179.36	11,614.52	-3,031.80	-1,323.55	3,167.55	0.00	0.00	0.00
14,700.00	88.17	179.36	11,617.71	-3,131.74	-1,322.43	3,266.66	0.00	0.00	0.00
14,800.00	88.17	179.36	11,620.91	-3,231.68	-1,321.31	3,365.76	0.00	0.00	0.00
14,900.00	88.17	179.36	11,624.11	-3,331.63	-1,320.19	3,464.86	0.00	0.00	0.00
15,000.00	88.17	179.36	11,627.31	-3,431.57	-1,319.07	3,563.96	0.00	0.00	0.00
15,100.00	88.17	179.36	11,630.51	-3,531.51	-1,317.95	3,663.06	0.00	0.00	0.00
15,200.00	88.17	179.36	11,633.71	-3,631.45	-1,316.83	3,762.16	0.00	0.00	0.00
15,300.00	88.17	179.36	11,636.90	-3,731.40	-1,315.70	3,861.27	0.00	0.00	0.00
15,400.00	88.17	179.36	11,640.10	-3,831.34	-1,314.58	3,960.37	0.00	0.00	0.00
15,500.00	88.17	179.36	11,643.30	-3,931.28	-1,313.46	4,059.47	0.00	0.00	0.00
15,600.00	88.17	179.36	11,646.50	-4,031.22	-1,312.34	4,158.57	0.00	0.00	0.00
15,700.00	88.17	179.36	11,649.70	-4,131.17	-1,311.22	4,257.67	0.00	0.00	0.00

## Planning Report

Database: Company: HOPSPP

**ENGINEERING DESIGNS** 

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

Wellbore: Wellbore #1

Design: Permitting Plan

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

Design:	Permitting Pla	an							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,800.00	88.17	179.36	11,652.90	-4,231.11	-1,310.10	4,356.78	0.00	0.00	0.00
15,900.00	88.17	179.36	11,656.09	-4,331.05	-1,308.98	4,455.88	0.00	0.00	0.00
16,000.00	88.17	179.36	11,659.29	-4,430.99	-1,307.86	4,554.98	0.00	0.00	0.00
16,100.00	88.17	179.36	11,662.49	-4,530.94	-1,306.74	4,654.08	0.00	0.00	0.00
16,200.00	88.17	179.36	11,665.69	-4,630.88	-1,305.61	4,753.18	0.00	0.00	0.00
16,300.00	88.17	179.36	11,668.89	-4,730.82	-1,304.49	4,852.28	0.00	0.00	0.00
16,400.00	88.17	179.36	11,672.09	-4,830.76	-1,303.37	4,951.39	0.00	0.00	0.00
16,500.00	88.17	179.36	11,675.28	-4,930.71	-1,302.25	5,050.49	0.00	0.00	0.00
16,600.00	88.17	179.36	11,678.48	-5,030.65	-1,301.13	5,149.59	0.00	0.00	0.00
16,700.00	88.17	179.36	11,681.68	-5,130.59	-1,300.01	5,248.69	0.00	0.00	0.00
16,800.00	88.17	179.36	11,684.88	-5,230.53	-1,298.89	5,347.79	0.00	0.00	0.00
16,900.00	88.17	179.36	11,688.08	-5,330.48	-1,297.77	5,446.89	0.00	0.00	0.00
17,000.00	88.17	179.36	11,691.28	-5,430.42	-1,296.64	5,546.00	0.00	0.00	0.00
17,100.00	88.17	179.36	11,694.47	-5,530.36	-1,295.52	5,645.10	0.00	0.00	0.00
17,200.00	88.17	179.36	11,697.67	-5,630.30	-1,294.40	5,744.20	0.00	0.00	0.00
17,300.00	88.17	179.36	11,700.87	-5,730.25	-1,293.28	5,843.30	0.00	0.00	0.00
17,400.00	88.17	179.36	11,704.07	-5,830.19	-1,292.16	5,942.40	0.00	0.00	0.00
17,500.00	88.17	179.36	11,707.27	-5,930.13	-1,291.04	6,041.50	0.00	0.00	0.00
17,600.00	88.17	179.36	11,710.47	-6,030.07	-1,289.92	6,140.61	0.00	0.00	0.00
17,700.00	88.17	179.36	11,713.66	-6,130.02	-1,288.80	6,239.71	0.00	0.00	0.00
17,800.00	88.17	179.36	11,716,86	-6,229.96	-1,287.67	6,338.81	0.00	0.00	0.00
17,900.00	88.17	179.36	11,720.06	-6,329.90	-1,286.55	6,437.91	0.00	0.00	0.00
18,000.00	88.17	179.36	11,723.26	-6,429.84	-1,285.43	6,537.01	0.00	0.00	0.00
18,100.00	88.17	179.36	11,726.46	-6,529.79	-1,284.31	6,636.11	0.00	0.00	0.00
18,200.00	88.17	179.36	11,729.66	-6,629.73	-1,283.19	6,735.22	0.00	0.00	0.00
18,300.00	88.17	179.36	11,732,86	-6,729.67	-1,282.07	6,834.32	0.00	0.00	0.00
18,400.00	88.17	179.36	11,736.05	-6,829.61	-1,280.95	6,933.42	0.00	0.00	0.00
18,500.00	88.17	179.36	11,739.25	-6,929.56	-1,279.83	7,032.52	0.00	0.00	0.00
18,600.00	88.17	179.36	11,742.45	-7,029.50	-1,278.70	7,131.62	0.00	0.00	0.00
18,700.00	88.17	179.36	11,745.65	-7,129.44	-1,277.58	7,230.73	0.00	0.00	0.00
18,800.00	88.17	179.36	11,748.85	-7,229.38	-1,276.46	7,329.83	0.00	0.00	0.00
18,900.00	88.17	179.36	11,752.05	-7,329.33	-1,275.34	7,428.93	0.00	0.00	0.00
19,000.00	88.17	179.36	11,755 <b>.</b> 24	-7,429.27	-1,274.22	7,528.03	0.00	0.00	0.00
19,100.00	88.17	179.36	11,758.44	-7,529.21	-1,273.10	7,627.13	0.00	0.00	0.00
19,200.00	88.17	179.36	11,761.64	-7,629.16	-1,271.98	7,726.23	0.00	0.00	0.00
19,300.00	88.17	179.36	11,764.84	-7,729.10	-1,270.86	7,825.34	0.00	0.00	0.00
19,400.00	88.17	179.36	11,768.04	-7,829.04	-1,269.74	7,924.44	0.00	0.00	0.00
19,500.00	88.17	179.36	11,771.24	-7,928.98	-1,268.61	8,023.54	0.00	0.00	0.00
19,600.00	88.17	179.36	11,774.43	-8,028.93	-1,267.49	8,122.64	0.00	0.00	0.00
19,700.00	88.17	179.36	11,777.63	-8,128.87	-1,266.37	8,221.74	0.00	0.00	0.00
19,800.00	88.17	179.36	11,780.83	-8,228.81	-1,265.25	8,320.84	0.00	0.00	0.00
19,900.00	88.17	179.36	11,784.03	-8,328.75	-1,264.13	8,419.95	0.00	0.00	0.00
20,000.00	88.17	179.36	11,787.23	-8,428.70	-1,263.01	8,519.05	0.00	0.00	0.00
20,100.00	88.17	179.36	11,790.43	-8,528.64	-1,261.89	8,618.15	0.00	0.00	0.00
20,200.00	88.17	179.36	11,793.62	-8,628.58	-1,260.77	8,717.25	0.00	0.00	0.00
20,300.00	88.17	179.36	11,796.82	-8,728.52	-1,259.64	8,816.35	0.00	0.00	0.00
20,400.00	88.17 88.17	179.36 179.36	11,800.02	-8,828.47 8 028 41	-1,258.52 1,257.40	8,915 <b>.</b> 45	0.00 0.00	0.00 0.00	0.00
20,500.00	88.17		11,803.22	-8,928.41	-1,257.40	9,014.56			0.00
20,600.00	88.17	179.36	11,806.42	-9,028.35 0.128.30	-1,256.28	9,113.66	0.00	0.00	0.00
20,700.00	88.17	179.36	11,809.62	-9,128.29	-1,255.16	9,212.76	0.00	0.00	0.00
20,800.00	88.17	179.36	11,812.81	-9,228.24 0.228.18	-1,254.04	9,311.86	0.00	0.00	0.00
20,900.00	88.17	179.36	11,816.01	-9,328.18 0.428.13	-1,252.92 1,251.90	9,410.96	0.00	0.00	0.00
21,000.00	88.17	179.36	11,819.21	-9,428.12	-1,251.80	9,510.07	0.00	0.00	0.00
21,100.00	88.17	179.36	11,822.41	-9,528.06	-1,250.67	9,609.17	0.00	0.00	0.00

## **Planning Report**

Database: HOPSPP

Company: ENGINEERING DESIGNS

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

Wellbore: Wellbore #1

Design: Permitting Plan

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Saker 6\_7 Fed Com 32H

RKB=26.5' @ 3476.50ft RKB=26.5' @ 3476.50ft

Grid

nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,200.00	88.17	179.36	11,825.61	-9,628.01	-1,249.55	9,708.27	0.00	0.00	0.00
21,300.00	88.17	179.36	11,828.81	-9,727.95	-1,248.43	9,807.37	0.00	0.00	0.00
21,400.00	88.17	179.36	11,832.00	-9,827.89	-1,247.31	9,906.47	0.00	0.00	0.00
21,500.00	88.17	179.36	11,835 <b>.</b> 20	-9,927.83	-1,246.19	10,005.57	0.00	0.00	0.00
21,600.00	88.17	179.36	11,838.40	-10,027.78	-1,245.07	10,104.68	0.00	0.00	0.00
21,700.00	88.17	179.36	11,841.60	-10,127.72	-1,243.95	10,203.78	0.00	0.00	0.00
21,800.00	88.17	179.36	11,844.80	-10,227.66	-1,242.83	10,302.88	0.00	0.00	0.00
21,900.00	88.17	179.36	11,848.00	-10,327.60	-1,241.70	10,401.98	0.00	0.00	0.00
21,947,04	88.17	179.36	11,849.50	-10,374,62	-1,241.18	10,448,60	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Saker 6_7 Fed - plan misses target - Point	0.00 center by 20		11,531.50 600.00ft ME	67.17 ) (11386.78 T	-1,356.93 VD, -70.15 N	457,210.69 , -1323.85 E)	828,133.74	32° 15' 12.747677 N	103° 24' 20.174753
PBHL (Saker 6_7 Fed - plan hits target cer - Point	0.00 nter	0.00	11,849.50	-10,374.62	-1,241.18	446,768.88	828,249.49	32° 13' 29.418793 N	103° 24' 19.877352

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
5,685,00	5.685.00	0.00	0.00	Build 2°/100'
6,385.00	6,378.06	8.23	-84.70	Hold 14° Tangent
11,107.29	10,960.07	118.72	-1,221.77	KOP, Build & Turn 10°/100'
12,004.45	11,531.50	-437.74	-1,352.66	Landing Point
21,947.04	11,849.50	-10,374.62	-1,241.18	TD at 21947.04' MD

Released to Imaging: 5/28/2021 10:05:12 AM

#### PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)

Site: Saker 6\_7

Well: Saker 6\_7 Fed Com 32H

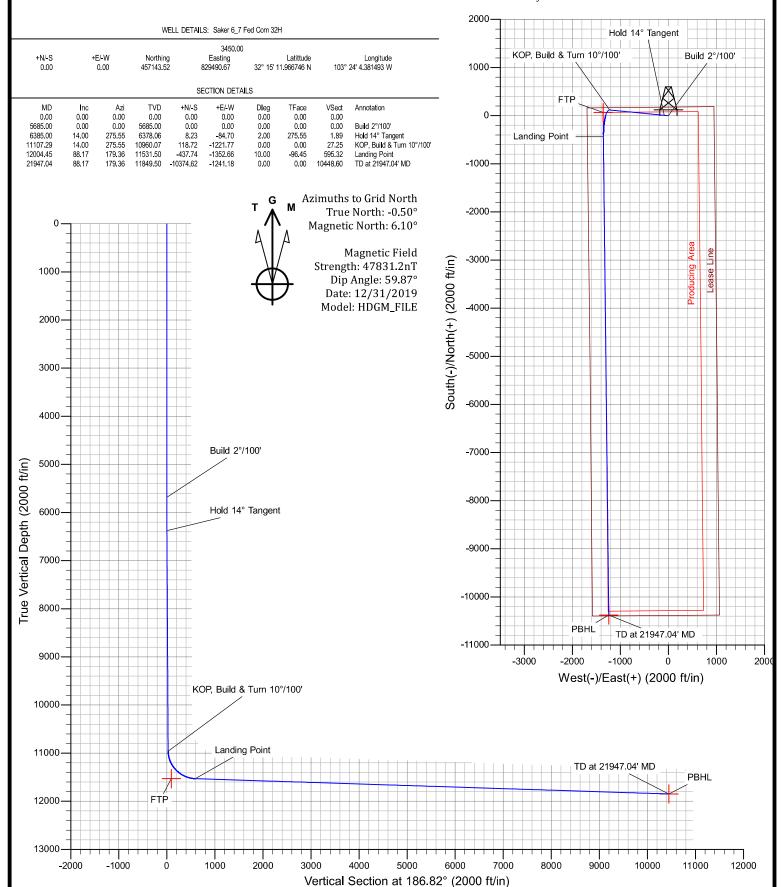
Wellbore: Wellbore #1 Design: Permitting Plan Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level



#### Oxy USA Inc. - Saker 6 7 Fed Com 32H

#### 1. Geologic Formations

TVD of target	11849'	Pilot Hole Depth	N/A
MD at TD:	21947'	Deepest Expected fresh water:	397'

#### **Delaware Basin**

Formation	TVD - RKB	<b>Expected Fluids</b>
Rustler	797	
Salado	1,058	Salt
Castile	3,385	Salt
Lamar/Delaware	5,254	Oil/Gas/Brine
Bell Canyon	5,304	Oil/Gas/Brine
Cherry Canyon	6,192	Oil/Gas/Brine
Brushy Canyon	7,556	Losses
Bone Spring	8,742	Oil/Gas
1st Bone Spring	9,876	Oil/Gas
2nd Bone Spring	10,324	Oil/Gas
3rd Bone Spring	11,346	Oil/Gas

<sup>\*</sup>H2S, water flows, loss of circulation, abnormal pressures, etc.

#### 2. Casing Program

									Buoyant	Buoyant
H 1 6: (1)	Casing	Interval	Csg. Size	Weight			SF	SF Burst	Body SF	Joint SF
Hole Size (in)	From (ft)	To (ft)	(in)	(lbs)	Grade	Conn.	Collapse	Sr Durst	Tension	Tension
14.75	0	998	10.75	40.5	J-55	BTC	1.125	1.2	1.4	1.4
9.875	0	11007	7.625	26.4	L-80 HC	BTC	1.125	1.2	1.4	1.4
6.75	0	21947	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4
			-		-	-		SF Values will	meet or Exceed	i

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

#### **Annular Clearance Variance Request**

As per the agreement reached in the Oxy/BLM meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

- 1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
- 2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y

<sup>\*</sup>Oxy requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool may be run in case hole conditions merit pumping a second stage cement job to comply with permitted top of cement. If cement circulated to surface during first stage, we will drop a cancelation cone and not pump the second stage.

<sup>\*</sup>Oxy requests the option to run production casing with DQX, SF TORQ, and/or DQW TORQ connections to accommodate hole conditions or drilling operations.

## Oxy USA Inc. - Saker 6 7 Fed Com 32H

Oxy OSM Mc Saker 0_7 Fed Com 3211	
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
T 111 ( 1' '4' 1 C /W (9	N.T.
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

# 3. Cementing Program

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H20 (gal/sk)	500# Comp. Strength (hours)	Slurry Description	
Surface (Lead)	N/A	N/A	N/A	N/A	N/A	N/A	
Surface (Tail)	822	14.8	1.33	6.365	5:26	Class C Cement, Accelerator	
Intermediate 1st Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A	
Intermediate 1st Stage (Tail)	445	13.2	1.65	8.640	11:54	Class H Cement, Retarder, Dispersant, Salt	
Intermediate 2nd Stage (Tail Slurry) to be pumped as Bradenhead Squeeze from surface, down the Intermediate annulus							
Intermediate 2nd Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A	
Intermediate 2nd Stage (Tail)	960	12.9	1.92	10.41	23:10	Class C Cement, Accelerator	
Production (Lead)	N/A	N/A	N/A	N/A	N/A	N/A	
Production (Tail)	839	13.2	1.38	6.686	3:39	Class H Cement, Retarder, Dispersant, Salt	

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	N/A	N/A	N/A
Surface (Tail)	0	998	100%
Intermediate 1st Stage (Lead)	N/A	N/A	N/A
Intermediate 1st Stage (Tail)	7806	11007	5%
Intermediate 2nd Stage (Lead)	N/A	N/A	N/A
Intermediate 2nd Stage (Tail)	0	7806	10%
Production (Lead)	N/A	N/A	N/A
Production (Tail)	10507	21947	20%

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

The summarized operational sequence will be as follows:

## Oxy USA Inc. - Saker 6\_7 Fed Com 32H

- 1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
- 2. Land casing.
- 3. Fill pipe with kill weight fluid, and confirm well is static.
  - a. If well is not static notify BLM and kill well.
  - b. Once well is static notify BLM with intent to proceed with nipple down and offline cementing.
- 4. Set and pressure test annular packoff.
- 5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange. If any barrier fails to test, the BOP stack will not be nippled down until after the cement job is completed.
- 6. Skid rig to next well on pad.
- 7. Confirm well is static before removing cap flange.
- 8. If well is not static notify BLM and kill well prior to cementing or nippling up for further remediation.
- 9. Install offline cement tool.
- 10. Rig up cement equipment.
  - a. Notify BLM prior to cement job.
- 11. Perform cement job.
- 12. Confirm well is static and floats are holding after cement job.
- 13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

## Three string wells:

- CBL will be required on one well per pad
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		<b>√</b>	Tested to:
		5M	Annula	ır	✓	70% of working pressure
9.875" Hole	12 5/0"		Blind R	am	✓	
9.875" Hole	13-5/8"	5M	Pipe Ra	m		250 mg; / 5000 mg;
			Double Ram		✓	250 psi / 5000 psi
			Other*			
		5M	Annula	ır	✓	70% of working pressure
6.75" Hole	13-5/8"		Blind R	am	✓	
	13-3/8	534	Pipe Ra	m		250 psi / 5000 psi
		5M	Double F	Ram	✓	230 psi / 3000 psi
			Other*			

<sup>\*</sup>Specify if additional ram is utilized.

Oxy will utilize a 5M annular with a 10M BOPE stack. The 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

## Oxy USA Inc. - Saker 6\_7 Fed Com 32H

System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Formation integrity test will be performed per Onshore Order #2.

On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.

A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

Y Are anchors required by manufacturer?

A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015.

See attached schematics.

#### **BOP Break Testing Request**

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. A separate sundry will be sent prior to spud that reflects the pad based break testing plan.

BOP break test under the following conditions:

- After a full BOP test is conducted
- When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower.
- When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper. If the kill line is broken prior to skid, two tests will be performed.
  - 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
  - 2) Wellhead flange, HCR valve, check valve, upper pipe rams

If the kill line is not broken prior to skid, only one test will be performed.

1) Wellhead flange, co-flex hose, check valve, upper pipe rams

5. Mud Program

Depth		Tymo	Weight	Vigogrity	Water Loss	
From (ft)	To (ft)	Туре	(ppg)	Viscosity	water Loss	
0	998	Water-Based Mud	8.6-8.8	40-60	N/C	
998	11007	Saturated Brine- Based or Oil-Based Mud	8.0-10.0	35-45	N/C	
11007	21947	Water-Based or Oil- Based Mud	9.5-12.0	38-50	N/C	

#### Oxy USA Inc. - Saker 6 7 Fed Com 32H

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
---------------------------------------------------------	--------------------------------

**6.** Logging and Testing Procedures

Logg	Logging, Coring and Testing.					
Yes	Will run GR from TD to	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs				
	run will be in the Completion Report and submitted to the BLM.					
No	Logs are planned based on well control or offset log information.					
No	Drill stem test? If yes, explain					
No	Coring? If yes, explain					
Addi	itional logs planned	Interval				

Addi	tional logs planned	Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	ICP - TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7394 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	175°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N H2S is present

valu	values and formations will be provided to the BLM.				
N	H2S is present				
Y	H2S Plan attached				

8. Other facets of operation	Yes/No			
Will the well be drilled with a walking/skidding operation? If yes, describe.	Yes			
• We plan to drill the four well pad in batch by section: all surface sections,				
intermediate sections and production sections. The wellhead will be secured				
with a night cap whenever the rig is not over the well.				
Will more than one drilling rig be used for drilling operations? If yes, describe.	Yes			

## Oxy USA Inc. - Saker 6\_7 Fed Com 32H

• Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.

Total estimated cuttings volume: 1643.3 bbls.

## 9. Company Personnel

Name	<u>Title</u>	Office Phone	Mobile Phone
Garrett Granier	Drilling Engineer	713-513-6633	832-265-0581
William Turner	Drilling Engineer Supervisor	713-350-4951	661-817-4586
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
Diego Tellez	Drilling Manager	713-350-4602	713-303-4932

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT SUPO Data Report

APD ID: 10400060717

**Submission Date: 08/25/2020** 

Highlighted data reflects the most

**Operator Name: OXY USA INCORPORATED** 

Well Number: 32H

recent changes

Well Name: SAKER 6-7 FEDERAL COM

**Show Final Text** 

Well Type: OIL WELL

Well Work Type: Drill

## **Section 1 - Existing Roads**

Will existing roads be used? YES

**Existing Road Map:** 

Saker6 7FdCom32H ExistRoads 20200825193616.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

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:** 

Saker6\_7FdCom32H\_NewRoads\_20200825193650.pdf

New road type: LOCAL

Length: 3629.94

Feet

Width (ft.): 30

Max slope (%): 0

Max grade (%): 0

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Watershed Diversion every 200' if needed.

New road access plan or profile prepared? Y

New road access plan attachment:

Saker6\_7FdCom32H\_NewRoads\_20200825194211.pdf

Access road engineering design? N

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

#### Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 0

Offsite topsoil source description:

Onsite topsoil removal process: If available

Access other construction information: None

Access miscellaneous information:

Number of access turnouts: Access turnout map:

#### **Drainage Control**

New road drainage crossing: CULVERT

Drainage Control comments: Watershed Diversion every 200' if needed.

Road Drainage Control Structures (DCS) description: Watershed Diversion every 200' if needed.

Road Drainage Control Structures (DCS) attachment:

#### **Access Additional Attachments**

## **Section 3 - Location of Existing Wells**

**Existing Wells Map?** YES

Attach Well map:

Saker6 7FdCom32H ExistWells 20200825194242.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

**Production Facilities description:** 

**Production Facilities map:** 

Saker6\_7FdCom32H\_LeaseFacilityInfo\_20200825194506.pdf

## **Section 5 - Location and Types of Water Supply**

**Water Source Table** 

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Water source type: GW WELL

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION

CASING

OTHER Describe use type: Drilling

Source latitude: Source longitude:

Source datum:

Water source permit type: WATER WELL

Water source transport method: TRUCKING

**PIPELINE** 

Source land ownership: COMMERCIAL

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 2000 Source volume (acre-feet): 0.25778618

Source volume (gal): 84000

#### Water source and transportation map:

Saker6 7FdCom32H GRRWtrSrc 20200825194535.pdf

**Water source comments:** This well will be drilled using a combination of water mud systems. It will be obtained from commercial water stations (Gregory Rockhouse, Mesquite) in the area and will be hauled to location by transport truck using existing and proposed roads.

New water well? N

#### **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:

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

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

Well Production type: Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

#### **Section 6 - Construction Materials**

Using any construction materials: YES

Construction Materials description: Primary - All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM/State/Fee approved pit or from prevailing deposits found on the location. Will use BLM recommended extra caliche from other locations close by for roads, if available. Secondary - The secondary way of obtaining caliche to build locations and roads will be by turning over the location. This means, caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cubic yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel: a. The top 6 of topsoil is pushed off and stockpiled along the side of the location. b. An approximate 120 X 120 area is used within the proposed well site to remove caliche, c. Subsoil is removed and piled alongside the 120 X 120 within the pad site. d. When caliche is found, material will be stockpiled within the pad site to build the location and road. e. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road. f. Once the well is drilled the stockpiled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the edge of the pad. Water will be provided from Mesquite.

**Construction Materials source location attachment:** 

# **Section 7 - Methods for Handling Waste**

Waste type: DRILLING

Waste content description: Water-Based Cuttings, Water-Based Mud, Oil-Based Cuttings, Oil-Based Mud, Produced Water

Amount of waste: 1643.3 barrels

Waste disposal frequency : Daily

Safe containment description: Haul-Off Bins

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: COMMERCIAL

FACILITY

Disposal type description:

**Disposal location description:** An approved facility that can process drill cuttings, drill fluids, flowback water, produced water, contaminated soils, and other non-hazardous wastes.

#### **Reserve Pit**

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

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? Y

**Description of cuttings location** A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of liquids, drilling fluids and cuttings will be disposed of at an approved facility.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

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?: N

**Ancillary Facilities attachment:** 

Comments:

## **Section 9 - Well Site Layout**

Well Site Layout Diagram:

Saker6 7FdCom32H WellSiteCL 20200825194652.pdf

Comments:

#### **Section 10 - Plans for Surface Reclamation**

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: SAKER 6-7 FEDERAL COM

Multiple Well Pad Number: 32H, 37H, 33H, 38H, 4H, 5H, 6H

Recontouring attachment:

Drainage/Erosion control construction: Reclamation to be wind rowed as needed to control erosion

Drainage/Erosion control reclamation: Reclamation to be wind rowed as needed to control erosion

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Well pad proposed disturbance

(acres): 6.44

Road proposed disturbance (acres):

2.5

Powerline proposed disturbance

(acres): 8.31

Pipeline proposed disturbance

(acres): 21.7

Other proposed disturbance (acres): 0

Total proposed disturbance: 38.95

Well pad interim reclamation (acres): Well pad long term disturbance

8 (acres): 4.76

(acres): 4.22 Read lever terms

Road interim reclamation (acres): 1.33 Road long term disturbance (acres):

Powerline interim reclamation (acres):

8.31

Pipeline interim reclamation (acres):

16.54

Other interim reclamation (acres): 0

Total interim reclamation: 27.86

Powerline long term disturbance

(acres): 0

Pipeline long term disturbance

(acres): 5.17

Other long term disturbance (acres): 0

Total long term disturbance: 11.1

Disturbance Comments: See Below

Reconstruction method: If the well is deemed commercially productive, caliche from the areas of the pad site not required for operations will be reclaimed. The original topsoil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original topsoil will again be returned to the pad and contoured, as close as possible, to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

Topsoil redistribution: The original topsoil will be returned to the area of the drill pad not necessary to operate the well.

Soil treatment: To be determined by the BLM.

Existing Vegetation at the well pad: To be determined by the BLM at Onsite.

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

Existing Vegetation Community at the road: To be determined by the BLM at Onsite.

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

Existing Vegetation Community at the pipeline: To be determined by the BLM at Onsite.

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

Existing Vegetation Community at other disturbances: To be determined by the BLM at Onsite.

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

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Seed harvest description attachment:

**Seed Management** 

**Seed Table** 

Seed Summary
Seed Type Pounds/Acre

Total pounds/Acre:

Seed reclamation attachment:

**Operator Contact/Responsible Official Contact Info** 

First Name: Last Name:

Phone: Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

**Existing invasive species treatment description:** 

**Existing invasive species treatment attachment:** 

Weed treatment plan description: To be determined by the BLM.

Weed treatment plan attachment:

Monitoring plan description: To be determined by the BLM.

Monitoring plan attachment:

Success standards: To be determined by the BLM.

Pit closure description: NA

Pit closure attachment:

**Section 11 - Surface Ownership** 

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

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:

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

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:** 

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

Disturbance type: OTHER

Describe: Electric Line

Surface Owner: BUREAU OF LAND MANAGEMENT

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:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

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:** 

Well Name: SAKER 6-7 FEDERAL COM Well Number: 32H

## **Section 12 - Other Information**

#### Right of Way needed? Y

Use APD as ROW? Y

**ROW Type(s):** 281001 ROW - ROADS,285003 ROW - POWER TRANS,288100 ROW - O&G Pipeline,288101 ROW - O&G Facility Sites,289001 ROW- O&G Well Pad,Other

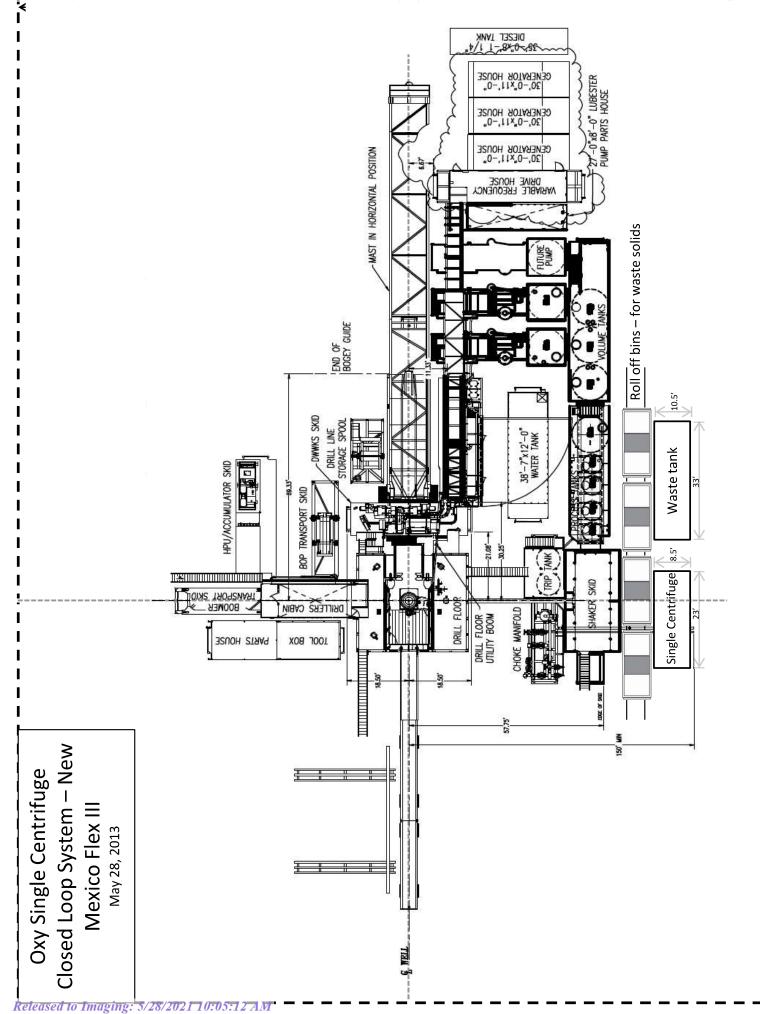
**ROW Applications** 

**SUPO Additional Information**: Permian Basin MOA - To be submitted after APD acceptance. GIS shapefiles available for BLM download from shared FTP site after APD submittal. **Use a previously conducted onsite?** N

#### **Previous Onsite information:**

## **Other SUPO Attachment**

Saker6\_7FdCom32H\_AerialMap\_20200825194828.pdf Saker6\_7FdCom32H\_GasCapPlan\_20200825194846.pdf Saker6\_7FdCom32H\_GradingPlan\_20200825194901.pdf Saker6\_7FdCom32H\_StakeForm\_20200825194927.pdf Saker6\_7FdCom32H\_SUPO\_20200825194939.pdf Saker6\_7FdCom32H\_LVM\_20200825194954.pdf



<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II

Strict II

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

1310 1025-48933 2200

Joint or Infill

#### State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

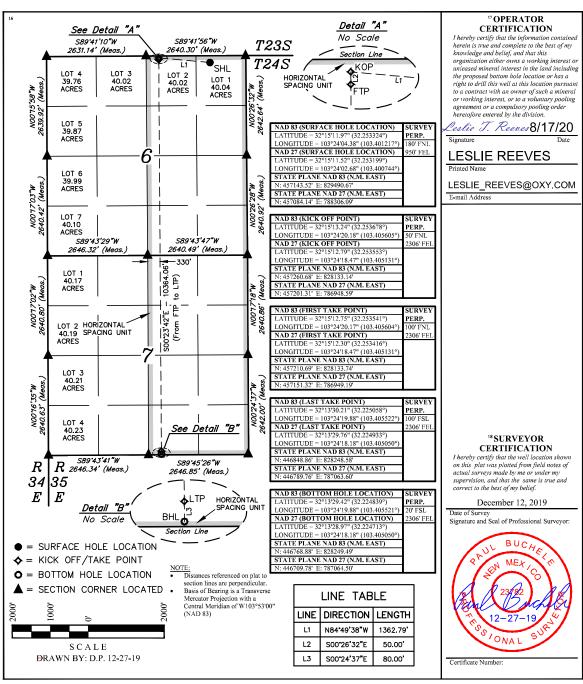
Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

30-025-	<b>130 1025-48933</b> 2200 2 Pool Code ANTELOPE RIDGE; BONE SPRING									
33084	330848				<sup>5</sup> Property SAKER 6_7					6 Well Number 32H
<sup>7</sup> OGRID N 16696	7 OGRID No.				<sup>8</sup> Operator OXY US				345	<sup>9</sup> Elevation 50.0' (NAVD 88)
Surface Location  □ Surface Location										
UL or lot no.	Section 6	Township 24S	Range 35E	Lot Idn	Feet from the 180	North/South line NORTH	Feet from the 950	East/We EAS		County LEA
<sup>11</sup> Bottom Hole Location If Different From Surface										
UL or lot no.	Section 7	Township 24S	Range 35E	Lot Idn	Feet from the 20	North/South line SOUTH	Feet from the 2306	East/We EAS		County LEA

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



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

Date: 07-13-2020

## State of New Mexico Energy, Minerals and Natural Resources Department

Submit Original to Appropriate District Office

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

#### **GAS CAPTURE PLAN**

$\boxtimes$	Original	Operator & OGRID No.: OXY USA INC 16696
	Amended - Reason for Amendment:	

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

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

## Well(s)/Production Facility - Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
SAKER 6_7 FED COM 1H	Pending	Lot 3-Sec. 6-T24SR-35E	200'FNL 1600'FWL	3,500	0	
SAKER 6_7 FED COM 2H	Pending	Lot 3-Sec. 6-T24SR-35E	200'FNL 1635'FWL	3,500	0	
SAKER 6_7 FED COM 3H	Pending	Lot 3-Sec. 6-T24SR-35E	200'FNL 1670'FWL	3,500	0	
SAKER 6_7 FED COM 4H	Pending	Lot 1-Sec. 6-T24SR-35E	180'FNL 590' FEL	3,500	0	
SAKER 6_7 FED COM 5H	Pending	Lot 1-Sec. 6-T24SR-35E	180'FNL 555' FEL	3,500	0	
SAKER 6_7 FED COM 6H	Pending	Lot 1-Sec. 6-T24SR-35E	180'FNL 520' FEL	3,500	0	
SAKER 6_7 FED COM 11H	Pending	Lot 4-Sec. 6-T24S-R35E	200'FNL 1305' FWL	2,100	0	
SAKER 6_7 FED COM 12H	Pending	Lot 3-Sec. 6-T24S-R35E	200'FNL 1340' FWL	2,100	0	
SAKER 6_7 FED COM 13H	Pending	Lot 2-Sec. 6-T24S-R35E	710' FNL 1393'FEL	2,100	0	
SAKER 6_7 FED COM 14H	Pending	Lot 2-Sec. 6-T24S-R35E	710' FNL 1358'FEL	2,100	0	
SAKER 6_7 FED COM 23H	Pending	Lot 4-Sec. 6-T24S-R35E	200' FNL 715' FWL	1,500	0	
SAKER 6_7 FED COM 24H	Pending	Lot 4-Sec. 6-T24S-R35E	200' FNL 750' FWL	1,500	0	
SAKER 6_7 FED COM 31H	Pending	Lot 3-Sec. 6-T24S-R35E	200' FNL 1960' FWL	2,600	0	
SAKER 6_7 FED COM 32H	Pending 30-025-489	Lot 1-Sec. 6-T24S-R35E	180' FNL 950' FEL	2,600	0	
SAKER 6_7 FED COM 33H	Pending	Lot 1-Sec. 6-T24S-R35E	180' FNL 885' FEL	2,600	0	
SAKER 6_7 FED COM 34H	Pending	Lot 3-Sec. 6-T24S-R35E	200' FNL 1930' FWL	2,600	0	

SAKER 6_7 FED COM 35H	Pending	Lot 3-Sec. 6-T24S-R35E		2,600	0	
			1995' FWL			
SAKER 6_7 FED COM 36H	Pending	Lot 3-Sec. 6-T24S-R35E	200' FNL	2,600	0	
			2030' FWL			
SAKER 6_7 FED COM 37H	Pending	Lot 1-Sec. 6-T24S-R35E	180' FNL	2,600	0	
	_		920' FEL			
SAKER 6_7 FED COM 38H	Pending	Lot 1-Sec. 6-T24S-R35E	180' FNL	2,600	0	
			850' FEL			

#### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility is dedicated to <u>Targa Resources ("Targa")</u> and is connected to <u>Targa low/high</u> pressure gathering system located in Lea County, New Mexico. <u>OXY USA INC. ("OXY")</u> provides (periodically) to <u>Targa</u> a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, <u>OXY</u> and <u>Targa</u> have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at the <u>Eunice</u> Processing Plant located in Sec. 3, Twn. 22S, Rng. 37E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### **Flowback Strategy**

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

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

#### **Alternatives to Reduce Flaring**

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

CONDITIONS

Action 25604

#### **CONDITIONS**

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	25604
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created	Condition	Condition
Ву		Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/28/2021
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or	5/28/2021
	zones and shall immediately set in cement the water protection string	