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

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised July 18, 2013

WELL API NO.
30-015-41488

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Harroun 9

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

8. Well Number 3H

2. Name of Operator
OXY USA INC

9. OGRID Number
16696

3. Address of Operator
PO BOX 4294; HOUSTON, TX 77210

10. Pool name or Wildcat
PIERCE CROSSING; BONE SPRING, EAST

4. Well Location
Unit Letter P : 200 feet from the SOUTH line and 550 feet from the EAST line
Section 9 Township 24S Range 29E NMPM EDDY County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
2933

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER: RUN TRACER WITH FRAC	☒			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

OXY USA INC respectfully request permission to run a tracer with our frac procedure of our existing formation. Attached is our proposed procedure for your use and review. Should you have any other questions or concerns, please feel free to contact us at any time.

Spud Date: Rig Release Date:

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

SIGNATURE Jennifer Duarte TITLE REGULATORY SPECIALIST DATE 07/31/2015

Type or print name JENNIFER DUARTE E-mail address: JENNIFER_DUARTE@OXY.COM PHONE: 713-513-6640

For State Use Only

APPROVED BY: TITLE DIST. SUPERVISOR DATE 8/3/2015
Conditions of Approval (if any):

WELL INFORMATION

CASING AND TUBING

		Size(in)	Wt(lbs)	Grade	Coll(psi)	Burst(psi)	MD (ft)
Surface		11-3/4"	47	J-55	1,510	3,070	567
Intermediate		8-5/8"	32	J-55	2,530	3,930	3,020
Production String		5-1/2"	17	L-80	6,390	7,740	13,196
Note / Casing Record	marker joint 7,973' KOP 7915' No DV tool or ECP No RBP downhole Completion Fluid is 10# brine Max DLS in the Vertical Section: 12.7deg/ 100' @ 8,889' MD						

PERTINENT CONTACT INFORMATION

Name	Company	Contact #	Email
Jason Watford	CJ-Frac	832-265-6877	Jwatford@cjenergy.com
Anh Bennett	CJ-CT	832-782-2078	abennett@cjenergy.com
Bobby Johnson	CJ-CT	701-570-8382	bjohnson@cjenergy.com
Luisa Jiminez	SLB- Frac	832-202-3134	Ljimenez@slb.com
Candice Murray	Key-CT	713-757-5430	cmurray@keyenergy.com
Matt Olson	Key-CT	701-367-3061	molson01@keyenergy.com
David Burleigh	Nabors-Frac	713-825-3795	Michael.Burleigh@nabors.com
Gabriel Garduno	Nabors-WL		Gabriel.Garduno@nabors.com
Gerrit Bennis	Cameron-WH	432-413-6278	Matthew.Bennis@c-a-m.com
Eric Johnson	FMC		eric.johnson@fmcti.com
Brandon Beseda	Cameron-WH		brandon.beseda@c-a-m.com
KJ Kranston	Renegade	432-312-0797	
Customer Service	Apollo	432-258-4572	
Rusty Nix	Stallion	432-258-4572	rnix@sofs.cc
Nick Perry	Neff Rentals	432-333-3648	

PROJECT DESCRIPTION	
Business Unit	**Permian Resources, NM-Delaware**
Well Name	**Harroun 9-3H**
Field	**Cedar Canyon 2BS**
Completions Method	**Single Stage Continuous Pumping**
Completed Formation	**2nd Bone Springs**

STANDARD DOCUMENT		
Lead Completions Engineer	Adekoya, Folarin	281-728-6187
2nd Completions Engineer	Macario Rincon	281-224-5223
Completion Team Lead	Rodriquez, Robert	832-660-4968
Completions Field Superintendent	Johnson, Travis	575-499-6425
Completions Superintendent	Thompson, Buddy	806-893-3628

APPROVAL

Revision	Date Issued	Status	Issued By	Reviewed By
0	7/30/15	Active	Folarin Adekoya	

EMERGENCY CONTACT INFORMATION

CITY	COUNTY	AMBULANCE	HELICOPTER	HOSPITAL	POISON	SHERIFF	FIRE DEPT	HWY PATROL	POLICE
Pecos	Reeves	432-445-4444	432-445-2421	432-447-3551	800-222-1222	432-445-4901	432-445-4444	432-447-3533	432-445-4911
Fort Stockton	Pecos	432-547-2240	432-336-6261	432-332-2004	800-222-1222	432-336-9393	432-366-9393	432-366-3414	432-366-8525
Carlsbad NM	Eddy	575-887-5969	575-887-1191	575-887-4100	800-222-1222	575-887-7551	575-885-3125	575-885-2026	575-885-2111
Artesia NM	Eddy	575-746-5050	575-746-2122	575-748-3333	800-222-1222	575-746-9888	505-746-5050	888-442-6677	575-746-5000
Midland	Midland	432-685-7340	432-570-2892	432-685-1111	800-222-1222	432-688-4600	432-685-7310	432-498-2100	432-685-7110
Odessa	Ector	432-550-9410	432-332-1660	432-640-4000	800-222-1222	432-335-3050	432-257-0502	432-332-6100	432-333-3641

WELL OBJECTIVES

The following are the objectives of this well:

- Comply with OXY Permian HES policy and promote a safe working environment with no harm to the people or the environment.
- Ensure all changes to the Completion Procedure are documented through the MOC process.
- Stimulate Well through continuous pumping method
    - Start by pumping an injection tests with 2 wellbore volumes of slickwater
    - Pump ~ 5.76MM of 20/40 Ottawa White Sand with 80,000bbls of fluid (linear, cross-linked gel and slickwater)
- Shut in well for a week before CTCO
- Run production tool
- Monitor flowback (slowly open choke) and make sure to include Sand Catcher in case there are large volumes of white sand returns during flowback
- RIH with Gas lift after well dies naturally

RECOMMENDED PROCEDURE:

STIMULATION PROCEDURE:

1. MIRU stimulation equipment. Ensure high pressure lines are properly secured and that the area is restricted to essential personnel only.
2. Pressure test lines to 7,200 psi.
3. Set the hydraulic pop-off valve(s) at 6,000 psi.
4. Set the global pump kick-out at 6,100 psi.

5. Stagger electronic kick-outs at 50 – 100 psi increments below the global kick-out. Verify the lowest kick-out is greater than the estimated treating pressure.
6. **Do Not Exceed Max Treating Pressure of 6,200 psi.**
7. Prior to frac, ensure that Computer van is monitoring all rates and pressures accurately
8. Review the frac treatment schedules. Execute the appropriate Frac schedule for the current stage and be prepared to modify pump schedule as needed
9. **Ensure Renegade is pumping radioactive tracers throughout job.** Renegade is going to run 3 different isotopes (1st isotope Stages 1-10, 2nd isotope stage 11-15 and 3rd isotope stage 16-20)
10. Begin by pumping an injection test with 2 wellbore volumes of slickwater. The first stage will be pumped per pump schedule below (using 150lbs of J660) at the end of the stage, based on the pressure response observed, the amount of BroadBand Sequence diversion pill to be deployed will be recalculated for the following stage. This method will be repeated until the adequate amount of pills per stage yields pressure is greater than 400psi.
11. Refer to the attached decision tree below for adjusting the mass of the diversion pill.
12. Slow the rate to 20 bpm, 50bbls before the pill reaches the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
13. Shut down and record ISIP. If this ISIP is more than **1,200 psi** as compared to pre-job ISIP. **Then do not pump the slickwater pre-pad for Stage 2, directly go to the linear gel (WF120) and continue the rest of the treatment.**
14. At the end of Stage 2, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
15. Shut down and record ISIP. If this ISIP is more than **1,200 psi** as compared to pre-job ISIP. **Then do not pump the slickwater pre-pad for Stage 3, directly go to the linear gel (WF120) and continue the rest of the treatment.**
16. At the end of Stage 3, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
17. Shut down and record ISIP.
18. Pump Stage 4 as planned.
19. At the end of Stage 4, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
20. Shut down and record ISIP.
21. Repeat steps 10 -12 for the Stages 5 and 6.
22. Pump Stage 7 as planned.
23. At the end of Stage 7, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.

24. Shut down and record ISIP. If this ISIP is more than **2,000 psi**. **Then skip planned Stages 8 through 10 and go to 500,000 lbs (ReStimulate) stage design. Use remainder of sand volume in Stage 20.**
25. If this ISIP is less than **2,000 psi then pump Stage 8 as planned.**
26. At the end of Stage 8, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
27. Shut down and record ISIP. If this ISIP is more than **2,000 psi**. **Then skip planned Stages 9 and 10 and go to 500,000 lbs (ReStimulate) stage design. Use remainder of sand volume in Stage 20.**
28. If this ISIP is less than **2,000 psi then pump Stage 9 as planned.**
29. At the end of Stage 9, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
30. Shut down and ISIP. If this ISIP is more than **2,000 psi**. **Then skip planned Stage 10 and go to 500,000 lbs (ReStimulate) stage design. Use remainder of sand volume in Stage 20.**
31. If this ISIP is less than **2,000 psi then pump Stage 10 as planned.**
32. At the end of Stage 10, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
33. Shut down and record ISIP.
34. Pump Stage 11 as planned.
35. At the end of Stage 11, use the decision tree for deployment of the BroadBand Sequence diversion pill. Slow the rate to 20 bpm after the pill has reached the top perforation, and continue at this rate until the pill has been flushed to the bottom perforation.
36. Shut down and record ISIP.
37. Repeat steps 26 -28 for the remainder of stages.
38. Upon reaching Stage 20, pump any remaining proppant from Stages 8 through 10 in addition to the 500,000 lbs. Flush the sand to the top perforation.
39. Ensure to monitor pressures to avoid screen outs while pumping.
40. Flush Procedure – When the in-line densitometer proppant concentration falls to 0.2 ppg, pump a 20 bbl cross linked spacer and then mark flush. Flush with slick water to the top perforation depth. Shut down and record ISIP, 5, 10 and 15mins.
41. Report the following pressures for each stage:
42. Well Open pressure, ISIP, Frac Gradient, pressures during 20bpm slowdowns (if there is no ISIP)
43. **Screen-out Guideline**: If screen out leaves excessive proppant in the wellbore, flowback the well. Do not exceed 4,320 bpd (~3 bpm). Once proppant has been unloaded, flowback one additional casing volume to verify the casing is clean. Establish injection rate and slowly bring up pumps 5bpm every 2mins until max rate is achieved. Pump 1.5 wellbore volume with slickwater.

COILED TUBING CLEANOUT

SLB CTU UNIT will mobilize to location after shutting well in for a week to perform well clean-out and run a production tool downhole.

CHECK PIPE FATIGUE before starting job

1. Conduct SAFETY MEETING and test lines to 7,200psig
2. MIRU 2" CTU and pumping equipment, N2 units. ND night cap and MU lubricator.
3. Function test BOP rams and MU BHA as following.
    a. *Coil connector – 2.88" OD*
    b. *Dual flapper check valve – 2.88" OD*
    c. *Hydraulic disconnect – 2.88" OD*
    d. *Jar – 2.88" OD*
    e. *Circulation sub – 2.88" OD*
    f. *Motor – 2.88" OD*
    g. *Full wellbore –4 ¾" JZ bit OD with ~99 % of the production casing Drift ID.*

Production casing: 5 1/2" OD, L-80, 17#, 4.892" ID, 4.767" DID, set at 13,196' (MD), 8,645' TVD

4. Test BHA and record rate when motor starts to turn. Pull BHA into lubricator and MU to WH.
5. RIH at safe speed while circulating at minimum rates to **9,212'** (50' above top perf at **9,262'**). Wash sand and ensure N2/ air foam unit on standby to be used as needed.

   IF N2 is used then: Increase rate to 1.80 bpm and establish N2 injection at ~ 1,700 mscf resulting in an ideal foam quality of 67% to 88% maintain as will be recommended by CT company module a ~ 2200 psi WHP. (Note: the combine rate will result 3. 5 to 3.75 bbl/min exiting the bit). Wash sand at 12 ft/min max speed if encountered.

6. Continue RIH while maintaining circulation and wash sand at 12ft/min max speed if encountered and ensure to pump 5 bbl to 10bbl gel sweep after every cluster or more if needed (this will improve the chances of getting a cleaner wellbore).
   Monitor returns to ensure debris is being circulated from the wellbore. Also, check PIPE FATIGUE after every trip to KOP and ensure the integrity of pipe is intact.
7. Continue milling through sand to PBTD **(refer to existing perforations for actual perforation depths)**.
8. Pump last gel sweep (20 bbl) and circulate from bottom for one hour.
9. Start POOH at 40 ft/min to **KOP 7,915'** then 100 ft/min to surface. (Coil speed is maximum).
10. Once the sweep has been circulated out pump an additional 5bbl gel sweep and chase it up the vertical and out of the hole
11. POOH and LD 2.88" motor and 4.75" bit.
12. Ensure all valves are closed.
13. PU Goat head and Crown valve followed by night Cap to be installed on top of flow cross.

14. Shut in well
15. Handover well to production (well should be flowedback through casing)

CURRENT WELLBORE SCHEMATIC