

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
BLM

Sundry Notices and Reports on Wells

96 JUL 15 PM 3:48

1. Type of Well

GAS

2. Name of Operator

MERIDIAN OIL

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

1530' FSL, 1450' FWL, Sec.29, T-26-N, R-6-W, NMPM

K

5. Lease Number

SF-079266

6. If Indian, All. or

Tribe Name

7. Unit Agreement Name

8. Well Name & Number

Vaughn #32

9. API Well No.

30-039-22199

10. Field and Pool

Blanco MV/Basin DK/
Ensenada Gallup EXT

11. County and State

Rio Arriba Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

Type of Action

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Subsequent Report

☒ Recompletion

☐ New Construction

☐ Final Abandonment

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut off

☐ Altering Casing

☐ Conversion to Injection

☒ Other - Commingle

13. Describe Proposed or Completed Operations

It is intended to add the Gallup and Mesaverde formations to the subject well and commingle with the Dakota. Casing failures that are found will be repaired, and the well returned to production. Down hole commingle order R-10239 has been obtained from the New Mexico Oil Conservation Division.

RECEIVED
JUL 24 1996

OIL CON. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct.

Signed [Signature] (JME3) Title Regulatory Administrator Date 7/15/96

(This space for Federal or State Office use)

APPROVED BY _____ Title _____ Date _____

CONDITION OF APPROVAL, if any:

APPROVED

JUL 19 1996

DISTRICT MANAGER

WMOCD

District I
PO Box 1988, Hobbs, NM 88241-1988
District II
PO Drawer 88, Artesia, NM 88211-8719
District III
1000 Rio Brazos Rd., Aztec, NM 87418
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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26 JUL 15 PM 3:48

FARMINGTON, NM

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-22199	Pool Code 72319 96321/71599	Pool Name Blanco MV/Ensenada Gail/Basin DK
Property Code 7623	Property Name Vaughn	Well Number 32
OGRID No. 14538	Operator Name MERIDIAN OIL INC.	Elevation 6462'

10 Surface Location

UL or lot no. K	Section 29	Township 26 N	Range 6 W	Lot Ida	Feet from the 1530	North/South line South	Feet from the 1450	East/West line West	County R.A.
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres
W/320
160-W/320

13 Joint or Infill

14 Consideration Code

15 Order No.

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

Not resurveyed, prepared, from a plat dated 6-22-79 by Fred B. Kerr Jr.	29	1450'	1530'	RECEIVED JUL 24 1996 OIL CON. DIV. DIST. 3	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature Peggy Bradfield Printed Name Regulatory Administrator Title 7-15-96 Date
					18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 7-11-96 Date of Survey Signature NEALE C. EDWARDS 8857 8857 Certificate Number

Vaughn #32
Blanco Mesaverde/Undesignated Gallup/Basin Dakota Workover
UnitK-Sec29-T26N-R06W
Lat: 36° 27' 14"
Long: 107° 29' 41"

-
- Comply with all BLM, NMOCD, & MOI rules & regulations.
 - **Always Hold Safety Meetings.** Place fire and safety equipment in strategic locations.
 - **Lower Dakota stimulation will entail high surface pressures = 8500 psi.**
 - 2-7/8" N-80 Buttress Frac String (6400' +/- required).
 - Fifty (50) joints 2-3/8" 4.7# EUE J-55 tubing and six (6) 3-1/8" drill collars on location
 - **8 frac tanks required for fracture stimulations. Use 2% KCl water.**
 - **Acetic acid will be used for Gallup stimulation.**
 - **Immediate flowback will be implemented on the fracs.**
 - Use drill gas or Nitrogen ONLY for all operations - **NO AIR.**
 - Ensure CIBPs used are T-Lok for easier drilling of stacked plugs.
-

This well is part of the 1996 Klein/Vaughn Mesaverde/Gallup/Dakota commingle program. The well is currently completed in the Dakota with a production rate of 100 MCFD/ 0 BOPD. Cumulative Dakota production is 526 MMCF/ 7.7 MBO.

The Dakota will be temporarily abandoned so that the Gallup (Niobrara) and Mesaverde (Point Lookout) intervals can be added. All three zones will be commingled immediately after completion of the workover.

NOTE: All plunger lift equipment, if any, should have been removed from the tubing by the lease operator.

1. MIRU. Record and report SI pressures on tubing, casing, & bradenhead. Lay blowdown line. Blow down casing & tubing. Kill well w/ 2% KCl down tubing. ND WH, NU BOP.
2. PU on tubing, releasing Baker Model R-3 PKR. TOOH, rabbit, & strap 2-3/8" tubing (from 7119', SN @ 7087'). Visually inspect tubing, note any scale in tubing. Replace any damaged joints. Utilize tubing for 2-3/8" workstring. If PKR comes out of hole easily, can skip clean out run in Step #3. ∴
3. PU 3-7/8" bit, float, six (6) 3-1/8" drill collars on 2-3/8" tbg. Clean out w/ gas to PBTD @ 7279'. Note drilling mud in returns if any. TOOH with bit & collars.
4. PU 4-1/2" CIBP & 4-1/2" packer combination on 2-3/8". TIH & set CIBP @ [±]6800'. Load hole from bottom w/ 2% KCl water.
5. Pressure test entire casing string to 1000 psi for 10 minutes. **NOTE: Squeeze work done during initial completion, see pertinent data sheet and wellbore diagram.** If PT does not hold, pull above DV tools @ 5493' and 2897' & test below each to 1000 psi. Locate hole(s). TOOH. Engineering will provide a squeeze procedure if required.
6. RU wireline. Run GR-CCL-CBL from 6800' to surface under 1000 psi w/ no gaps. Note and report all cement tops and quality of bond over both Gallup & Mesaverde intervals. If cement is not covering the Gallup interval, a block squeeze may be performed across the Gallup. Engineering will provide a squeeze procedure if required.

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Meridian Oil Inc.
7/15/96

7. Complete all squeeze cementing operations which will be determined based upon pressure test information and bond quality. WOC recommended time. Drill out cement - **DO NOT drill CIBP @ 6800'**. Pressure test to 1000 psi. If casing integrity is not sound, identify leaks, & engineering will recommend squeeze procedure & modify stimulation work.

8. If no squeeze work is necessary and the casing held a solid test @ 1000 psi (no bleedoff), isolate wellhead with 2 joints 2-7/8" tbg and PKR. Test casing string to 3800 psi. If the test holds, make necessary adjustments to frac down casing. If test does not hold, bleed off and retest to 1000 psi to make sure no new leaks developed.

Niobrara Completion:

9. Spot 250 gallons 10% acetic acid (w/ 2 gal/1000 corrosion inhibitor) across Gallup @ 6318'. TOOH, stand back 2-3/8". Change rams to 2-7/8".

10. RU wireline under packoff. Perforate Gallup top-down in acid @ the following depths with 3-1/8" HSC gun w/ Owen 306 12 g charges (0.31" hole, 11" penetration), 1 SPF @ 180 degree phasing. Engineering may modify perforations based upon bond character.

6040'	6046'	6054'	6064'	6091'	6098'
6105'	6135'	6144'	6170'	6178'	6198'
6204'	6210'	6215'	6225'	6230'	6240'
6259'	6265'	6315'	6318'		

(22 total holes, 278' of interval)

11. PU 4-1/2" FB PKR, 1.81" profile nipple, 4 joints 2-3/8" 4.7# N-80 tubing, 2-3/8" x 2-7/8" buttress changeover, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. TIH above CIBP and below bottom perforation. Test CIBP to 3800 psi. Release PKR, pull uphole & set PKR 100' above top Gallup perforation. Hold 500 psi on annulus during acid job.

12. RU stimulation company. Pressure test surface lines to 7500 psi. **Max pressure = 6500 psi.** Prepare to break down Niobrara w/ 250 gallons 10% acetic acid (w/ 2 gal/1000 corrosion inhibitor) and 44 7/8" 1.3 s.g ball sealers. Attempt to achieve 20 BPM on breakdown, go higher if possible. Release pressure, RD stimulation company. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR.

13. RU immediate flowback equipment (frac nipple, valve, tee, etc.). See attached diagram.

14. RU stimulation company. Pressure test surface lines to 7500 psi. **Maximum STP = 6500 psi.** Hold 500 psi on annulus. Fracture stimulate the Niobrara w/ 20# linear gel w/ 70Q N2 foam and 50,000# Tempered DC sand. See attached frac schedule for details. *(1 frac tanks needed)*

15. Flow back well immediately after shutdown -- **NOTE: Time from frac shut-down until flow tee is opened for flow back should be around 30 seconds.** Time is critical to achieve reverse gravel packing. Flowback rate not to exceed 4 BPM - choke flowback line as necessary. Frac company is to monitor flowback pressures for 30 minutes after shutdown. Flowback should continue for as long as possible while still allowing for completion of both stages within 24 hours. Blow down to release pressure when necessary.

16. Release PKR, TOOH w/ 2-7/8" tubing and PKR. RU wireline under packoff. Make 4-1/2" gauge ring run to 5300'. Set 4-1/2" CIBP @ 5275'.

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Meridian Oil Inc.
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Point Lookout Completion:

17. TIH w/ PKR on 2-7/8" and test CIBP to 3800 psi. Spot 300 gallons 7.5% HCl acid (w/ 2 gal/1000 corrosion inhibitor) at 5208' across Mesaverde. TOOH.

18. Perforate Mesaverde top-down in acid @ the following depths 3-1/8" HSC gun w/ Owen 306 12 g charges (0.31" hole, 11" penetration), 1 SPF @ 180 degree phasing. Engineering may modify perforations based upon bond character.

4878'	4881'	4884'	4887'	4890'	4894'
4917'	4943'	4946'	4950'	4953'	4969'
4986'	4993'	4998'	5035'	5037'	5062'
5066'	5126'	5130'	5147'	5150'	5176'
5205'	5208'				

(26 total holes, 330' of interval)

19. PU 4-1/2" FB PKR, 1.81" profile nipple, 4 joints 2-3/8" 4.7# N-80 tubing, 2-3/8" x 2-7/8" buttress changeover, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. Set PKR 100' above top Mesaverde perforation. Hold 500 psi on annulus during acid job.

20. RU stimulation company. Pressure test surface lines to 7500 psi. **Max pressure = 6500 psi.** Prepare to break down Mesaverde w/ 300 gallons 7.5% HCl acid (w/ 2 gal/1000 corrosion inhibitor) and 52 7/8" 1.3 s.g ball sealers. Attempt to achieve 20 BPM on breakdown, go higher if possible. Release pressure, RD stimulation company. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR.

21. RU immediate flowback equipment (frac nipple, valve, tee, etc.). See attached diagram

22. RU stimulation company. Pressure test surface lines to 7500 psi. **Maximum STP = 6500 psi.** Hold 500 psi on annulus. Fracture stimulate the Mesaverde w/ 100,000# 20/40 sand in slickwater + 30% N2 foam. See attached frac schedule for details. *(7 frac tanks needed)*

23. Flow back well immediately after shutdown -- **NOTE: Time from frac shut-down until flow tee is opened for flow back should be around 30 seconds. Time is critical to achieve reverse gravel packing. Flowback rate not to exceed 4 BPM - choke flowback line as necessary.** Frac company is to monitor flowback pressures for 30 minutes after shutdown. Flowback should continue for as long as necessary to release PKR.

24. Release PKR & TOOH laying down 2-7/8" N-80 tubing. Change out rams to 2-3/8".

25. TIH w/ 3-7/8" bit and drill collars on 2-3/8" tubing and clean out to CIBP @ 5275'. Drill CIBP, clean out to CIBP @ 6800'. Drill CIBP, clean out to PBTD @ 7279'. Clean up to +/- 5 BPH and trace to no sand. Obtain final pitot gauge. TOOH.

26. Prepare to run production tubing string as follows: expendable check, one joint 2-3/8" tubing, 1.78" seating nipple, and remaining tubing. Rabbit tubing in hole, land @ 7137'.

27. ND BOP, NU WH. Pump off expendable check and flow well up tubing. RD & release rig to next location.

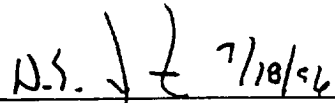
Vaughn #32
Meridian Oil Inc.
7/15/96

28. Notify Marketing & government agencies that commingled production from all horizons MV, GP, & DK will occur in order to finalize allocation formula. At end of 90 days, the allocation formula will be submitted to NMOCD for approval, **production will commence prior to actual allocation approval.**

Concur:

 7/17/96
Northeast Basin Team Leader

Approved:

 7/18/96
Drilling Superintendent

JME 

Recommended Vendors:

Stimulation
Cased Hole Services
Engineering

Rig Dependent
Rig Dependent
Joan Easley

599-4026-work
324-2717-pager
327-6843-home

PERTINENT DATA SHEET
VAUGHN #32

Location: 1530' FSL, 1450' FWL
Unit K, Section 29, T26N, R6W
Rio Arriba County, NM

Elevation: 6462' GL
LAT: 36° 27' 14"
LONG: 107° 29' 41"
DP#: 43940A
GWI: 100%
NRI: 68.25%
TD: 7297'
PBTD: 7279'

Field: Basin Dakota

Spud Date: 06-27-80

Completion Date: 12-10-80

Cathodic Protection: 1992

Casing Record:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight & Grade</u>	<u>Depth Set</u>	<u>Sxs Cement</u>	<u>Cement Type</u>
13-3/4"	9-5/8"	40#, LSS	239'	190 (224 ft3)	B w/3% CaCl, 1/4#/sk Flocele
7-3/4"	4-1/2"	11.6#, K-55	7297'	274 (408 ft3)	174sx B 65/35w/6%gel,2%CaCl
		0.5# K-55	6473		100sx B65/35w/6%gel,2%CaCl,1/4#Tufplug
Marker jt. @ 6887'		Stage Tool	5493'	385 (624 ft3)	B 65/35 w/6% gel, 2% CaCl
		Stage Tool	2897'	355 (571 ft3)	B 65/35 w/6% gel, 2% CaCl

good circulation all stages

Tubing Record:

<u>Tubing Size</u>	<u>Weight & Grade</u>	<u>Depth Set</u>	<u>BHA</u>
2-3/8"	4.7#, J-55	7119'	SN set @ 7087'
			Model R-3 PKR @ 6614'

Formation Tops:

Ojo Alamo	1988'	Chacra	3471'	Gallup	5940'
Kirtland	2112'	Mesaverde	4248'	Greenhorn	6801'
Fruitland	2407'	Menefee	4275'	Graneros	6855'
Pictured Cliffs	2628'	Pt. Lookout	4850'	Dakota	7000'

Logging Record:

IEL, CDL-FR, Temp Survey

Stimulation:

Perf'd (2) squeeze holes @ 7274', and (1) @ 7273'. Perf'd one hole @ 6916'. Set cement retainer @ 7264' cmt w/100 sx(118 ft3). Drill out to ret. Run CBL, perf sqz hole @ 6884'. Set cmt ret @ 6804', sqz w/50 sx (59 ft3). Drill out rets. to PBTD. Perf'd 6916', 6922', 6928', 6967', 6972', 6078', 7010', 7016', 7033', 7045', 7056', 7078', 7082', 7125', 7131', 7137' w/1 SPZ. Frac'd w/210,000# 20/40 sand, 40,500# 10/20 sand, 181,200 gal water

Workover History:

12-18-91 MIRU. Kill well. Tag fill @ 7252', TOO, scale buildup in bottom 19 jts. TIH w/ bit & scraper to 6800'. TOO, replace scaled tb, land tb, R-3 pkr @ 6614'. Swab in well, RD.

Production History:

Current Production	100 MCFD	-0- BOPD
Initial Deliverability	No Info	Latest Deliverability: 456 MCFD
Cum Gas: 526 MMCF	Cum Oil: 7701 BOP	ISITP: 2471 ISICP: 2476

Transporter: Oil/Condensate: Giant Transportation Gas: El Paso Natural Gas

VAUGHN #32

Basin Dakota
Unit K, Section 29, T26N, R6W
Rio Arriba County, NM
Elevation: 6462' GL
LAT: 36 °27' 14"
LONG: 107° 29' 41"
date spud: 06-27-80

Current

Final

9-5/8" 36# K-55
casing set
@ 239' w/190 sx
circ to surface

TOC @ 1850' (T.S.)

Stage Tool @ 2897'
w/ 355 sx

Stage Tool @ 5493'
w/ 385 sx

Dakota Perfs:
6916', 6922', 6928', 6967',
6972', 6078', 7010', 7016',
7033', 7045', 7056', 7078',
7082', 7125', 7131', 7137',
w/1SPZ
Frac'd w/210,000# 20/40
sand, 40,500# 10/20 sand,
&181,200 gal wtr.

4-1/2" 11.6# & 10.5#
K-55 csg set @ 7297'
w/274 sx

TD: 7297'
PBTD: 7279'

Formation Tops	
Ojo Alamo	@ 1988'
Kirtland	@ 2112'
Fruitland	@ 2407'
Pictured Cliffs	@ 2628'
Chacra	@ 3417'
Mesaverde	@ 4248'
Menefee	@ 4275'
Point Lookout	@ 4850'
Gallup	@ 5940'
Greenhorn	@ 6801'
Graneros	@ 6855'
Dakota	@ 7000'

Baker Model R-3
Packer @ 6614'

2-3/8", 4.7" J-55
tubing landed
@ 7119'

2-3/8", 4.7" J-55
tubing landed
@ 7137'

Mesaverde Perfs:

4878', 4881', 4884', 4887', 4890
4894', 4917', 4943', 4946', 4950
4953', 4969', 4986', 4993', 4998
5035', 5037', 5062', 5066', 5126
5130', 5147', 5150', 5176', 5205
5208 w/ 1SPZ. Frac w/ 100,000
20/40 sand in slickwater + 30%

Gallup Perfs:

6040', 6046', 6054', 6064', 6091
6098', 6105', 6135', 6144', 6170
6178', 6198', 6204', 6210', 6215
6225', 6230', 6240', 6259', 6265
6315', 6318' w/1SPZ
Frac w/ 50,000# Tempered DC
sand in 20# lin gel w/ 70Q N2

Dakota Perfs:

6916', 6922', 6928', 6967',
6972', 6078', 7010', 7016',
7033', 7045', 7056', 7078',
7082', 7125', 7131', 7137',
w/1SPZ
Frac'd w/210,000# 20/40
sand, 40,500# 10/20 sand,
&181,200 gal wtr.

TD: 7297'
PBTD: 7279'

Vaughn #32
Alternate Procedure Items for Fracing Down Casing

The workover procedure for this well has been written assuming that it will be necessary to frac down tubing (worst case scenario).

If no squeeze operations are necessary and the subsequent pressure test to 3800 psi (Step #8) is okay, we will frac down casing. Alternate frac designs for this possibility are attached.

If we can frac down casing, we will still spot acid and pressure test bridge plugs as before. We will do the acid breakdown down casing and retrieve balls with a junk basket. The frac will still be flowed back immediately.

Concur:

J. D. Ste 7/17/96
Northeast Basin Team Leader

Approved:

W.S. J. 7/17/96
Drilling Superintendent

JME *JME*
599-4026-work
324-2717-pager
327-6843-home