

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

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

2. Name of Operator  
Hallador Petroleum, LLP

3a. Address  
1660 Lincoln St., Suite 2700, Denver, CO 80264

3b. Phone No. (include area code)  
303 839-5504

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
4290 feet fwl and 790 feet fsl Section 7, T31N, R11W

5. Lease Serial No.

SF-078095A

6. If Indian, Allottee or Tribe Name  
NA

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

8. Well Name and No.

Horton #1

9. API Well No.

30-045-10841

10. Field and Pool, or Exploratory Area

Blanco Mesaverde

11. County or Parish, State

San Juan County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input checked="" type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration the If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and z Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 Following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator determined that the site is ready for final inspection.)

Note: Vertical approval required for this well. The well is located in the Horton #1 field and is being drilled to a depth of 4290 feet fwl and 790 feet fsl. The well is being drilled to a depth of 4290 feet fwl and 790 feet fsl. The well is being drilled to a depth of 4290 feet fwl and 790 feet fsl.

See attached casing repair procedures for the Horton #1.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Timothy Lovseth

Title

Manager of Exploration and Geology

Signature

Date

October 9, 2000

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

**COMPLETION PROGNOSIS  
FOR THE  
HALLADOR PETROLEUM, LLP  
HORTON #1  
BLANCO MESAVERDE  
SECTION 7, T31N-R11W  
SAN JUAN COUNTY, NEW MEXICO  
October 9, 2000**

**Current Well Status**

Well Spot Location	4,290' FWL and 790' FSL
Elevation Ground Level	6,253'
Kelly Bushing	6,262'
Base of existing 5 1/2" casing	4,945' W/150 sks. (TOC @ 3,905')
Base of existing 10 3/4" casing	158' w/150sks.
Total Depth drilled in 1952	5440'

**PHYSICAL DATA**

**5 1/2" 15.50 LB/FT J-55 (No Condition or thread description).**

Collapse	3,030 psi. (DF 0.75)
Burst	3,600 psi (DF 0.75)
Joint Strength in Tension	211,000 lbs.
Tube I.D.	4.950 in.
Wall Thickness	0.275 in.
Drift Diameter	4.825 in.
Joint O.D.	6.050 in.
Capacity	0.0238 bbls/ft.

**2 3/8" 4.60 lbs/ft J-55 Tubing (4,852' run in hole).**

Burst	7,700 psi. (new)
Inside Diameter	1.995 in.
Drift	1.901 in.
Joint Strength	71,700 lbs. (new)
Optimum Make-up Torque	1,290 ft lbs.
Minimum Make-up Torque	970 ft lbs.
Capacity	0.00387 bbls/ft.
Displacement	1.656 bbls/1000 ft.

**ANNULAR VOLUMES AND CAPACITIES**

Surf to 158': 10 3/4" by 5 1/2" casing	0.0829 bbls/ft.
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Surf. To 4,945' MD: 8 3/4" OH by 5 1/2"	0.4653 cu.ft/lin.ft.
	0.0450 bbls/ft.
2 3/8" by 5 1/2" casing	0.2526 cu ft/lin ft.
	0.0186 bbls/ft.
	0.1042 cu ft/lin ft.

### **PRODUCING INTERVALS:**

A) Top of Point Lookout at 5,075' B) Top of Mancos at 5,348'

### **NOTE:**

If it is determined that the casing has deteriorated beyond repair, Procedure #1 will be abandoned and Procedure #2 will be implemented.

### **PROCEDURE #1:**

1. Rig up, install BOE. Connect rig pump and haul in 200 bbls. 2 % KCL. Make sure
2. 10 3/4" casing has access and is equipped with one operating 2" valve.
3. Pull 4,852' of 2 3/8" tubing and 530' of 2" line pipe. Visually inspect tubing as it is being pulled. Replace Line pipe with 2 1/16" tubing.
4. Run in with 15.50# scraper to top of liner at 4,889'.
5. Run Retrievable Bridge plug to 4,800' and Baker packer. Establish where hole/holes are in casing. Pull Packer.
6. Contact Aztec OCD Office and determine where squeeze holes to be located.
7. Rig Wireline, dump sand with wireline bailer on top of Retrievable bridge plug and then shoot 2 squeeze holes.
8. Run Packer and set at least 200' above holes. Pressure backside to 1,000 psi and monitor it while establishing pumping rate into squeeze holes. Tie in 10 3/4" casing to pit/tank. Anticipate 171 bbls. fluid as returns from 8 3/4" & 5 1/2" annulus if squeezing from 3,800'.
9. Pump 590 sks. Lead cement with 2% calcium chloride and tail in with 50 sks. Class "B" neat with 2% calcium chloride. This volume allows 30% excess cement. Monitor returns on 10 3/4" casing. WOC.
10. Pull packer, run 4 3/4" bit and scraper on 4 - 3 1/2" drill collars and cleanout cement. Pressure test casing to 1,500 psi.
11. Trip in and recover Retrievable Bridge plug.

12. Run tubing and 2 1/16" tail pipe back into well, swab down and return to production.

**Procedure #2:**

1. Rig up, install BOE. Connect rig pump and haul in 200 bbls. 2 % KCL.
2. Pull 4,852' of 2 3/8" tubing and 530' of 2" line pipe. Visually inspect tubing as it is being pulled. Replace 2" line pipe with 2 1/16" tubing.
3. Run in with 15.50# scraper to top of liner at 4,889'.
4. Run Retrievable Bridge plug to 4,800' and Baker packer. Establish where hole/holes are in casing.
5. Pull Retrievable Bridge plug and Packer.
6. Run in with Sandline and check Total Depth of 5,385'.
7. If casing is deteriorated, run casing inspection log to determine wall thickness and
8. run Baker Lockset packer with 2 3/8" Unloader, 530' of 2 1/16" tubing as tail pipe with 4,000 # plug in end of 2 1/16". Set down with 2 3/8" tubing to set packer. Pull up 2 3/8" tubing to open unloader.
9. Cement 2 3/8" by 5 1/2" annulus with 450 cubic feet of cement.
10. Set tubing down to close Unloader, pressure tubing to 4,000 psi to shear plug in tail pipe.
11. Swab well down to top of packer.
12. Place well on Production.

Directions to Horton #1 in San Juan, County NM.

Travel 5 miles north of Aztec on Hiway 574 to mile post 9.1, turn right on County Road 3095. Go 1/4 mile to first road turning right & stay on thru gate and well location. Proceed another 1/4 mile to second road to right, up steep hill to well site.