Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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070 FARMINGTON, NM

FORM APPROVED
Budget Bureau No. 1004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
SF-078146A

6. If Indian, Allottee or Tribe Name

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

7. If Unit or CA, Agreement Designation

2. Name of Operator
Hallador Petroleum Company (OGRID # 12672)

8. Well Name and No.
Horton # 4

3. Address and Telephone No.
1600 Lincoln St, Suite 2700 (303) 839-5504 x-317
Denver, CO 80264

9. API Well No.
30-045-60074

4. Location of Well (Footage, Sec, T. R., M, or Survey Description)
Unit M, 990' FSL, 990' FWL, Sec 27, T32N - R12W

10. Field and Pool, or Exploratory
Blanco Mesaverde

11. County or Parish, State
San Juan County
New Mexico

MAR 2003

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ *Subsequent Report*	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ *Plugging Back*	☐ *Non-Routine Fracturing*
	☐ Casing Repair	☐ Water Shut-Off
	☒ Altering Casing	☐ Converion to Injection
	☐ Other	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or recompletion Report and Log Form)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including, estimated date of starting work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones of pertinent to this work.

HALLADOR PETROLEUM WILL PERFORM REMEDIAL CEMENTING WORK PER THE ATTACHED PROCEDURE TO ISOLATE THE PICTURED CLIFFS AND THE FRUITLAND COAL INTERVALS AND ELIMINATE THE BRADENHEAD GAS PRESSURE AND FLOW ON THIS WELL.

WE WILL COMMENCE OPERATIONS UPON SECURING PARTNER APPROVAL WITHIN THE NEXT 30 DAYS.

THIS SUNDRY WAS INITIALLY FILED TO THE NMOCD, ON A STATE FORM, ON 02-07-2003.

HALLADOR CONTACT TIM LOVESETH (303) 839-5504 x-317

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

ACCEPTED FOR RECORD
FEB 27 2003
FARMINGTON FIELD OFFICE
BY

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

Signed: Thomas E. Mullins (for Hallador Petroleum Company) Title: Engineering Manager Date: 02-12-2003

Telephone: (303) 839-5504 x-317

This space for federal or state office use

Approved by: /s/ Jim Lovato Title: Date: FEB 27 2003

Conditions of approval if any

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, ficticious, or fraudulent statements or representations as to any matter within its jurisdiction

NMOCD

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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 March 25, 1999

WELL API NO. 30-045-60074

5. Indicate Type of Lease STATE XX FEE ☐

6. State Oil & Gas Lease No. SF-078146A

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: HORTON

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

2. Name of Operator
HALLADOR PETROLEUM COMPANY (OGRID # 12672)

8. Well No. 4

3. Address of Operator
1660 LINCOLN ST, SUITE 2700, DENVER, CO 80264 (303) 839-5504 x-317

8. Pool name or Wildcat
BLANCO MESAVERDE

4. Well Location

Unit Letter M , 990' feet from the SOUTH line and 990' feet from the WEST line

Section 27 Township 32 N Range 12 W NMPM SAN JUAN County

10. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
6121' KB

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	X	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPLETION	☐	CASING TEST AND CEMENT JOB	☐		
OTHER:			☐	OTHER:	☐		

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

HALLADOR PETROLEUM WILL PERFORM REMEDIAL CEMENTING WORK PER THE ATTACHED PROCEDURE TO ISOLATE THE PICTURED CLIFFS AND FRUITLAND COAL INTERVALS AND ELIMINATE THE BRADENHEAD GAS PRESSURE AND FLOW ON THIS WELL. WE WILL COMMENCE OPERATIONS UPON SECURING PARTNER APPROVAL WITHIN THE NEXT 30 TO 45 DAYS.

HALLADOR CONTACT TIM LOVSETH (303) 839-5504 x-317

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

SIGNATURE _____ TITLE Engineering Manager DATE 02-07-2003

Type or print name Thomas E. Mullins (for Hallador Petroleum Company) Telephone No. (505) 566-3725

(This space for State use)

APPPROVED BY _____ TITLE _____ DATE _____

Conditions of approval, if any:

Hallador Petroleum, LLP
Horton # 4 (Mesaverde)
30-045-60074
T32NR12W Sec27
990' FSL, 990' FWL
Remedial Cementing Procedure

Well History: The Horton # 4 was drilled and openhole nitroglycerin shot completed in the Pt. Lookout interval of the Mesaverde in 1953. The openhole was drilled with a 6-1/4" bit and a 5" Slotted Liner is assumed to have been run in the well. There is no record of perforations placed in the well. The initial SICP was 933 psi. 2-3/8" 4.7# J-55 tubing was run and landed at 5105'+/-. No accurate records of the joint count, or true tubing depths(lengths) or BHA are noted. A slickline pressure survey in 1990, reached 5100', finding no water and showing a BHP of 553 psi.

Cumulative gas production is shown as 2,441 MMCF. Current production is 75 MCFD +/- into Williams Field Services Line at 140 psi. There is no clock, separator, compressor, or other surface equipment on this well.

Remedial work is necessary to eliminate the bradenhead gas pressure per the New Mexico Oil Conservation Division. Gas is believed to be sourced from the Fruitland Coal Intervals from 2250' to 2485'.

The offset Pictured Cliffs producer, Horton # 12, on the same well pad, is completed through perforations from 2496' to 2592'. This well is 183 feet away from the Horton # 4.

Directions: From Aztec, Take Light Plant Road North. Travel 8.3 miles. Turn Right (North) on new gravel road. Travel 2.7 miles on gravel road. Well location is on the immediate right hand side of the road.

Notify BLM (Farmington) and NMOCD of the commencement of remediation activities. Comply with all company and regulatory safety and environmental requirements. Designate a smoking area, minimum of 90' from any flammable source.

10-3/4" 32# K-55 Casing @ 200', Drill 9" Hole
7" 23# (6.366" ID) J-55 Casing @ 4680' (Cemented w/ 175 sxs), TOC @ 2905' T.S.
Drill 6-1/4" Hole. 5" slotted liner (4.560" ID?) from 4638' to 5158'
6-1/4" TD 5160'
2-3/8" 4.7# J-55 EUE Tubing @ 5100', Unknown number of jts in the well.

Items needed
One (1) 400 bbl frac tank, Empty Float for Old Tubing. New Float with New Tubing and Drill Collars.

1) Perform one-call. Dig small workover pit, fence and line pit. A Muffler will be used at the end of the 2" flow line.

2/12

2) Place Rig Anchors and Test Same.
3) Spot and fill One (1) – 400 bbl frac tanks with treated water (KCl substitute). Necessary due to large hole volumes and probable need of water during circulation, testing, and kill operations.
4) MIRU workover rig, with auxillary equipment. Check pressures on all WH valves. Blow down casing to pit as necessary. Kill well as necessary. ND WH. NU BOPE. Test Same.
5) Unseat Tubing Hanger. (Hanger Bolts Stuck).
6) COOH with 2-3/8" tubing, laying down tubing on float (Haul to town). Tubing is 50 years old. Tubing @ 5100'+/-.
7) PU yellow-band 2-3/8" 4.7# J-55 tubing and RIH with 7" 23# scraper. Tally-in-the hole. Run scraper to liner top @ 4638'. COOH.
8) PU 7" 23# RBP and GIH on 2-3/8" tubing. Set RBP above liner top at 4600'. Load hole through tubing from the bottom-up. (181 bbls w/o tubing). Spot 30 foot of sand on top of RBP. COOH. Top off casing with water.
9) Pressure test 7" casing to 750 psi. Replace old lock-down pins in wellhead, 3" casing wing valves in acceptable condition. Lubricate valves.
10) RU Blue Jet Perforators. Perforate four (4) squeeze holes phased at 90 degrees at 2475'+/-. Note depths of Horton # 4 PC perforations. SI Horton # 12 production.
11) PU 7" cement retainer. GIH w/ retainer & squeeze perfs @ 2450'+/-. Test tubing to 2500 psi, test casing to 500 psi. Hold 500 psi on casing, while pumping. Establish rate below retainer and out the squeeze holes. Mix and pump 120 bbls of water (98 bbls gauge volume) below the retainer in the attempt to circulate to surface. Shut down & monitor fluid fall back. Reestablish rate.
12) RU BJ Services. Gauge Annular Volume 436 ft3+/-. Re-establish rate below retainer. Mix & Pump 225 sacks (508.5 ft3) of lead 12.3 ppg cement followed by 50 sxs (71.5 ft3) of tail 14.5 ppg cement, (Lead 2.26 yield, Tail 1.43 yield) at a maximum rate of 3 bpm, diplace cement to retainer. SD, monitor lift pressure. Monitor bradenhead flow and pressure throughout job. This is 40% Excess on the Lead Slurry.
13) Sting out of the retainer. Reverse out cement. COOH w/ 2-3/8" tubing.
14) WOC 2 hrs. Monitor bradenhead pressure throughout job. If cement circulated to surface, then no need for steps # 14 through # 17.
15) MIRU Blue Jet. RIH w/ GR-CCL-CBL tool. Quicklook monitor for top of squeeze cement. POOH. Blue Jet perforate 2nd set of 4 squeeze holes in the 7" casing. POOH.
16) Close blind rams. Establish rate down casing and out bradenhead. Note circulation.
17) PU 7" cement retainer. GIH w/ retainer above 2nd squeeze perfs.
18) RU BJ Services. Test tubing to 2500 psi, test casing to 500 psi. Hold 500 psi on casing, while pumping. Establish rate below retainer and out the squeeze holes with water. Mix and pump remaining cement. Total cement volumes based upon 40% Excess due to large number of recent primary 7" cement jobs in the township area. SD. Sting out of the retainer. Reverse out cement. COOH w/ 2-3/8" tubing.
19) PU 6-1/4" bit, bit sub, and six (6) 3-1/8" drill collars on 2-3/8" tubing. WOC overnight.
20) Drill out cement squeezes and retainers. Test casing at each cement squeeze to 500 psi. Hold pressure 10 minutes, monitoring for bleed-off. Mix 2 sacks gel into rig pit water for drill-out to raise the viscosity of the fluid. Place screen at the return line to monitor cuttings and returns.

21) Continue in the hole to sand fill above the CIBP at 4600'+/-. Drill up any additional retainer pieces for 2 hours+/-. Circulate 15 feet of sand fill. Test the entire casing again to 500 psi. Hold and witness pressure for 30 minutes.
22) COOH, laying down drill collars and BHA.
23) PU retreiving head and GIH on 2-3/8" tubing.
24) MIRU air package. Unload casing above CIBP or stage in as necessary. Engage RBP and recover same from the well.
25) GIH w/ final production tubing assembly. Expendable check on bottom, one jt, SN, and remaining tubing. GIH and blow well clean to TD with Air/foam mist.
26) Pull up, and land tubing at 5100'+/- as before.
27) ND BOPE, NU WH equipment. Pump off expendable check. Flow well to pit to remove air from the produced gas stream.
28) RD & release workover rig and auxillary equipment.
29) Return well to sales line production. Suggested that a rental compressor be installed to maximize production. Liquid production may require the setting of a condensate/water tank.

Contact List

Company Contact	Tim Lovseth	(303) 839-5504 x-317
Well Anchors	L&R Oilfield Service	(505) 325-1922
PT, Acid, & Stimulation	BJ Services	(505) 327-6222
Wellhead	WSI Machine	(505) 326-0308
DH Tools, DCs, Etc	Baker Oil Tools	(505) 325-0216
Perforating Services	Blue Jet	(505) 325-5584
Supervision (Tom Mullins)	Synergy Operating	(505) 320-1751
Water Hauling, Heavy Haul	Key Energy Services	(505) 327-0416
Air Package	Energy Air	(505) 634-0113

Billing Information:

Hallador Petroleum Company
1660 Lincoln Street, Suite 2700
Denver, CO 80264
(303) 839-5504

TEM
February 3, 2003