Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMSF078051

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
MUDGE LS 22

2. Name of Operator
BP AMERICA PRODUCTION CO.
Contact: CHERRY HLAVA
E-Mail: hlavacl@bp.com

9. API Well No.
30-045-11057-00-S1

3a. Address
HOUSTON, TX 77253

3b. Phone No. (include area code)
Ph: 281-366-4081

10. Field and Pool, or Exploratory
BASIN DAKOTA

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 4 T31N R11W SWNE 1850FNL 1450FEL
36.92886 N Lat, 107.99107 W Lon

11. County or Parish, and 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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. 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 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The above mentioned well has been unable to produce since Feb. 2009 and is on the Feb. 2010 Inactive well list. The above mentioned well has limited remaining reserves and the wellbore is in poor condition.

Cement is estimated on the 5 1/2" to be around 3000' (cement based on 70% efficiency)

BP request permission to P&A the entire wellbore per the attached plugging procedure.

RCVD FEB 17 '10
OIL CONS. DIV.
DIST. 3

H_2S POTENTIAL EXIST

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #81250 verified by the BLM Well Information System
For BP AMERICA PRODUCTION CO., sent to the Farmington
Committed to AFMSS for processing by STEVE MASON on 02/12/2010 (10SXM0086SE)

Name *(Printed/Typed)* CHERRY HLAVA — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 02/10/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By STEPHEN MASON — Title PETROLEUM ENGINEER — Date 02/12/2010

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 Farmington

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

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCD

MUDGE LS 22 – DK PxA Procedure (Version 1)

General Information:

Formation:	DK	**Job Objective:**	Plug and Abandon
Project #:		**Date:**	1/28/2010
Engineer:	Anne Hansford	**p.** 281.366.8691	**c.** 713-540-3386
Production Contact:	Rocky Deromedi	**p.** 505.326.9471	**c.** 505.486.0942
Optimizer:	Mike Mcmahen	**p.** 505.326.9231	
Backup Engineer:			

Well Information:

API Number:	**30-045-11057**
BP WI:	50%
Run #:	44
Surface Location:	**Sec. 4, T31N, R11W**
Meter Number:	72924
Well FLAC:	
Cost Center:	
Lease FLAC:	
Restrictions:	N/A
Regulatory Agency:	
Compressed (Y/N):	N

Production Data:

Tubing Pressure:	0 psi (was 175 psi)
Casing Pressure:	0 psi (was 175 psi)
Line Pressure:	175 psi
Pre-rig Gas Rate:	0 MCFD
Anticipated Uplift:	
Water Rate:	
CO2 (%):	0.79-2.2%
H2S (PPM):	N/A
Gas BTU:	1154
Artificial Lift Type:	Plunger (see details)

Basic Job Procedure:

1. POOH with 2 3/8" tubing.
2. Set CIBP @ 7254'
3. Run USIT Log to determine TOC of 5-1/2" casing and where to cut- contact engineer for remedial work
4. Run USIT log on 7-5/8" casing to determine if remedial work needs to occur – contact engineer
5. Continue plugging program uphole - will be determined on location after logs.
6. Pxa entire wellbore

Safety and Operational Details:

ALL work shall comply with DWOP E&P Defined Operating Practice.

Don't know where TOC is so don't know exactly how we will plug the entire wellbore.

Should not have any plunger or plunger equipment, but not able to tag to bottom. Suspected hole in casing due to high fluid level – possibly around 1900', just due to not being able to swab below 1900', but not sure where the hole.

No F or X-nipple in tubing string. Tubing string is from 1960.

Well History:

The Mudge LS 22 – DK was completed in 1960. The well has had names of Mudge No 7 and Mudge 22.

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1. Perform pre-rig site inspection, size of location, gas taps, other wells, other operators, running equipment, wetlands, wash, H2S barriers if needed for equipment. Landowner issues, buried lines in pits, raptor nesting, critical location, check anchors. Check ID wellhead, determine if equipment is acceptable or obsolete and replace if necessary, if digging is required have One Call made 48 hours. Follow ground disturbance policy.

2. Perform second site visit, checking anchors and barriers if needed. Ensure lines are marked so that they clearly designate pit locations. Discuss and turnover handover sheet with someone from operations team and wells team. LOTO all necessary equipment including but not limited to: meter run, automation, separator, and water line.

Rig Procedure:

3. Notify NMOCD 24 hours prior to performing the work.

4. Hold pre-job safety meeting and discuss JSA with everyone on location. JSA should cover: heavy lifts, pinch points, location hazards, pressure hazards, proper PPE and 8 golden rules of safety/IFF. Make sure everyone has preformed their LOTO and knows they have the right to stop the job.

5. Check and record casing pressure, intermediate, and Bradenhead pressures. Record all pressures into DIMS. Notify engineer if Bradenhead pressures exist. Check gas H2S content and treat if the concentration is > or equal to 10 ppm.

6. MIRU workover rig.

7. Insure double casing valves are installed. Spot and lay 3" line and tank to blow down well, record pressures while blowing well down if possible.

8. Move in Wireline unit, equipment and crew. Be sure to fill out necessary work orders. Wireline must perform LOTO and JSA. RU unit with a lubricator and BOP. Pressure test lubricator and BOP to 250psi for 5 min and 700psi full test. Chart results and record passing test in DIMS.

9. Two barriers will need to set in order to break containment (Plugs in downhole profiles, CW plugs with triple slip stop, or Plug in profile). Each time the lubricated connection is broken, it will need to be pressure tested for a quick 5 min test and document in DIMS. Contact engineering if these barriers cannot be used. If wellhead has profile for Back Pressure valve, rig up High Tech, pressure test lubricator and equipment to set two-way check in wellhead profile. Test will need to be charted and recorded in DIMS.

10. Blow down backside to flow back tank.

11. Nipple down Wellhead. NU BOPs and diversion spool with 3" outlets and 3" pipe to the flow back tank. Pressure test BOPs. Monitor flowing casing pressure with gauge (with casing flowing to blow tank) throughout workover. Remove wellhead back pressure valve if used.

12. Pull tubing hanger and shut pipe rams and install stripping rubber.

13. POOH with 2-3/8" J-55 4.7#/ft production tubing currently set @ 7296'.

14. RIH with 5-1/2" CIBP and set at **7254'** and load hole with fluid and pressure test **5-1/2"** casing. If no fluid or pressure loss is apparent, RIH with scraper to ensure logging tool does not get stuck and run **USIT**. If fluid loss, TIH with scraper and run **USIT** and contact engineer for remedial procedure. (the operator may set a cast iron bridge plug within 100 feet of uppermost perforations or production casing shoe. load the casing with inert fluid

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and pressure test to 500 psi surface pressure with a pressure drop of not more than 10 percent over a 30 minute period). **Cement is estimated on the 5-1/2" to PERHAPS be around 3000' (based on 70% efficiency and a lower cement type, since none is noted in sundries.) If TOC is around 3000', then follow proposed plugging plan, if not, then STOP and contact engineer and BLM .**

a. RIH and mix correct batch of G-Class cement. Spot a cement plug from **7254'** (top of CIBP) **to 6377' (877' plug).** POOH. WOC. This should place cement across the DK and Gallup formations.
   i. Capacity of 5-1/2" casing: 0.0233 bbl/ft
   ii. 98 sxs of cement of Class G
b. RIH and set balanced plug at @ ~~4428~~' up to ~~4200~~' to cover the Mesaverde formation. POOH and WOC. ~~5075~~ 4523 ~~3975~~ 4423
→ Check 3575 - 3475
c. Since TOC may only be to **3000'** in 5-1/2" casing, will need to rig up e-line for perforating to cover Fruitland and Pc formations.
→ 7 5/8" Casing shoe 3035 - 2935
d. RIH c-line and equalize and pressure test lubricator
e. RIH with perforating gun and shoot 4 shots/ft @ ~~2845~~ 2842', (but need results of USIT).

   Attempt to establish circulation up annulus to ensure holes are open. If no circulation, attempt to re-perf tubing.
f. RIH and set cement retainer at ~~2795~~ 2842'. Sting into retainer and pump G-class (Yield 1.15 cu ft/sx) cement ~~from 2795' to 2595~~ 260' in annulus. Pump internal plug from ~~2795~~ 2842' to ~~2595~~ 2642' inside casing. POOH and WOC. This should cover the PC formation.

15. To cover the Fruitland formation, results from the USIT will be used to determine casing is free to cut to access 7-5/8" casing, to run USIT on 7-5/8" casing to determine remedial procedure. I would like to set a CIBP in 7-5/8" @ ~ ~~2307~~' (based on estimated TOC in 7-5/8" casing to be 1600-1900' from a 70% efficiency and low yield cement), after cutting the 5-1/2" casing between an estimated 2595 to 2495. Then place a 150' plug from ~~2307~~' to 2466 - 2366 ~~2157~~' to cover Fruitland coal formation. Based on USIT results that will be run in the 7-5/8" casing, remedial work over the Kirtland/Ojo will determine with regulatory agency and engineer on location. Place a cement plug across the 5 1/2" casing stub (150') Kirtland plug from 1161 - 1061' inside 200' of 7 5/8" casing
16. RIH and perf 7-5/8" casing at **250'**. Establish circulation from **250'** to surface through 7-5/8" casing x 10-3/4" casing annulus. Pump and displace a **250'** plug from **250'** to surface both inside and outside of the 7-5/8" casing. This should put cement across surface casing show all the way to surface and in all annuli from **250' to surface**. POOH

17. Perform underground disturbance and hot work permits. Cut off tree. **If cement cannot be seen on all annulus and casing strings remedial cementing will be required from surface.**

18. Install well marker and identification plate per BLM requirements.

19. RD and release all equipment. Remove all LOTO equipment.

20. Ensure all reports are loaded into DIMS. Print out summary of work and place in Well file. Notify Sherri Bradshaw (326-9260) of completed P&A and Cherry Hlava.

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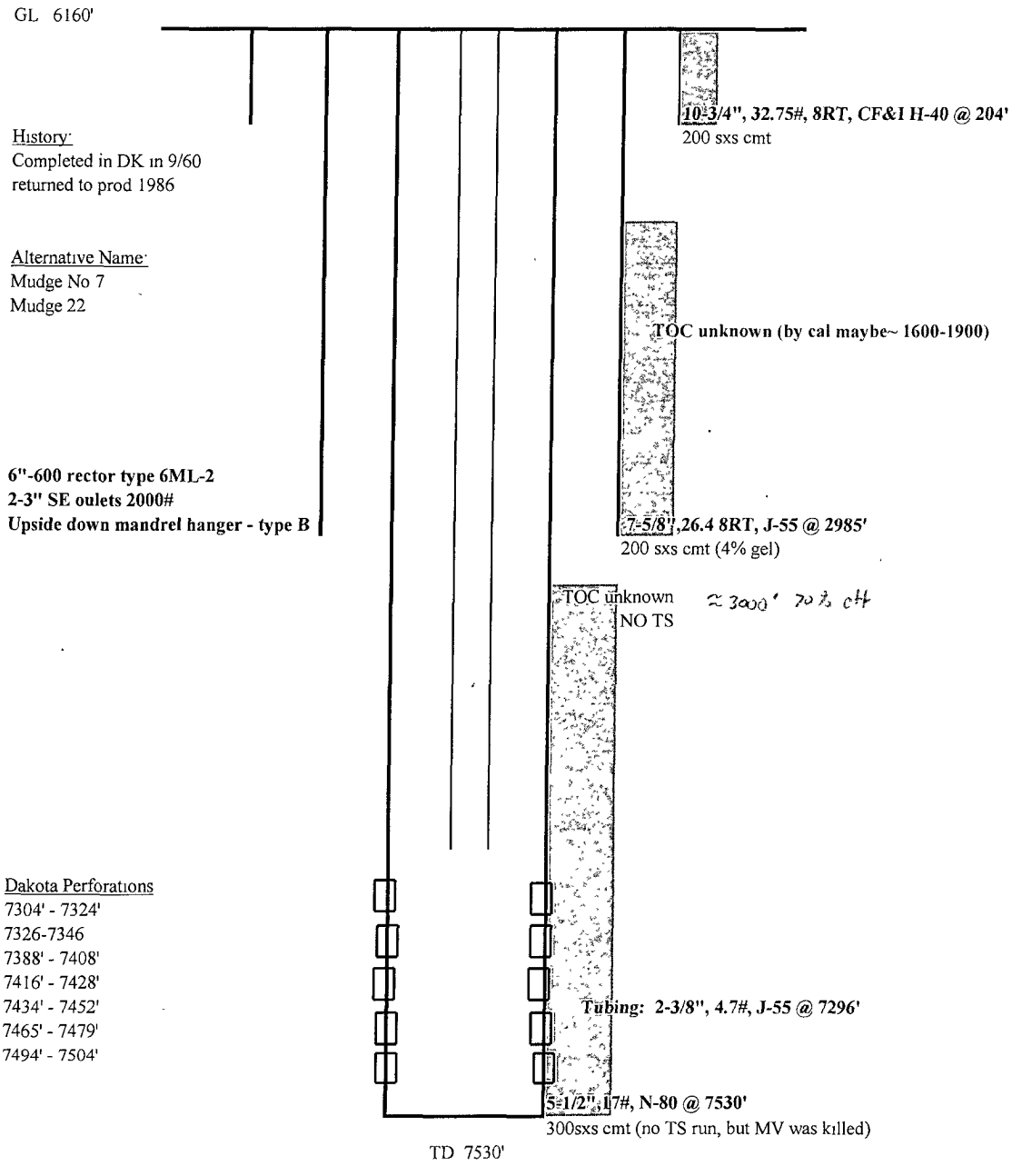
Mudge LS 22 - DK

Sec 4, T31N, R11W Unit G

API # 30-045-11057



Formation tops:

Ojo	1010'
Kirtland	1135'
Fruitland	2357'
Pc	2845'
Lewis	3000'
Clhs	4478'
Mene	4675'
PTLO	5090'
Mancos	5115'
Gallup	6527'
Grn	7139'
DK	7336'

Notes

1) Tubing has pin colar @ 7290' - 2005 wireline
2) wireline tag fluid @ 5850'
3) Well head is flanged - threaded MV

updated 8-25-09 AH

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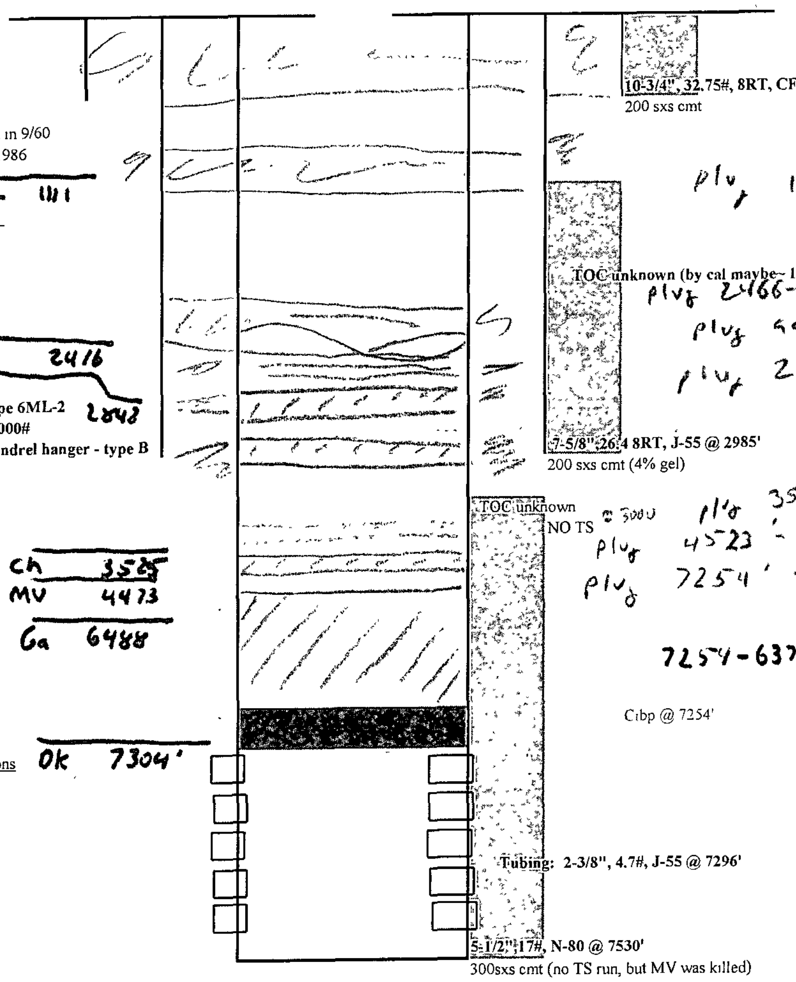
250/ 3.775 (n V5) = 56 sxs
50/ 4.8954 (1.18) = 9 sxs
200/ 4.009 (1.18) = 42 sxs
107 sxs

Mudge LS 22 - DK

Sec 4, T31N, R11W Unit G
API # 30-045-11057

GL 6160'



History
Completed in DK in 9/60
returned to prod 1986

Kt 1111

Alternative Name
Mudge No 7
Mudge 22

Fr 2416
Pc 2848

6"-600 rector type 6ML-2
2-3" SE oulets 2000#
Upside down mandrel hanger - type B

Ch 3525
MV 4473
Ga 6488

Dk 7304'

Dakota Perforations
7304' - 7324'
7326-7346
7388' - 7408'
7416' - 7428'
7434' - 7452'
7465' - 7479'
7494' - 7504'

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
1235 LA PLATA HIGHWAY
FARMINGTON, NEW MEXICO 87401

Attachment to notice of
Intention to Abandon:

Re: Permanent Abandonment
Well: 22 Mudge LS

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."

2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 599-8907.

3. The following modifications to your plugging program are to be made:

a) Place the Mesaverde plug from 4523' – 4423'.

b) Place a cement plug from 3575' – 3475' to cover the Chacra.

c) Place the 7 5/8" Casing Shoe plug from 3035' – 2935' inside and if no cement in the annulus outside the 5 ½" casing.

d) Place the Pictured Cliffs plug from 2892' – 2792' inside and outside the 5 ½" casing.

e) Place a 150' cement plug across the 5 ½" casing stub.

f) Place the Fruitland plug from 2466' – 2366' inside and outside the 5 ½" casing if the casing is cut off above the Fruitland.

g) Place the Kirtland plug from 1161' – 1061' inside and outside the 7 5/8" casing

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.