

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FEB 13

FORM APPROVED  
OMB No 1004-0137  
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.

File Serial No.  
NO-G-1008-1773Indian, Allottee or Tribe Name  
NAVAJO NATION

SUBMIT IN TRIPLICATE - Other instructions on page 2.

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator  
NAVAJO NATION OIL & GAS COMPANY3a. Address  
PO BOX 5069  
WINDOW ROCK, AZ 865153b. Phone No. (include area code)  
(303)534-83004. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
2041' FSL & 1647' FWL, Sec 14, T27N, R14W

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

8. Well Name and No.  
CBM A Pod A 14J #19. API Well No.  
30-045-3533310. Field and Pool or Exploratory Area  
BASIN FRUIT, COAL11. Country or Parish, State  
SAN JUAN, NM

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

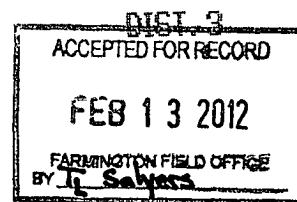
TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" 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 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 recompleat 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 must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

## AMENDED DRILLING PROCEDURES ATTACHED:

## SUMMARY:

Elevation: 6032' GL, 6037' RKP (Estimated)  
Total Dept: 1520' MD RKB  
Well Objective: Fruitland Coal  
Drilling Rig: D&D Rig #1  
Completion Rig: <undetermined>  
Estimated Spud Date: 03/05/2012  
Estimated Completion Date: Not scheduled at this time  
Estimated Drilling Time: 6 days

RCVD FEB 16 '12  
OIL CONS. DIV.

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

Racheal Dahozy for Lauren Germinario

Title Regulatory Analyst

Signature

Date 02/09/2012

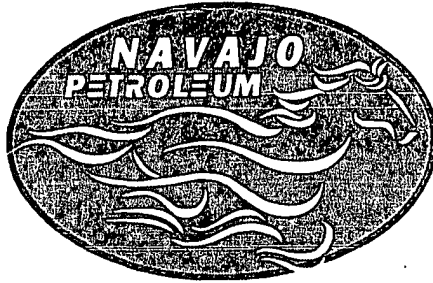
## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

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 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

(Instructions on page 2)

NMOCD Av



**Navajo Nation Oil & Gas Company  
Drilling Procedure – CBM Pilot Well  
CBM Pod A 14J #1**

**February 2012**

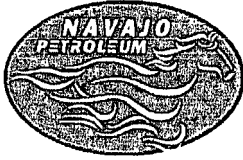
## 1. Summary Information

Well Name	CBM Pod A 14J #1 (A001)
API#	30-045-3533
AFE#	CBM001
Surface Location	36.57358 N. 108.29438° W (NAD 83) 2041' FSL & 1647' FEL (SWSE)
Section, Township, County, State	Sec 14, T27N, R14W San Juan County, New Mexico
Elevation	6032' GL, 6037' RKP (Estimated)
Total Depth	1520' MD RKB
Well Objective	Fruitland Coal
Drilling-Rig	D&D Rig #1
Completion Rig	<undetermined>
Estimated Spud Date	3/5/12
Estimated Completion Date	Not scheduled at this time
Estimated Drilling time	6 days
Estimated Completion time	5 days

## 2. Formation Tops

Formation	Depth-MD
Kirtland	Surface
Fruitland	690'
Fruitland Basal Coal	1257'
Pictured Cliffs Sandstone	1300'
Lewis Shale	1510'
Total Depth	1520'

**CBM Well Pod 14J #1 – Wellbore Schematic  
(Pod A Location)**



**Lease# NO-G-1008-1773**

County, State: San Juan, NM

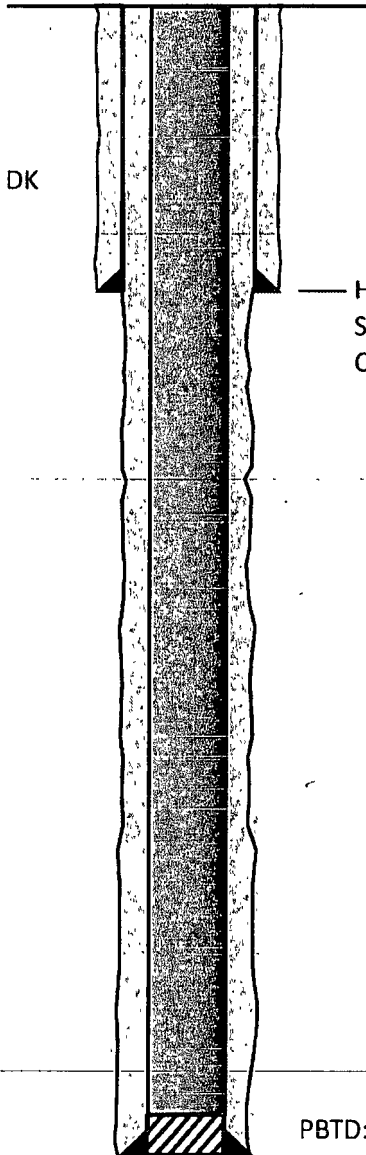
Field: Basin Fruitcoal, Chch GL & DK

Formation: Fruitland Coal

API# 30-045-35333

Spud Date: 3/05/2012

Location: T-27, R-14, Sec. 14



Hole size – 12 1/4", 160'

Surface casing – 8 5/8", 24#

Cmt to surface, 120 sks

Hole size – 7 7/8"

Production Casing – 5 1/2", 15.5#

Single stage: 140 sks

Tail: 100 sks

PBTD:

TD: 1520'

### 3. Hazards

**Hole instability** is always a concern but it is considered a low risk in the mud drilled portion of the well.

**Lost circulation** is possible in the basal Fruitland coal and Pictured Cliffs intervals. Monitor returns closely while drilling these intervals. Adjust water loss or add LCM accordingly if well is taking fluid.

### 4. Casing & Hole Program

Interval	Hole Size	Csg OD	Wt (lb/ft)	Grade
Surf – 160'	12 ¼"	8 5/8"	24	J-55
160 – 1520'	7 7/8"	5 ½"	15.5	J-55

### 5. Procedure

#### *Build Location, Set Surface*

1. Build any new access required, and location; set anchors, line the reserve and blooey pits.
2. Coordinate preparation of all casing strings prior to shipping to location.
3. MIRU Drilling rig. (Notify NMOCD & BLM of planned spud time.
4. Spud 12 ¼" hole. Drill to 160' GL. Condition hole. Take a survey.
5. Run 8 5/8" 24-lb/ft J55 casing to 160' GL. (**See Attachment A – Halliburton Cement Proposal, pages 3 – 5**) WOCT 4 hours, back off landing joint & nipple up BOPE and related surface equipment.
6. 3<sup>rd</sup> party pressure test BOPE (who?) and related equipment (choke & kill manifold) to 250 psig low (5 min) & 1000 psig (high) for 10-minutes. Record test results in driller's log. Notify Navajo Nation Minerals Dept.
7. Pressure test surface casing to 650 psi for 30 min after 12 hours WOCT.

#### *Drill Production Hole*

8. Drill out with 7-7/8" bit and remaining drill string assembly. Circulating fluid is non-dispersed gel base fluid with fluid loss control < 12cc.
9. Run SS surveys on slick line minimum every 500 feet. If rate of build is 1° per 100 ft or more, run SS surveys minimum at 100-ft intervals.
10. Drill 7-7/8" hole to core point: ~ 1250'. Core point will be determined by correlation with offsetting well or the drill break identifying top of coal seam. POOH to core.

#### *Core Fruitland Coal(s)*

11. Condition mud & TOH.
12. Pickup core barrel & TIH. (**See Attachment B for coring procedures and equipment details**) Core Fruitland Coal from 1250-1275' (coring depths will be confirmed during drilling by wellsite geologist').
13. TOH with core samples.

### *Continue Drilling Production Hole*

14. Continue drilling 7-7/8" production hole to 1520' RKB (wellsite geologist will confirm final TD on location).

### *Run Open Hole Surveys*

15. At TD, circulate & condition mud.
16. Pull short trip, minimum of 20 joints. Continue pulling pipe if any "tight" spots are encountered.
17. Circulate & condition mud, TOH for logs.
18. RU loggers and run OH surveys (To be determined in field by NNOGC staff). RD loggers.

### *Lay Down Drill Pipe & Drill Collars & Run Production Casing*

19. TIH to TD.
20. Circulate & condition hole.
21. TOH, laying down drill pipe & drill collars.
22. Rig up casing crew & hold safety meeting.
23. Pick up ~ 20' jt of 5-1/2" 15.5-ppf, J55 casing for shoe joint. Install one casing centralizer on the shoe jt.
24. Pick up a self-fill or equivalent float collar and make it up to the shoe joint.
25. RIH w/ 5-1/2", 15.5-ppf J55 casing, place centralizers on every other joint. Use total of ten (10) centralizers. Note: run 20' maker jt after 10<sup>th</sup> full joint.
26. Circulate last joint down and tag bottom. Circulate minimum 1 full circulation prior to cementing.

### *Cement Production Casing*

27. RU cementers and hold safety meeting.
  28. Cement first stage while reciprocating 5-1/2" csg slowly. (**See Attachment A – Halliburton Cement Proposal, pages 3, 8 – 13, 15 – 19**)
  29. RD cementers & set slips (w/ 60% of string weight in tension).
  30. ND BOPs and install 5,000# well head equipment. Bolt on well head cover. Shut-in.
  31. RD and release drilling rig.
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## 6. Materials & Services

Wellsite Supervision	John Thompson, Cell: 505-320-1748
Drilling Rig - D&D Rig #1	Glen Davis      Cell: 505-215-4600
Cementing Services	Halliburton – Randy Snyder, Cell: 505-320-3166
Trucking	Gillis Enterprises – 505-589-9373 Kelly Oilfield – 505-327-3485
Float Equipment	Halliburton – Randy Synder, Cell: 505-320-3166
Casing & Tubulars	Cave Enterprises – Jimmy Cave, Office: 505-334-1719
Casing Crew	San Juan Casing Services Buddy Morris or Ron Fellembaum: 505.325.2910
Drilling Mud	WesVan Mud & Chemical – Arnold VanNoy, Cell: 505-320-1890
Mudlogging	Field Geoservices – Michael D'Anna: 970-749-9284 Scott Waggoner: 970-270-5618
Coring	Quest Coring – Scotty Lucash, Cell:307-315-1489 (Alternate – Halliburton – Dispatch: 505-324-3500)
Core Analysis	Weatherford Labs – Kyle West: 970-389-6718 (Alternate– Core Lab – Jeff Craig, Cell: 303-257-9244)
Logging	Schlumberger – Dispatch : 435-789-3394; Charles Bartlett, Cell: 720-308-9953 (Alternate: Weatherford – Walter Campbell, Cell: 303-875-7929)
Drill Bits	Reed – Dom Vallejos, Cell: 505-330-3162
Tool Rental	Select Oil Tools – Doug Bowers, Cell: 505-215-2001
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Wellhead Equipment	Weatherford – Steve Smith, Cell: 303-242-4893 Chris Wulfert, Cell: 505-634-8447 Keith Schoch, Cell: 505-320-9418
Dirtwork & Location	Ace Services – Brian Carey, Cell: 505-215-2574 Consolidated Constructors – Craig Murray 505-486-5594

## 7. Safety Plan

### A. General

Drilling operations will be conducted on a 12-hour basis. No open flames will be permitted on location. Smoking will only be permitted in a safety zone away from the wellhead. The designated smoking area will be approved by the company representative and will be posted.

During formation testing, only essential personnel will be permitted in the test area.

A Blowout Preventer will secure the well bore at all times after surface casing has been set.

Rig safety lines will be utilized.

Hard hats will be worn on location at all times during drilling or completion operations.

The site is sufficiently open and will not impede removal of vehicles or personnel in the event of an emergency.

### B. Blowout Equipment and Test Procedures

Blowout prevention equipment will be installed prior to drilling out the surface casing. It will be a 2000 PSI system consisting of a double ram hydraulically actuated preventer, with one set of pipe rams and one set of blind rams. Sufficient valving will be installed to permit fluid circulation at the surface. A schematic of the BOP stack is included in this Plan. Blowout prevention equipment shall be in accordance with API RP 53: Recommended Practices for Blowout Prevention Equipment Systems.

While in service, BOP equipment will be inspected daily and a preventer operating test will be performed on each round trip of the pipe, but not more than once per 24 hour period. A notation of the operating tests performed will be made on the daily report.

All pipe fittings, valves, and unions placed on or connected with BOP equipment, well casing, casinghead, drill pipe, or tubing will have a minimum working pressure of 2000 PSI.

The BOP will enable closure on the pipe being used. The choke lines and kill lines will be anchored, tied, or otherwise secured to prevent whipping resulting from pressure surges.

Pressure testing of each component of the BOP equipment will be conducted prior to drilling out any string of casing. Drilling or completion operations will not proceed until BOP equipment is found, upon testing, to be serviceable.

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If the blind rams are closed for any purpose, the valves on the choke lines or relief lines below the blind rams will be opened prior to opening the rams, to bleed off any pressure.

Rig employees will have an adequate understanding of and be able to operate the BOP equipment. New employees will be trained in the operation of the BOP equipment.



## 8. Emergency Plan

### A. Definition

The emergency plan will go into effect if any uncontrolled flow occurs from the well or a production facility.

### B. Person-In-Charge

In order to assure proper execution of this action plan, it is essential that one person be responsible for coordinating emergency activities with local fire officials or other agencies that might become involved. That person is in complete charge of implementing these procedures. The order of responsibility in the event of an emergency is as follows:

1. Representative of Navajo Nation Oil & Gas Company at the well site,
2. The Rig Supervisor/Toolpusher at the well site,
3. Other person appointed by Navajo Nation Oil & Gas Company.

In the event of an emergency, if the top person on the list is not available, the responsibility will fall upon the next person on the list. This will continue until the responsible person is designated.

The responsible person will remain in charge until relieved by order of Scott Daves or John Hatch, Drilling and Production Managers for Navajo Nation Oil & Gas Company.

### C. Duties of the Person in Charge

1. Notify the Fire Department of any fire or other emergency at 911.
2. Organize or coordinate with municipal emergency service personnel an emergency search for anyone missing. Should a search team need to approach the well, a gas detector shall be used to determine explosive gas perimeter and a safety harness and rope shall be used along with a self contained breathing apparatus if the team should need to move into an explosive zone.
3. Ensure that injured persons, visitors, and nonessential workers are removed from the location to a hospital or safe haven by coordinating with emergency services personnel.
4. If necessary, assist in blocking the entrance to the location, prohibiting unauthorized persons from entering.
- ~~5. Implement the buddy system for company personnel remaining at the site.~~
6. Ensure that all matches, cigarette lighters, and all smoking materials are collected and placed in storage.
7. Coordinate with the senior fire department officer to determine if nearby residents should evacuate and if so, the Merrion location supervisor will begin assisting with the orderly evacuation of nearby residents if requested to do so by the fire or police department.

8. Define and isolate the hazard.
9. Determine whether to ignite the flow. Ignition procedures are outlined in Section E.

**Note: The decision to ignite the well should be made only as a last resort and only when it is clear that:**

- **Human life is endangered, or**
- **There is no hope of controlling the well under prevailing conditions.**

The decision to ignite a pipeline leak is also only the last resort; however, the resulting fire can be controlled easier.

10. Remain on location and lead attempts to regain control of the well.

#### **D. Duties of Rig Personnel:**

1. Company Supervisor: Take charge of emergency operations as outlined in Duties of Person-in-Charge:
2. Rig Supervisor/Toolpusher: In the absence of Navajo Nation Oil & Gas Company representative, take charge of emergency operations until relieved.
3. Driller:
  - Make sure there are no tool joints in the BOP.
  - Stay on location and assist company supervisor; help coordinate activities to contain the well in the safest way possible.
4. Rig Hands:
  - Go to the remote BOP controls and shut the well in when the tool joints have been cleared.
  - Go to choke manifold and choke the well using standard safe practices.
5. All Other Persons: Leave the location and go to a waiting area designated by the person in charge, and await further instructions.

#### **E. Leak Ignition**

The following procedure will be used to ignite a flow in the event it becomes necessary to protect the public:

Two (2) men wearing self-contained breathing apparatuses must determine the perimeter of the flammable area. This should be done with one man using a flammable gas detector. The flammable perimeter should be established at 30% to 40% of the lower flammable limits. The ignition team will be wearing harnesses connected to 350 feet of safety lines. These safety lines will be administered by two (2) more men wearing self-contained breathing apparatuses. If either man on the ignition team goes down or has problems, it shall be the responsibility of the back-up team to drag him out by use of the safety line and harness. Protective hose lines manned by the fire department personnel shall be ready at all times during such activities.

After the flammable perimeter has been established, and all employees and citizens have been removed from the area, the ignition team should move to the upwind area of the flammable perimeter and fire a flare into the area. If the flow is not ignited on the first attempt, move in 20 feet and fire another flare. Continue moving in and firing flares until the flow is ignited or the flammable gas detector indicates the ignition team is moving into a hazardous area (75% to 80% of the lower

flammable limits). If ignition is still not accomplished, ignite a copper line burner and push it into the flow area. If ignition is not possible due to the make up of the flow, the toxic perimeter must be established and maintained to insure evacuation is completed and continued until the emergency is secured.

**Note:** The decision to ignite the well should be made in concert with the senior fire department officer present and only as a last resort. This decision should be made at the corporate level if time permits. The decision to ignite should be made only when it is clear that:

1. Human life is endangered, or
2. There is no hope of controlling the well under prevailing conditions.

## F. Evacuation Procedure

The decision to evacuate and the area to evacuate will be made in concert with the fire department officials and the law enforcement personnel.

## 9. WELL CONTROL

### A. Responsibilities

The driller is responsible for detecting a kick or other abnormal flow. He will first take the steps outlined, and then notify the fire department and Navajo Nation Oil & Gas Company's representative, in that order.

### B. Well Control Procedures

If pit volume gain or well flow occurs, driller should immediately:

1. Pull kelly above rotary table.
  2. Shut pumps down.
  3. Open gate valve to choke manifold. Chokes will be open during drilling.
  4. Close pipe rams.
  5. Close choke valves. Note: the toolpusher or company drilling foreman or engineer may specify a limit on pressure.
  6. Move pipe slowly.
  7. Record drillpipe and casing pressures and volume of pit gain. Notify toolpusher and company drilling foreman or engineer.
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8. If so instructed by toolpusher or company drilling foreman or engineer, resume circulation at reduced rate and hold pump rate constant.
  9. Start circulation at reduced rate with casing back pressure set equal to or slightly higher than the shut in casing pressure. Note: toolpusher or company drilling foreman or engineer will specify exact pressure. When pump reaches desired rate and pump pressure is established, the casing pressure should be adjusted to maintain the established drill pipe pressure.

10. Note drillpipe pressure and continue to adjust choke to maintain this pressure until kick has been circulated from well.

NOTE: Pump rate must be held constant during circulation.

CAUTION: Conditions downhole vary greatly. This is intended as a guide only and is not to be used as standard procedure. The rig supervisor/ toolpusher or company drilling foreman or engineer will determine the correct well control procedure to be used in any given situation. Contact them immediately.

## 10. Emergency Call List

### A. Navajo Nation Oil & Gas Company Personnel

	<u>Mobile</u>	<u>Home</u>	<u>Office</u>
■ John Thompson, Consultant	505-320-1748;	505-327-1868;	505-327-4892
■ John Hatch, Op. Engineer	303-887-3684;	303-362-1035;	303-534-8300
■ Scott Daves, Consultant	303-601-9179		303-298-1400
■ Wayne Williams	303-514-5938;	303-706-1228;	303-534-8300

### B. Rig Company – D&D Drilling L.L.C.

Glen Davis 505-215-4600

C. Fire Department 911 505-599-1430

### D. Ambulance Service

Bloomfield 911

### E. Law Enforcement Agencies

■ New Mexico State Police 911 505-334-6622

■ Rio Arriba County Sheriff 505-334-6107

■ Navajo Police 928-871-6112

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### F. Well Fire Fighting Companies

■ Boots and Coots 713-931-8884

■ Red Adair 713-462-6479

G. Regulatory Personnel

- |   |  |
|---|--|
| ■ NM Oil Conservation Division<br>Denny Foust or Charlie Perrin | 505-334-178                                  |
| ■ NM OSHA Office<br>Robert Genoway                              | 505-476-8718                                 |
| ■ Navajo Nation Minerals<br>Valjean Uentille<br>Steven Prince   | 928-871-7312<br>928-206-6375<br>435-650-4492 |

11. Nearest Occupied Dwellings – (None at these sites)

<u>Name</u>	<u>Address</u>	<u>Phone</u>
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