Form 3160-5 (June 1990)

Conditions of approval, if any:

UNITED STATES DEPARTMENT OF THE INTERIOR

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

BUREAU OF L	5. Lease Designation and Serial No.		
SUNDRY NOTICES AN	NM 046		
Do not use this form for proposals to drill of	6. If Indian, Allottee or Tribe Name		
·	PERMIT - " for such proposals		
	IN TRIPLICATE	7. If Unit or CA, Agreement Designation	
1. Type of Well Oil X Gas Well Other		8. Well Name and No. Cheney Federal B 2	
2. Name of Operator ENERGEN RESOURCES CORPORATION		9. API Weil No.	
3. Address and Telephone No.	30-039-25266		
2198 Bloomfield Highway, Farmington 4. Location of Well (Footage, Sec., T., R., M., or Survey De.	10. Field and Pool, or exploratory Area		
1650' FSL, 990' FWL, Sec. 8, T26N,		Blanco Mesaverde	
1000 3E, 990 NE, 3ec. 0, 120N,	NER, N.11.1 .11.	11. County or Parish, State	
	Rio Arriba NM		
CHECK APPROPRIATE BOY(s) TO INDICATE NATURE OF NOTICE, REPORT	•	
) TO INDICATE NATORE OF NOTICE, HEI CITT	ONOTHENDATA	
TYPE OF SUBMISSION	TYPE OF ACTION		
X Notice of Intent	X Abandonment	Change of Plans	
 1	Recompletion	New Construction	
Subsequent Report	Plugging Back	Non-Routine Fracturing	
	Casing Repair	Water Shut-Off	
Final Abandonment Notice	Altering Casing	Conversion to Injection	
	Other	Dispose Water	
		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	
give subsurface locations and measured and true vert	pertinent details, and give pertinent dates, including estimated date of startical depths for all markers and zones pertinent to this work.)* ds to plug and abandon this well as per the		
	FEB 2001	01 JAN 19 AT 10 44	
14. I hereby certiff that the foregoing is true and correct Signed (This space for Federal or State effice use) (This space for Federal or State effice use)	Title Drilling & Completion Foreman Lands and Mineral Resources	Date 1/16/01 FEB 0 1 2001	
Approved by	, Title	Date —	

Title 18 U.S.C. Section 1001, makes 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.

PLUG & ABANDONMENT PROCEDURE

1/13/01

Cheney Federal B #2 Gavilan Mancos/Blanco Mesaverde 1650' FSL, 990' FWL, SW Section 8, T-26-N, R-02-W Rio Arriba Co., New Mexico

Note: All cement volumes use 100% excess outside pipe and 50' excess inside. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement is ASTM Type II, (15.6ppg, 1.18 cf/sx).

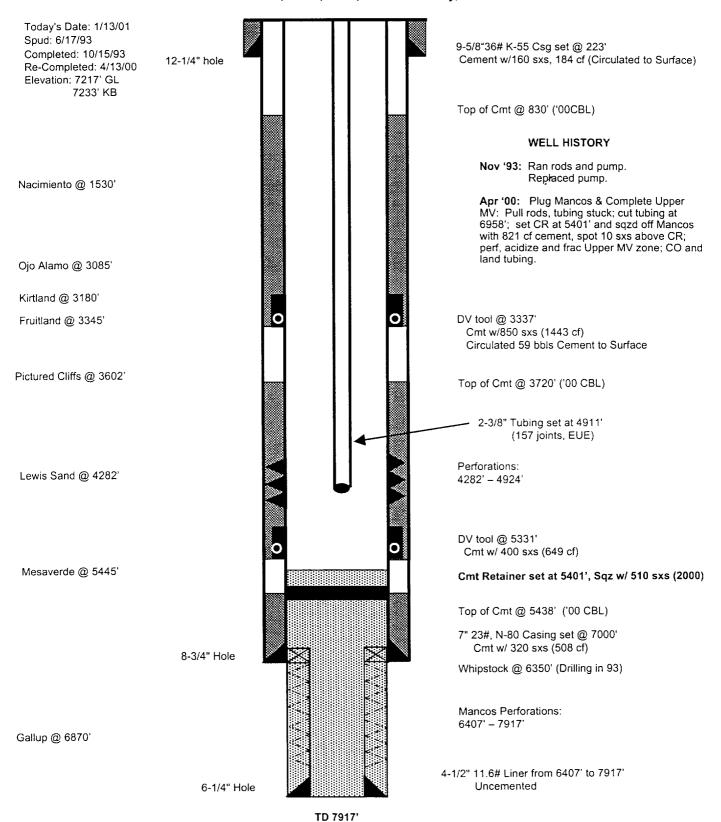
- 1. Install and/or test rig anchors. Prepare blow pit. Comply with all NMOCD, BLM and Energen safety rules and regulations. Conduct a safety meeting for all personnel. MOL and RUSU. Blow well down; kill with water if necessary. ND wellhead and NU BOP and stripping head; test BOP.
- 2. TOH and tally 157 joints 2-3/8" tubing (4911'); visually inspect. If necessary LD 2-3/8" tubing and PU workstring. Round-trip 7" gauge ring to 4232' or as deep as possible.
- 3. Plug #1 (Upper Mesaverde (Lewis) perforations, 4232' 4132'): Set a 7" CIBP or cement retainer at 4232'. TIH and tag CIBP. Load casing with water and circulate clean. Pressure test casing to 500#. If casing does not test, then spot or tag subsequent plugs as appropriate. Mix 28 sxs cement and spot a balanced plug above CIBP to isolate the perforations. TOH with tubing.
- 4. Plug #2 (Pictured Cliffs, Fruitland, Kirtland tops, 3652' 3336'): Perforate 3 HSC squeeze holes at 3652'. Establish rate into squeeze holes if casing tested. Set 7" CR at 3602'. Mix 151sxs cement, squeeze 26 sxs outside 7" casing from 3652' to 3552' and leave 125 sxs inside casing to cover Pictured Cliffs, Fruitland, Kirtland and Ojo Alamo tops. PUH to 1580'.
- 5. Plug #3 (Nacimiento top, 1580' 1480'): Mix 28 sxs cement and spot a balanced plug inside casing to cover Nacimiento top. TOH and LD the tubing.
- 6. Plug #4 (9-5/8" Casing Shoe, 273' Surface): Connect pump line to the bradenhead valve. Pressure test the surface annulus to 400#. If it does not test, then perforate 3 HSC squeeze holes at 273'. Establish circulation out bradenhead valve with water. Mix and pump approximately 100 sxs cement down 7" casing, circulate good cement out bradenhead valve. If the annulus tests, then spot 28 sxs from 273' to 173' and a surface plug from 50' to surface (with or without perforating, determined by pump in volume and calculated top of cement).
- 7. ND BOP and cut off wellhead below surface casing. Install P&A marker to comply with regulations. RD, MOL, cut off anchors, and restore location. Backfill pit and clean up location.

Cheney Federal B #2

Current

Gavilan Mancos/Blanco Mesaverde

SW Section 8, T-26-N, R-2-W, Rio Arriba County, NM



Cheney Federal B #2

Proposed P&A

Gavilan Mancos/Blanco Mesaverde

SW Section 8, T-26-N, R-2-W, Rio Arriba County, NM

Today's Date: 1/13/01 Spud: 6/17/93 Completed: 10/15/93 Re-Completed: 4/13/00 Elevation: 7217' GL

7233' KB

12-1/4" hole

8-3/4" Hole

6-1/4" Hole

Nacimiento @ 1530'

Ojo Alamo @ 3085'

Kirtland @ 3180'

Fruitland @ 3345'

Pictured Cliffs @ 3602'

Lewis Sand @ 4282'

Mesaverde @ 5445'

Gallup @ 6870'

TD 7917'

9-5/8"36# K-55 Csg set @ 223'

Cement w/160 sxs, 184 cf (Circulated to Surface)

Perforate @ 273'

Top of Cmt @ 830' ('00CBL)

Plug #4 273' - Surface Cmt with 100 sxs Class B

Plug #3 1580' - 1480' Cmt with 28 sxs Class B

Plug #2 3652' - 3035' Cement 151with sxs. 26 sxs outside casing (3652' to 3552'), then 125 sxs inside casing (3652' to 3035').

DV tool @ 3337'

Cmt w/850 sxs (1443 cf) Cir. 59 bbls cement to Surface

Cement Rt @ 3602'

Perforate @ 3652'

Top of Cmt @ 3720' ('00 CBL)

Set CIBP @ 4232'

Plug #1 4232' - 4132' Cement with 28 sxs

Perforations: 4282' - 4924'

DV tool @ 5331' Cmt w/ 400 sxs (649 cf)

Cmt Retainer set at 5401', sqz 510 sxs (2000)

Top of Cmt @ 5438' ('00 CBL)

7" 23#, N-80 Casing set @ 7000' Cmt w/ 320 sxs (508 cf)

Whipstock @ 6350' (Drilling in 93)

Mancos Perforations: 6407' - 7917'

4-1/2" 11.6# Liner from 6407' to 7917' Uncemented

BLM CONDITIONS OF APPROVAL

The following surface rehabilitation Conditions of Approval must be complied with as applicable, before this well can be approved for final abandonment (see 43 CFR 3162.3-4). Surface rehabilitation work shall be completed within one year of the actual plugging date. Notification for completion of this work can be submitted with a Sundry Notice. Questions? Call Pat Hester at (505) 761-8786.

- 1. All fences, production equipment, purchaser's equipment, concrete slabs, deadman (anchors), flowlines, risers, debris and trash must be removed from the location. Non-retrieved flowlines and pipelines will be abandoned in accordance with State Rule 714. Information supporting the non-retrieval will be included in the subsequent report or final abandonment Sundry Notice.
- 2. Production pits will be closed according to the Unlined Surface Impoundment Closure Guidelines, as approved in the Environmental Assessment of December 1993. Any oil stained soils can be remediated on-site according to these guidelines or disposed of in a an approved facility.
- 3. The well pad will be shaped to the natural terrain and left as rough as possible. All compacted areas and areas devoid of vegetation shall be ripped to a minimum of 12" in depth before reseeding.
- 4. Access roads will be shaped to conform to the natural terrain and left as rough as possible to deter vehicle travel. Access will be ripped to a minimum of 12" in depth, water barred and reseeded. All erosion problems created by the development must be corrected prior to acceptance of release. Water bars should be spaced as shown below along the fall line of the slope:

% Slope	Spacing Interval
Less than 20%	200'
2 to 5 %	150'
6 to 9 %	100'
10 to 15 %	50'
Greater than 15%	30'

- 5. All disturbed areas will be seeded with the prescribed certified seed mix (reseeding may be required). Seed mix must be certified weed free to avoid the introduction of noxious weeds. Refer to the original APD for seed mix.
- 6. Notify Surface Managing Agency seven (7) days prior to seeding so that they may be present to witness.
- 7. The period of liability under the bond of record will not be terminated until the well is inspected and the surface rehabilitation approved.

Other Surface Managing Agencies (SMA's) may vary slightly in their restoration requirements. It is your responsibility, as the operator, to obtain surface restoration requirements from other SMA's. We need to be provided with a copy of these requirements. Any problems concerning stipulations received from other SMA's should be brought to us.

On private land, a letter from the fee owner stating that the surface restoration is satisfactory will be provided to the office. Questions? Call Pat Hester at (505) 761-8786.

The following seed mixtures with allowable listed substitutions will be recommended for use within the AFO administrative area. All seed used in reclamation projects shall be certified noxious weed free prior to use.

HIGH ELEVATION VEGETATION TYPE

Common Name	Variety	Drilled Rate	Broadcast Rate	% for Mix	Lbs/Acre
Mountain Brome	Bromar	11.0	25.0	15%	3.8
Western Wheatgrass	Arriba	8.0	17.0	25%	4.3
Arizona Fescue	Redondo	2.0	3.0	20%	2.2
June Grass		0.5	1.0	25%	0.3
American Vetch		4.0	8.0	5%	0.4
Scarlet Penstemon		3.0	6.0	10%	0.6
Annual Rye	Gulf	4.0	8.0	-	8.0

Annual Rye Grass is included as a 1st year cover crop.

Alternative Species for Consideration:

Grass: Sand Dropseed, Sporobolus cryptandrus

Forbs: Desert Marigold, Baileya multiradiata

Rocky Mountain Beeplant, Cleome serrulata Purple Coneflower, Echinacea purpurea California Poppy, Eschscholtzia californica Annual Sunflower, Helianthus annuus

Yellow Evening Primrose, *Oenothera biennis* Purple Prairie Clover, *Petalostemum prupureum*

Prairie Coneflower, Ratibida columnaris Desert Globemallow, Sphaeralcea ambigua

Purple Verbena, Verbena stricta