

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 to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <u>Gas</u> <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <u>Gas</u>		5. Lease Serial No. NM-28277
2. Name of Operator <u>Vastar</u> Contact: CHERRY HLAVA E-Mail: hlavacl@bp.com		6. If Indian, Allottee or Tribe Name
3a. Address P.O. BOX 3092 HOUSTON, TX 77253	3b. Phone No. (include area code) Ph: 281.366.4081 Fx: 281.366.0700	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 17 T32N R4W Mer NWSW		8. Well Name and No. CARRACAS 17 B 14
		9. API Well No. 30-039-26485
		10. Field and Pool, or Exploratory 71629
		11. County or Parish, and State RIO ARRIBA 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 type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> DRG
	<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 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 shall 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 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.)

Please reference Vastar's application for permit to drill dated 6/20/00 and BLM's approval dated 8/8/00. Vastar Resources requests permission to procede with drilling the above referenced well. Please see the attached drilling plan.



14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #4879 verified by the BLM Web Information System For AMOCO PRODUCTION COMPANY, sent to the Farmington Committed to AFMSS for processing by Maurice Johnson on 06/14/2001 ()</b>	
Name (Printed/Typed) CHERRY HLAVA	Title AUTHORIZED REPRESENTATIVE
Signature	Date 06/08/2001

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By _____	Title _____	Date <u>6/25/01</u>
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.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***



BP Operating as Vastar Resources  
San Juan Business Unit  
P.O. Box 3092  
Houston, TX 77253-3092

June 7, 2001

Mr. Jim Lovato  
Bureau of Land Management  
Farmington District Office  
1235 La Plata Highway  
Farmington, NM 87401

Re: APD Sundry – Carracas 17 B #14

Mr. Lovato,

Attached please find an APD Sundry package for the previously approved \_\_\_\_\_  
Carracas 17 B #14 \_\_\_\_\_ in the Carson National Forest in  
Rio Arriba County, New Mexico. These changes are as we discussed in our telephone  
conversation June 6, 2001. Included are the following items:

APD Sundry Form  
Eight Part Drilling Plan  
Dowell Cement Proposal  
Mud Product information

The notable changes in the drilling program include upsizing the casing program to accommodate an additional string of pipe, the use of an environmentally responsible starch mud system, and a revised cement program based on the new casing program. Lastly, the 17 B #14 well was revised from a directional well to a straight hole from the pre-approved surface location.

Please contact Ryan Lamothe at BP America in Houston at (281) 366-0777 or Mary Corley at BP America in Houston at (281) 366-4491 if further information is needed to process the attached application.

Sincerely,

*Ryan B Lamothe* 6/7/01

Ryan Lamothe  
Drilling Engineer  
San Juan Business Unit  
281-366-0777

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BP Operating as Vastar Resources, Inc.  
Carracas 17 B #14  
795' FSL, 1940' FWL  
Sec 17, T32N, R4W  
Rio Arriba County, New Mexico

## **DRILLING PLAN**

### **FORMATION TOPS:**

The estimated tops of geologic markers as follows:

Ojo Alamo	3552'
Kirkland	3677'
Fruitland	3977'

### **2. ANTICIPATED DEPTHS OF OIL, GAS AND WATER:**

Ojo Alamo	3552' – Water
Fruitland	3977' – Gas

All zones capable of oil, gas or water production will be protected with 10-3/4", 7-5/8" or 5-1/2" casing and cemented.

### **3. BLOWOUT PREVENTOR REQUIREMENTS:**

Interval	Pressure Control Equipment
Surface – 150'	No equipment necessary
150' – 2300'	11" 3000 psi Double Ram preventor, rotating head and choke manifold.
2300' – 4319'	11" 3000 psi Double Ram preventor, rotating head and choke manifold.

All BOPE will be hydraulically pressure tested when nipped up, after well control use and every thirty days. Pressure tests will be to the lesser of 3000 psi or to 70% of the minimum internal yield pressure of the casing.

Blind rams will be functioned on each trip out of the hole. All BOPE checks will be noted on the daily drilling reports.

Additional BOPE equipment includes a kelly cock, FO Safety valve and an inside BOP.

BOP diagram submitted with original APD.

BP Operating as Vastar Resources, Inc.  
 Carracas 17 B #14  
 795' FSL, 1940' FWL  
 Sec 17, T32N, R4W  
 Rio Arriba County, New Mexico

#### 4. CASING AND CEMENTING PROGRAM:

The proposed casing program will be as follows:

<u>Hole Section</u>	<u>Hole Size</u>	<u>Interval</u>	<u>Casing Size</u>	<u>Casing Specs</u>
Conductor	14-3/4"	Surface to 150'	10-3/4"	40.5 # J-55 STC
Surface	9-7/8"	150' to 2300'	7-5/8"	26.4 # J-55 LTC
Production	6-3/4"	2300' to 4319'	5-1/2"	15.5 # J-55 LTC

<u>Hole Section</u>	<u>Slurries</u>
Conductor	71 sx Class G w/ 2% CaCl <sub>2</sub> & 1/4 lb/sk CF (83 cu.ft., 1.17 yield, 15.8 ppg) CEMENT TO SURFACE
Surface	Lead 147 sx Class G w/ 2% CaCl <sub>2</sub> , 3% D79 exten., 0.2% D46 antifoam & 1/4 lb/sk CF (392 cu.ft., 2.66 yield, 11.7 ppg) CEMENT TO SURFACE Tail 92 sx Class G w/ 2% CaCl <sub>2</sub> & 1/4 lb/sk CF (107 cu.ft., 1.17 yield, 15.8 ppg)
Production	138 sx Litecrete w/ 0.03% gps D47 antifoam, 0.5% D112 fluid loss, 0.11% D65 TIC (223 cu.ft., 1.61 yield, 12.5 ppg) CEMENT TO 500' INSIDE 7-5/8" *Cement volumes shown here reflect gauge hole w/ 0% excess. Excess will be pumped to ensure cement heights listed above are met. Dowell cement recommendation attached.

#### 5. MUD PROGRAM:

The proposed circulating mediums to be employed in drilling are as follows:

<u>Depth</u>	<u>Mud Type</u>	<u>Density</u>	<u>Funnel Vis</u>	<u>Fluid Loss</u>
Surface to 150'	Spud Mud	8.5 to 9.5 ppg	40 to 60	No Control
150' to 2300'	LSND Starch	8.7 to 9.3 ppg	30 to 60	25 - <10 cc
2300' to TD	LSND Starch	8.7 to 9.3 ppg	30 to 60	<10 cc

LSND Starch mud primary products - 5 ppb Dextrid LT, 0.25 Pac R, 0.25 ppb Barazan D, Aldacide G will only be used if necessary.

\* Product data sheets attached, MSDS available upon request

BP Operating as Vastar Resources, Inc.  
Carracas 17 B #14  
795' FSL, 1940' FWL  
Sec 17, T32N, R4W  
Rio Arriba County, New Mexico

**6. TESTING, LOGGING AND CORING:**

The anticipated type and amount of testing, logging and coring are as follows:

- a. Drill stem tests are not anticipated.
- b. The electric wireline logging program will be as follows:
  - Temperature survey if cement does not circulate.
  - Cased hole GR/CCL/CNL
- c. Mud logging: 2300' to TD.
- d. Coring program: No cores are anticipated.

**7. ABNORMAL PRESSURES AND H<sub>2</sub>S GAS:**

No abnormal conditions are anticipated during the drilling and completion of this well. Standard well control practices and equipment will be used for the duration of this well.

**8. OTHER INFORMATION & NOTIFICATION**

- a. Vastar Resources, Inc. is operating under our United Pacific national bond on file with the BLM. That BLM bond number s ES 0309.
- b. Construction operations are planned to start pending approval of the APD. Location preparation is estimated to take 2 to 3 days. The drilling activity should take 6 days. The drilling rig may be used for the completion portion of the well. The completion activities are anticipated to take 9 days. Total duration of activities preparing this well to produce should take an estimated 23 days.
- c. In the event of an emergency, contact the following:

Ryan Lamothe  
Drilling Engineer  
(281) 366-0777 (office)  
(281) 366-7099 (fax)  
(713) 503-1323 (cell)

Vance Norton  
Well Advisor  
(505) 326-9211  
(505) 326-9262 (fax)  
(505) 320-6677 (cell)

# Dowell Cementing Program

Well Name: 17 B 14	Field: Carracas
Location: CNF	API No.
County: Rio Arriba	Well Flac
State: New Mexico	Formation: Coal
	KB Elev (est) 7451
	GL Elev. (est) 7439

## Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cmt Cir. Out (bbl.)
Surface	150	14.75	10.75	ST&C	Surface	NA	
Intermediate	2300	7 7/8	7 5/8	LT&C	Surface	NA	
Production -	4300	6.75	5.5	?	1800	NA	

## Casing Properties:

(No Safety Factor Included)

Casing String	Size (in.)	Weight (lb/ft)	Grade	Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
Surface		10.75	32 H-40				0.1009	
Intermediate		7 5/8	20 K-55				0.0493	
Production -		5.5	15.5 J-55				0.0238	

## Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	<u>Recommended Mud Properties Prio Cementing:</u>
			PV <20
			YP <10
			Fluid Los: <15
0 - SCP	Water/Spud	8.6-9.2	
SCP - ICP	Water/LSND	8.6-9.2	
ICP - ICP2	Gas/Air Mist	NA	
ICP2 - TD	LSND	8.6 - 9.2	

## Cementing Program

	Surface	Intermediate	Production
Excess %, Bit	100%	80	10
Excess %, Caliper	NA	NA	30
BHST (est deg. F)	60	105	135
Pipe Movement	NA	Rotate/Reciprocate	Rotate/Reciprocate
Rate, Max (bpm)	7	4	2
Rate Recommended (bpm)	6	4	2
Pressure, Max (psi)	200	2000	2000
Shoe Joint	40	80	40
Batch Mix	NA	NA	NA
Circulating prior cmtnng (hr)	0.5	1.5	2
Time Between Stages, (hr)	NA	NA	NA
Special Instructions	1,6,7	1,6,8	2,4,6

1. Do not wash pumps and lines.
2. Wash pumps and lines.
3. Reverse out
4. Run Blend Test on Cement
5. Record Rate, Pressure, and Density on 3.5" disk
6. Confirm densitometer with pressurized mud scales
7. 1" cement to surface if cement is not circulated.
8. If cement is not circulated to surface, run temp. survey 10-12 hr. after landing plug.

## Notes:

- \*Do not wash up on top of plug. Wash lines before displacing production cement job to minimize drillout.
- \*\*\* Run TMD cased hole logs to identify pay; Perforating and CH logs can be run rigless.

## Surface:

Preflush                      20 bbl.                      FreshWater

# Dowell Cementing Program

Slurry 1 TOC@Surface	143 sx Class G Cement + 2% CaCl <sub>2</sub> (accelerator) 0.25 #/sk Cellophane Flake (lost circulation additive) 0.1% D46 antifoam	167 cuft  0.5563 cuft/ft OH 100 % excess
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Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)	
Slurry 1	15.8	1.17	4.95	

  

Casing Equipment:

- 10 3/4", 8R, ST&C
- 1 Guide Shoe
- 1 Top Wooden Plug
- 1 Autofill insert float valve
- 4 Centralizers
- 1 Stop Ring
- 1 Thread Lock Compound

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**Intermediate:**

Fresh Water	20 bbl	fresh water
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Lead Slurry 1 TOC@Surface	254 sx Class "G" Cement + 3% D79 extender + 2% S1 Calcium Chloride +1/4 #/sk. Cellophane Flake + 0.2% D46 antifoam'	675 cuft
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Tail Slurry 2  500 ft fill	165 sx Class G Cement + 2% CaCl <sub>2</sub> (accelerator) 0.25 #/sk Cellophane Flake (lost circulation 0.1% D46 antifoam	193 cuft  0.2148 cuft/ft OH 0.2495 cuft/ft csg ann 80 % excess
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Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)	
Slurry 1	11.7	2.66	17.77	
Slurry 2	15.8	1.17	4.95	

  

Casing Equipment:

- 7 5/8", 8R, ST&C
- 1 Float Shoe (autofill with minimal LCM in mud)
- 1 Float Collar (autofill with minimal LCM in mud)
- 1 Stop Ring
- 20 Centralizers (one in middle of first joint, then every third collar)
- 1 Top Rubber Plug
- 1 Thread Lock Compound

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**Production:**

Fresh Water	10 bbl	CW100
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Lead Slurry 1 TOC@Surface	152 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss + 0.11% D65 TIC	245 cuft
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## Dowell Cementing Program

Slurry Properties:	Density	Yield	Water	0.0835 cuft/ft OH
	(lb/gal)	(ft <sup>3</sup> /sk)	(gal/sk)	10 % excess
Slurry 1	12.5	1.61		0.1119 cuft/ft csg ann

Casing Equipment: 5-1/2", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)

1 Float Collar (autofill with minimal LCM in mud)

1 Stop Ring

21 Centralizers (every third joint)

1 Top Rubber Plug

1 Thread Lock Compound

Note:

1. The job should be pumped at 2-3 bpm max rate. Do not exceed 3 bpm on displacement
2. Wash pump and lines before displacement. Slow to 1 bpm for the last 30 bbl of displacement.



# DEXTRID<sup>®</sup> LT

## Filtration Control Agent

Description	DEXTRID LT, modified potato starch, provides filtration control with minimum viscosity buildup in water-based drilling fluids. Through its coating mechanism, DEXTRID LT reduces dispersion of clay particles and stabilizes reactive formations. DEXTRID LT is stable against bacterial degradation.	
Applications/Functions	Lower filtration rates in most water-based drilling fluid systems Improve borehole stability Flocculate dispersed drill cuttings in clear water drilling	
Advantages	Maintains filtration control without detrimental viscosity increase Effective with fast drilling nondispersed systems Decreases clay dispersion Readily biodegradable	
Typical Properties	Appearance	Fine or granulated powder
	Specific gravity	1.5
Recommended Treatment	To reduce filtration in drilling fluids, add 2-6 lb/bbl (5.7-17.1 kg/m <sup>3</sup> ) of DEXTRID LT slowly through the hopper. <i>Note:</i> Small amounts of CELLEX <sup>®</sup> filtration control agent or PAC <sup>™</sup> viscosity control agent will complement DEXTRID in fresh and salt water drilling fluids.	
Packaging	DEXTRID LT is packaged in 50-lb (22.7-kg) sacks. DEXTRID LT can be purchased through any domestic Baroid Service Center.	

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Baroid The Complete Fluids Company • P.O. Box 1675 • Houston TX 77251 • (281) 871-5067



# BARAZAN<sup>®</sup> D PLUS

*Suspension Agent/Viscosifier*

<b>Description</b>	BARAZAN D PLUS, a powdered, dispersant-added biopolymer (xanthan gum); provides viscosity and suspension in fresh water, sea water, sodium bromide, potassium bromide, potassium chloride, and sodium chloride-based fluids. It has been specially formulated for enhanced dispersibility.	
<b>Applications/Functions</b>	Viscosify fresh water and brine-based fluids used in drilling, milling, underreaming, and gravel packing operations Suspend bridging agents and weighting materials in fresh water and the brine systems described above.	
<b>Advantages</b>	Disperses easily in fresh water or brine with shear Provides thixotropic properties and non-Newtonian flow characteristics over a wide salinity range at low concentrations Provides excellent suspension without the need of additional clays Minimizes the potential for formation damage Stable to 250°F (121°C)	
<b>Typical Properties</b>	<ul style="list-style-type: none"><li>• Appearance</li><li>• pH (1% aqueous solution)</li><li>• Specific gravity</li></ul>	<ul style="list-style-type: none"><li>Yellow to white powder</li><li>6.3</li><li>1.6</li></ul>
<b>Recommended Treatment</b>	Mix 0.1-2 lb/bbl of BARAZAN D PLUS (0.3-5.7 kg/m <sup>3</sup> ), or as needed to obtain the desired viscosity and suspension characteristics.	
<b>Packaging</b>	BARAZAN D PLUS is packaged in 25-lb (11.3-kg) sacks.	

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# ALDACIDE® G

Microbiocide

Description	ALDACIDE G, a glutaraldehyde solution, is used to control bacteria growth in water-based drilling fluids. ALDACIDE G is recommended for use with systems containing polymers that are readily biodegradable (i.e. starches, biogums, etc.).	
Applications/Functions	Prevent spoilage of organic colloids Control sulfate reducing bacteria	
Advantages	Environmentally responsible Effective in small concentrations Compatible with most water-based drilling fluids	
Typical Properties	Appearance	Transparent liquid
	Specific gravity	1.06
Recommended Treatment	Add 0.2-0.5 lb/bbl (0.57-1.43 kg/m <sup>3</sup> ) of ALDACIDE G directly to the circulating system. <i>Warning:</i> ALDACIDE G is incompatible with BARASCAV D, and BARASCAV L.	
Packaging	ALDACIDE G is packaged in 5-gal (18.9-l) pails and 55-gal (208-l) drums.	

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