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FORM APPROVED Form 3160-3 200 518 27 AM II: 49 OMB No. 1004-0136 (August 1999) Expires November 30, 2000 UNITED STATES 070 Farmington, Ni DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NM 984078 **BUREAU OF LAND MANAGEMENT** 6. If Indian, Allottee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7. If Unit or CA Agreement, Name and No. 1a. Type of Work: X DRILL REENTER 8. Lease Name and Well No. Type of Well: Oil Well Gas Well X Single Zone Multiple Zone Harmon A #1S Name of Operator 9. API Well No. **ENERGEN RESOURCES CORPORATION** 30045 3220S 3A. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory c/o Walsh Engineering,7415 E. Main, Farmington, NM 87402 (505) 327-4892 **Basin Fruitland Coal** 11. Sec., T., R., M., or Blk, and Survey or Area 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 1980' FSL and 660' FEL At surface 📘 Sec. 2, T27N, R12W At proposed prod. Zone 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State 9 miles south of Farmington, NM San Juan NM 15. Distance from proposed' 17. Spacing Unit dedicated to this well 16. No. of Acres in lease location to nearest 660' property or lease line, ft. (Also to nearest drig. unit line, if any) 320+ S/2 320 Acres Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 19. Proposed Depth 20. BLM/BIA Bond No. on file 1500' 1870 +/-21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 5979' GL June 15, 2004 1 week 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form: 1. Well plat certified by a registered surveyor. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above). 3. A Surface Use Plan (if the location is on National Forest System Lands, the Operator certification. SUPO shall be filed with the appropriate Forest Service Office. 6. Such other site specific information and/or plans as may be required by the authorized office. 25. Signature Name (Printed/Typed) Date Paul C. Thompson, P.E. 2/25/2004 Title Agent Approved by (Signature Name (Printed/Typed) Title Office Application approval 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. Conditions of approval, if any, are attached. 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 reverse)

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

Pris action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4





District I PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Depart

Form C-102 Revised February 21, 1994 Instructions on back

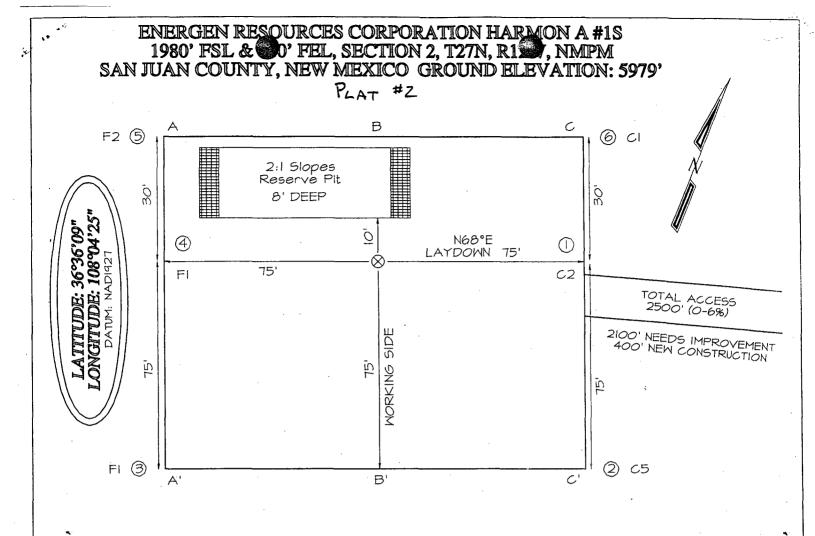
District II PO Drawer DD, Artesia, NM 88211-0719 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

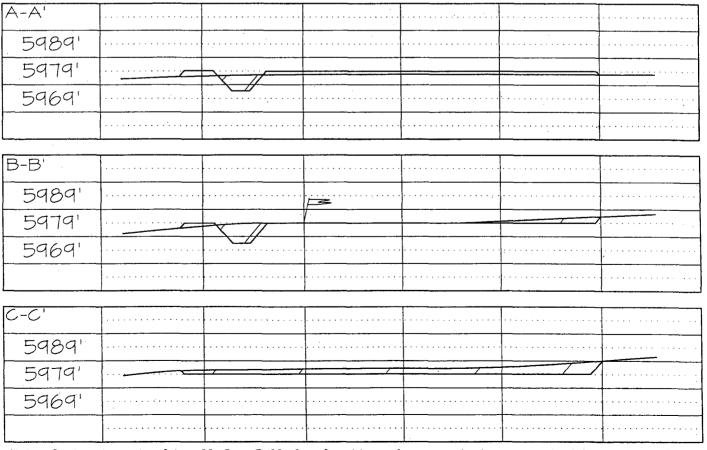
District III 1000 Rio Brazos Rd., Aztec, NM 87410 OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088

AMENDED REPORT

District IV PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREASE DEDICATION PLAT APENANDER 30-045-33805 71529 BASIN FRUITLAND COAL Property Rose HAPMON AS 15 GOPID No. 162928 ENERGEN RESOURCES CORPORATION 19979 10 SULFace Location 1 2 27N 12W 1990 SOUTH 660 EAST SAN JUAN 11 BOTTOM HOLE Location If Different From Sulface 10 February 1990 11 BOTTOM Form for Internet From Sulface 12 Jan 1990 13 SOUTH 660 EAST SAN JUAN 14 BOTTOM HOLE Location If Different From Sulface 15 Corporation Resources 16 Corporation Resources 17 Jan 1990 18 SOUTH 660 EAST SAN JUAN 1990	OGRID N 16292	5-32 Code 73 Io.		WELL	²Pool Cod	e Propert	y Name		³Pool Name	3		
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Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

ENERGEN RESOURCES CORP. OPERATIONS PLAN Harmon A #1S

I. Location: 1980' FSL & 660' FEL

Date: February 24, 2004

Sec 2 T27N R12W

San Juan County, NM

Field: Basin Fruitland Coal Elev: GL 5979'

Surface: Navajo Tribe / NAPI Minerals: Federal NM 084078

II. Geology: Surface formation Nacimiento

Α.	Formation Tops	Depths
	OjO Alamo	466′
	Kirtland	586 ′
	Fruitland	1391'
	Pictured Cliffs	1671'
	Total Depth	1870 ′

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 1391' and 1671'.

- B. Logging Program: Induction/GR and density logs at TD.
- C. No over pressured zones are expected in this well. No H_2S zones will be penetrated in this well. Max. BHP = 600 psig.

III. Drilling

- A. Contractor:
- B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with a fresh water polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 8.5 ppg.

C. Minimum Blowout Control Specifications:

Double ram type or annular type 2000 psi working pressure BOP with a rotating head. See the attached Exhibits #1 and #2 for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1000 psi.

Harmon A #1S Operations Plan Pg #2

C. Cont.

The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
8-3/4"	120'	7"	20# K-55
6-1/4"	1870 ′	4-1/2"	10.5# K-55

- B. Float Equipment:
- a) Surface Casing: None
- b) Production Casing: 4-1/2" cement guide shoe and self fill insert float collar. Place float one joint above shoe. Five centralizers spaced every other joint above shoe and five turbolizers every fifth joint from the top of the well.

V. Cementing:

Surface casing: 7" - Use 50 sx (59 cu. ft.) of Cl "B" with $\frac{1}{4}$ #/sk celloflake and 2% CaCl₂ (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

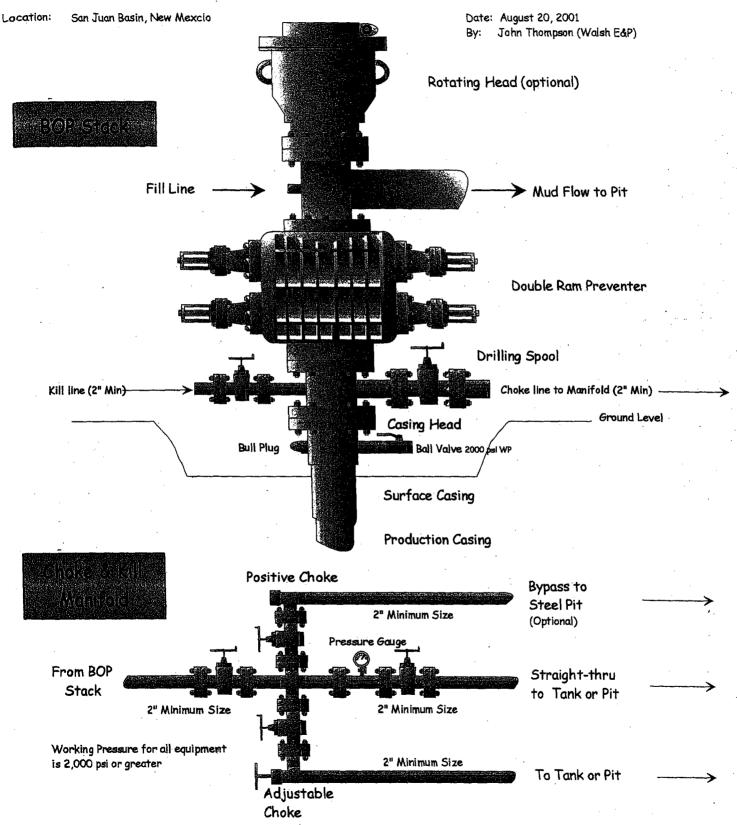
Production Casing: 4-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. Lead with 130 sx (268 cu.ft) of Cl "B" with 2% metasilicate and $\frac{1}{4}$ #/sk celloflake. (Yield = 2.06 cu.ft./sk; slurry weight = 12.5 PPG). Tail with 100 sx (118 cu.ft.) of Cl "B" with $\frac{1}{4}$ #/sk celloflake (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). Total cement volume is 386 cu.ft. (100% excess to circulate cement to surface).

Paul C. Thompson, P.E.

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup



ANNULAR PREVENTER

