AMOCO PRODUCTION COMPANY DRILLING AND COMPLETION PROGRAM

File:D:\VAND46.WK3 Date: 9/11/91

Lease: Vandewart/A/

Well No. 12"

Field: Basin Fruitland Coal

County: San Juan, New Mexico

Location: 1580' FNL x 1450' FEL Sec 11 -29N-8W

OBJECTIVE: Develop Fruitland Coal Reserves and also dual complete in the Pictured Cliffs. APPROXIMATE DEPTHS OF GEOLOGICAL MARKER METHOD OF DRILLING TYPE OF TOOLS Actual GL: 6311' Estimate KB: 6323' DEPTH OF DRILLING Marker Depth Elevation Rotary 0 - TDLOG PROGRAM Ojo Alamo 1989' 4322' Fruitland # * 3564 Туре Depth Interval 2747' 3065' 3246 Pictured Cliffs DIL TD to Sfc Csg FDC-CNL GR CAL REMARKS: TOTAL DEPTH: 3265' 3046 # Probable completion interval * Possible pay. DRILL CUTTING SAMPLES DRILLING TIME DEPTH **FREQUENCY** DEPTH SPECIAL TESTS **FREQUENCY TYPE** Geolograph DEPTH INTERVAL, ETC None 0 ~ TD Remarks: None Remarks: MUD PROGRAM: Vis, sec/qt W/L, cc's/30 min Approx Interval Type Mud Weight, #/gal Sufficient to clean hole and maintain hole conditions for logs. 0' - 250'**SPUD** 8.5 - 9.0250'-TD LSND 8.8 - 11.0REMARKS: * Use minimum mud weight to control formation pressures. CASING PROGRAM: Landing Point, Cement, Etc Casing String Estimated Depth Casing Size Hole Size Conductor Surface 250' 9-5/8" 12-1/4" Cement to be circulated to surface. Intermediate Production 7" 8-3/4" Cement to be circulated to surface. TD Remarks: Southern Rockies Drilling Engineer to design cement programs. **GENERAL REMARKS:** Southern Rockies Coal Degas Group to design completion program. This well to be maintained in confidential status.

Form 46 Reviewed by:	Logging program reviewed by:	
PREPARED BY:	APPROVED:	APPROVED:
H. TerBest/J. Davidson	J. K. Pantaleo (a RD	9-23-9/
Form 46 7 – 84bw	For Production Dept /	For Exploration Dept