GENERAL FIELD DATA

Regional Setting: Southwestern shelf, Paradox basin
Producing Formation(s): Pennsylvanian, (Desmoinesian) Desert Creek zone of the Paradox Formation
Type of Trap: Stratigraphic, carbonate buildup (phyllloid algal mound)
Exploration Method Leading to Discovery: Geophysical seismic surveys, subsurface geology
Other Significant Shows: None
Oldest Stratigraphic Horizon Penetrated: Pennsylvanian - Hermosa Group
Surface Formation(s): Jurassic Morrison Formation
Spacing: 80 acres
Productive Area: 89 acres
Completion Practice: Selective perforation and acidization (treatment size varies)
Logging Practice: DLL-MSFL with GR, Microlog, CNL-FDC Litho-Density with GR, BHC-sonic with GR, mudlog
Number of Producing Wells: 1
Number of Abandoned Producers: 0
Number of Dry Holes: 0
Number of Shut-in Wells: 0
Number of Disposal Wells: 0
Number of Secondary Recovery Injection Wells: 0
Market for Production: Oil to Gary-Williams Energy Corporation, Denver, Colorado and Giant Refining Company, Scottsdale, Arizona; gas to El Paso Natural Gas Company, El Paso, Texas
Method of Transportation: Oil is trucked to Tex-New Mexico pipeline at Montezuma Creek, Utah; gas transported via pipeline to Aneth Gas Plant which connects to Western Gas Resources pipeline at Montezuma Creek
Major Operators: Harken Southwest Corporation

DISCOVERY WELL

Name: Blue Hogan 1-J-1
Location: NE/NW/SE Sec. 1, T. 42 S., R. 23 E
Date of Completion: February 6, 1991
Initial Potential: Desert Creek zone - IPF 1,167 BOPD, 722 MCFGPD, and 5 BWPD on a 30/64" ck, FTP 265 psi
Initial Pressure: 1,800 psi
Perforations: 5,400-46', 5,454-77', 5,488-5,522', 5,530-42', 5,554-62'(w/ 4 shots/ft)
Treatment: 5,400-46' acidized w/ 13,800 gals. 28% MSR-100; 5,454-77' acidized w/ 6,900 gals. 28% MSR-100; 5,488-5,522' acidized w/ 10,200 gals. 28% MSR-100; 5,530-42' acidized w/ 3,600 gals. 28% MSR-100; 5,554-62' acidized w/ 2,400 gals. 28% MSR-100
Casing: 8 5/8" @ 492', 5 1/2" @ 5,611'

RESERVOIR DATA

Producing Formation: Paradox Formation, Desert Creek zone
Lithology: Porous algal bafflestone and dolomitized zones interbedded with low permeability wackestone and mudstone
Type of Drive: Gas expansion
Net Pay Thickness: 82'
Geometry of Reservoir Rock: Lenticular, northwest to southeast trending linear mound, 0.5 mi long and 1,000' wide
Porosity: 6-16.5%, average 9.1% (from geophysical logs and cores)
Permeability: 0.1-425 md, average for mound-core interval (30% of the reservoir) = 190 md, average for supramound interval (70% of the reservoir) = 2 md (from core analysis)
Saturation: 17.56%, average 15% (from geophysical logs and cores)
Gas/Oil Ratio: 487:1
Initial Field Pressure: 1,800 psi
Present Field Pressure: 200-300 psi
Gas-Oil Ratio: 40.6° API gravity, viscosity 0.811cP @ initial reservoir conditions, sulfur 0.0% by weight, color dark green; gas: BTU/ft³ - 1,497, specific gravity - 0.8992, carbon dioxide - 0.1%, nitrogen - 2.4%, oxygen - 0.0%, methane - 60.6%, hydrogen sulfide - 0.0%
Original Gas, Oil and Water Contact: Unknown
Cumulative Production: 282,718 BO, 256,006 MCFG, and 1,699 BW as of 1/1/96 (Utah Division of Oil, Gas and Mining, 1996).
Type of Secondary Recovery: None present, may initiate waterflood or CO₂ flood
Estimated Secondary Recovery: Unknown
Estimated Ultimate Recovery: Unknown

COMMENTS

Blue Hogan field is located in the southwestern shelf area of the Paradox basin, 32 miles (52 km) south-southeast of Blanding, Utah. The field consists of one well, the Blue Hogan 1-J-1, drilled in 1991 by Chuska Energy Company (now Harken Southwest Corporation). The well was drilled as part of an ambitious exploration program conducted within the Navajo Nation by Chuska and several Australian companies. The Blue Hogan prospect was identified as a high-resolution, common-depth-point seismic anomaly along the east flank of the Desert Creek anticline near the edge of the giant Greater Aneth field. The anomaly represented a thickening in the Desert Creek zone of the Pennsylvanian (Desmoinesian) Paradox Formation. This feature is one of several satellite mounds around the Greater Aneth field and is expressed on seismic by isochron thickening of the Desert Creek zone, isochron thinning of the overlying Ismay zone,