API #47 - 017- 06011

#### State of West Virginia Division of Environmental Protection Section of Oil and Gas

### Well Operator's Report of Well Work

Farm Name: Cowman Operator Well No.: Four (4) LOCATION: Elevation: 1320' Quadrangle: Smithburg District: **West Union** County: Doddridge Latitude: 39.31875 Feet South of 39 Deg. 19 Min. 07.5 Sec. Longitude: 80.73156 Feet West of 39 Deg. 20 Min. 00 Sec. Company: **KEY OIL COMPANY** Casing Used Left Cement 22 GARTON PLAZA & In ln Fill Up **WESTON, WV 26452** Tubing Drilling Well Cu Ft Size Agent: Jan E. Chapman Inspector: **David Scranage** 11" 32 Pulled N/A Permit Issued: 5-1-11 Well Work Commenced: 6-14-11 9-5/8" 210 210 85 sks. CTS Well Work Completed: 6-19-11 Verbal Plugging N/A 2156 310 sks. CTS 2156 Permission granted on: 6-5-11 Rotary X Cable Rig 4-1/2" 5708 300 sks. Total Depth (feet ) 5790' **ETOC 2100'** Fresh water depths (ft) 85' & 140' Salt water depths (ft) 1325' Is coal being mined in area (Y/N)? No Coal Depths (ft): OPEN FLOW DATA Alexander 5503-5530 Benson 5227-5233 Riley 4734-4786 Producing formation Warren Pay zone depth (ft) 3580-3692 RECEIVED Gas: Initial open flow 97 MCF / D Oil: Initial open flow Office of Oil & Gas Bbl / D Final open flow 2144 MCF / D Oil: Final open flow Bbl / D Time of open flow between initial and final tests 24 Hours AUG 0 3 2011 Static rock pressure 1700 psig (surface pressure) after 48 Hours All Formations Comingled. Second producing formation Pay zone depth (ft) WV Department of Gas: Initial open flow MCF / D Oil: Initial open flow Bbl / D Bbi/D Environmental Protection

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Oil: Final open flow

For: KEY QIL COMPANY

psig (surface pressure) after

By:

PRESIDENT

Hours

Hours

Date: June 30, 2011

MCF / D

Time of open flow between initial and final tests

Final open flow

Static rock pressure

# Cowman #4 (47-017-06011)

## TREATMENT:

Alexander	(20 holes) 5503-5530	sand, water and N2: 37,500# 20/40 sand, 400,000 SCF N2 212 bbls. water
Benson	(20 holes) 5227-5233	sand, water and N2: 25,000# 20/40 sand, 360,000 SCF N2 162 bbls. water
Riley	(20 holes) 4734-4786	sand, water and N2: 25,000# 20/40 sand, 372,000 SCF N2 166 bbls. water
Warren	(20 holes) 3580-3692	sand, water and N2: 40,000# 20/40 sand, 353,000 SCF N2 230 bbls. water

## **FORMATIONS:**

Cond and Chala	01	
Sand and Shale	0'	2180'
Lime	2180'	2260'
injun	2260'	2330'
Shale	2330'	2500'
Weir	2500'	2550'
Shale	2550'	2700'
Gantz	2700'	2710'
Shale	2710'	2900'
Gordon	2900'	2930'
Shale	2930'	3580'
Warren	3580'	3700'
Shale & Sand	3700'	4750'
Riley	4750'	4800'
Shale	4800'	5227'
Benson	5227'	5233'
Shale	<b>5233</b> '	5500'
Alexander	5500'	5560'
Sand & Shale	5700	5790'
TD		5790'