

SHL: 1830' FNL & 1015' FEL
 SE/4 NE/4 Sec 36(H), T31N, R5W
 Rio Arriba, New Mexico
 BHL: End -1645' FSL & 1858' FEL
 NW/4 SE/4 Sec 36(J), T31N, R5W
 Rio Arriba, New Mexico

ROSA 406
 BASIN FRUITLAND COAL HORIZONTAL

Spud 07/06/2011
 Completed 10/06/2011

Elevation: 6599' GR
 API # 30-039-30912

Top	Depth
Kirtland	2896'
Fruitland	3240'
Pictured Cliffs	3435'

Fruitland coal perforation intervals:
 3347'-3363', 24, 0.41' holes
 3388'-3403', 60, 0.41' holes
 3404'-3419', 60, 0.41' holes

TD vertical hole @ 3605'
 PBTD @ 3590'

7 jts 9-5/8", 36#, J-55, LT&C @ 319'

91 jts 7", 23#, K-55, LT&C @ 3590'

Land well @ 3506', as follows: one Mule shoe/Mud Anchor,
 2.28 S/N, 113 Jts of 2-7/8" 6.50# J-55 8RD EUE (113 total
 jts) Seat Nipple set @ 3474'. 194' of 1/4" chemical cap string
 banded to tubing

Fruitland coal perforation intervals:
 3740'-3790', 287, 0.42' holes
 4340'-4390', 287, 0.42' holes
 4920'-4970', 287, 0.42' holes

Window Cut @ 2966' - 2983'

Land 47 JTS, 4.5", 11.6#, N-80, LT&C csg
 set @ 4980', TOL @ 2997'. Not
 cemented



TD @ 5180' MD
 TVD @ 3379'
 PBTD @ 4980' MD
 TVD @ 3383'

12-1/4"	9-5/8", 36#	150 sx	270 cu. ft.	Surface
8-3/4"	7", 23#	485 sx	1064 cu. ft.	Surface
6-1/4"	4-1/2", 11.6#	None	None	N/A

LH: 10/07/2011

AL