

Operations Plan - Canyon Largo Unit #291

I. Location: 860'N, 1180'W, Section 12, T-24-N, R-6-W, Rio Arriba County, NM

Field: Basin Dakota

Elevation: 6619'GL

II. Geology:

A. Formation Tops:	Surface	San Jose	Menefee	3945'
	Ojo Alamo	1838'	Point Lookout	4530'
	Kirtland	1941'	Gallup	5609'
	Fruitland	2155'	Greenhorn	6529'
	Pic.Cliffs	2328'	Graneros	6589'
	Lewis	2443'	Dakota	6717'
	Mesa Verde	3860'	Total Depth	6910'

B. Logging Program: Induction Electric and Gamma Ray Density at TD.

C. Coring: none

D. Samples: none

III. Drilling:

A. Mud Program: mud from surface to Total Depth.

IV. Materials:

A. Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Csg.Size</u>	<u>Wt.&Grade</u>
	13 3/4"	200'	9 5/8"	32.3# H-40
	8 3/4"	5230'	4 1/2"	10.5# J-55
	7 7/8"	6500'	4 1/2"	10.5# J-55
	7 7/8"	6910'	4 1/2"	11.6# J-55

B. Float Equipment: 9 5/8" surface casing - Pathfinder guide shoe
(Part #2006-1-010)

4 1/2" production casing - Howco guide shoe (Prod. No. 102-1) and self-fill insert valve (Prod. No. 177-13). Two Howco multiple stage cementers (Prod. No. 200-03) equipped for three stage cementing. Set tool for second stage at 5130' and tool for third stage at 2640'. Run 20 Howco centralizers (Prod. No. 200-03) spaced as follows: one on each of the bottom 8 joints, one below each stage tool and five above each stage tool spaced every other joint.

C. Tubing: 6910' of 2 3/8", 4.7#, J-55 tubing with a common pump seating nipple and an expendable check valve with drill type guide.

D. Wellhead Equipment: 10" 3000 x 9 5/8" WKM Brewster Type R casing head with 10" x 4 1/2" Type SA casing hanger, 10" 3000 x 6" 3000 Brewster xmas tree (Dwg. #1-004-78). Wellhead representative to set all slips.

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