mme Operations Manager TELEPHONE NO. William F. Clark TYPE OR PRINT NAME (This space for State Use)

Original Signed by FRANK T. CHAVEZ

MARERYISOR DISTRICT ?

FER OF 1990

CONDITIONS OF APPROVAL, IF ANY:

AITROVED BY-

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- 11-07-89 Tested 7" casing and BOP pipe rams to 2000 psig held OK. Drilled cement and into formation with water. Drilled from 2899' to 3247'. Fruitland Coal zones: 3026-3028' (2'); 3032-3034' (2'); 3089-3109' (20'); 3116-3125' (8'); 3196-3197' (1'); 3200-3204' (4'); 3236-3242' (6'); and 3243-3246' (3') for a total of 46' coal.Circulated hole with water. Added air with water. Returns with water were light coal and increased to moderate coal, 1/2" minus with air.
- 11-08-89 Circulate hole with air water. Returns moderate to light coal. Hole sloughed, pipe sticky; increase water. Returns heavy coal decreasing to moderate. Hole sloughed again, pipe very sticky. Worked pipe till hole cleared up. Circulating with air and water.
- 11-09-89 Worked pipe blew with air and water, returns light, coal, shale, siltstone in clear water. Pull into 7" casing pitot guage well through 2" line, 90 lbs. 9127 MCFD wet, 45 & 60 minutes, 9575 MCFD wet.

Blew well to pit through 3/4" choke.

Flowing pressure - 275 psi

15 minutes - 440 psi

30 minutes - 550 psi

45 & 60 minutes - 560 psi

Slowly reduce flowing pressure and open well through blooie lines.

11-10-89 TIH and cleaned out bridges. Worked pipe and blew open hole with air and water - returns: heavy decreasing to moderate coal. Hole sloughing - returns: heavy to light 1/16" coal (98%), shale and siltstone in black to clear water. Hole occasionally sticky. Pulled into 7" casing. Pitot gauged well through 2" line: 30 minutes through 90 minutes - 100 psi, 10,022 MCFD (wet). Flow well to pit through a fixed 3/4" choke: 90 min - 625 psi. Shut well in to monitor pressure build up: 120 min - 1300 psi. Bled pressure off casing slowly and opened well to atmosphere through blooie lines.

TIH. Tagged at 3175'. Established circulation; hole very sticky - returns: very heavy 1/16" and smaller coal (99%) in black water.

- 11-11-89 Circulated with air and water returns very heavy coal in black water. Clean out 3175-3180' hole very sticky. Hole sloughed, pipe stuck at 3175'. Worked pipe. Well unloaded very heavy coal and water.
- 11-12-89 Worked pipe 3212-3247'. Blew well with air and water returns light 1/16" or smaller coal. Rigged up Cudd. Circulated on bottom with water. Stripped and strapped 3-1/2" drill pipe out of hole.
- 11-13-89 Changed rams and slips to run 5-1/2" casing. Ran 5-1/2" casing with 5-1/2" liner hanger. Changed over to run 3-1/2" drill pipe. Ran 5-1/2" liner on 3-1/2" drill pipe, tagged at 3095'. Picked up power swivel. Rigged up. Circulated hole holding back pressure. Washed 5 jts to bottom with 5 BPM water with 150 psi back pressure on annulus. Bridge 3095-3097'; fill 3227-3247'.

Ran 13 jts (425.15') 5-1/2" 23# P-110 8rd LT&C CF&I casing (total liner length 430.23'), set at 3247' with TIW type LA set shoe on bottom. PBTD at 3245'. Top of TIW 7" x 5-1/2" type SS hanger at 2817'. Liner overlap 82.23'. From bottom up jts 1, 2, 5, 7, 9, and 10 were fully perfed and plugged with 8 holes per foot. Perfintervals: 3245-3229'; 3226-3191'; 3128-3089'; 3046-3028'; 2986-2948'; 2945-2925'. (AR)

## Liner Summary

-		Perforation:		
Top -	2817'	2925'	to	29451
Bottom -	3247'	2948 '	to	2986'
PBTD -	3245'	3028'	to	3046'
		3089'	to	3128'
		3191'	to	3226'
		3229 '	to	3245'

11-14-89 TOH and lay down drill pipe and drill collars; change BOP rams, strap and rabbit 2-7/8" tubing. Picked up 4-1/2" skirt mill, then 2-7/8" tubing and TIH.

Found top of liner at 2817' and top of perforation plugs at 2925'. Milled plugs from 2925' to 3238', no circulation. Stripped and snubbed 2-7/8" tubing out of hole. Laid down 4-1/2" mill and prepared to snub expendable check into hole at daylight.

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11-15-89 Snub 2-7/8" tubing, expendable check valve, and F nipple. Rig down snubbing equipment and prepare to strip tubing. Strip tubing in hole to 2717'. Pull above liner, flow well back through 3/4" fixed choke and monitor flowing casing pressure: 60 min. - 810 psig. Estimated gas rate 10,164 MCFD (wet).

Land 2-7/8" tubing. Nipple down BOPs. Nipple up upper tree. Drop bomb, pump off expendable check valve, flow well back up tubing through 3/4" fixed choke. Flowing tubing pressure: 15 min. - 800 psig; 30 min. - 700 psig; 45 min. - 650 psig; 60 min. - 650 psig. Slowly shut well in through variable choke over 2 hour period.

Tubing Summary: 99 jts (3037.97') 2-7/8" 6.5# J-55 8rd EUE FBNAU Siderca, set at 3052' with Baker expendable check valve on bottom, Baker F nipple (2.25" ID) 1 jt off bottom, set at 3020'.

Rig down. Rig released 11-15-89.