DRILLING, COMPLETION, & GEOLOGICAL SUMMARY

ORIGINAL

OPERATOR: Western Pacific Farms, Inc. *KCC #:* 31006
WELL NAME: Santa Fe #1-17 *API #:* 15-081-21478
LOCATION: 1250' FNL, 1250'FWL sec17-T28S-R31W *COUNTY:* Haskell
ELEVATIONS: GL-2927', KB-2932' *TOTAL DEPTH:* 2820'
SPUD DATE: 05/02/03 *DRILLING COMPLETED:* 05/04/03
DRILLING CONTRACTOR: Cheyenne Drlg., Rig #8 *KCC #:* 5382

SURFACE CASING SIZE: 8 5/8" *WEIGHT:* *GRADE:* *DEPTH:* 963'

CEMENT: 300 sx of Premium+ Lite w/3% CaCl2 and .25# Flocele, 125 sx of Premium+ w/2% CaCl2 and .25# Flocele
CASING EQUIPMENT:

COMMENTS: Circulated 45 bbls of cement to the pit.

PRODUCTION CASING SIZE: 5.5" *WEIGHT:* 15.5# *GRADE:* J-55, LT&C *DEPTH:* 2818'

1st STAGE CEMENT: 245 sx of Midcon "C" w/.25# Flocele, 145 sx of Premium+ "C" w/.25# Flocele and .5% Halad-322.
2nd STAGE CEMENT:

CASING EQUIPMENT:

COMMENTS: Circulated 15 bbls of cement to the pit.

OPEN-HOLE LOGS: NONE

CASED-HOLE LOGS: G/R-CCL-DSN-CBL

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SIGNIFICANT DEPTHS: (log depths measured from-KB @ 2932')

horizon	log depth	datum	remarks
T/Permian	834'	+2098'	
T/Cedar Hills	1390'	+1542'	
B/Stone Corral	1956'	+ 976'	
T/Hollenberg	2703'	+ 229'	
T/Herington	2741'	+ 191'	perforated 2745'-2755',4spf
T/Krider	2772'	+ 160'	perforated 2774'-2780',4spf
T/Winfield	NR		
Rotary total depth	2820'	+ 112'	
Log Total depth	2807'	+ 125'	
Casing total depth	2808'	+ 124'	log depth
Plugged-back depth	2807'	+ 125'	

PERFORATIONS: 2745'-2755', 2774'-2780'(all w/4spf)

ACID TREATMENTS: 1600 gallons 20% MCA/FE

FRACTURE TREATMENTS: 25,000# 12/20 Sand, 166,000 scf N_2, 185 bbls treated water

REMARKS: Initial shut-in casing pressure after completion was 320 psig.

prepared by: Ronald G. Osterbuhr
05/2003

Western Pacific Farms, Inc.
Santa Fe #1-17
1250' FWL, 1250' FNL Sec 17-T28S-R31W
Haskell County, Kansas
API #15-081-21478
GL-2927', KB-2932' (ref. datum)
Spud Date - 05/02/2003
Completion date – 05/13/2003
RTD-2820', **PBTD**-2807'
Surface Casing: 8.625" 24# set @ 963' w/425 sx (circulated 45 bbls to pit)
Production Casing: 5.5" 15.5# set @ 2818' w/390 sx (circulated 15 bbls to pit)
Perforations: 2745'-2755' (Herington), 2774'-2780' (Krider); all w/4spf
Treatments: 1600 gallons of 20% MCA-FE w/100 ball sealers; 25,000# 12-20 sand, 166,000scf N_2, 185 bbls treated water.
Tubing String: 6' closed-end mud anchor, 1.1' seating nipple, 90 joints (2790') of 2.375" EUE tubing.
Rod String: 4' gas anchor, 2" x 1.5" x 10' RWBC insert pump, 110 .625" rods, 6'-4'-4' pony rods, 11' x 1.125" polish rod w/5' x 1.375" liner.

05/01/2003 – Moved-in Cheyenne Drilling Rig #8.

05/02/2003 – Rigged-up Rig #8, and began drilling a 12.25" hole at 9:30am. Hole deviation at 539' was .25°. Drilled to 710' at 1:45pm, and shut down for rig repairs until 5:00pm. Drilled to 962' at 8:00pm, and tripped out of the hole to run casing. Hole deviation was .75°. Ran 21 joints (953') of new 8.625", 24# casing to 962' with 3 centralizers and a float insert, and Halliburton cemented the casing with 300 sx of Premium+ Lite (w/3% $CaCl_2$ and .25# Flocele) and 125 sx of Premium+ (w/2% $CaCl_2$ and .25# Flocele). Plug was down at 11:20pm, and circulated 45 bbls of cement to the pit. Shut down to wait on cement.

05/03/2003 – Finish rig repairs and began drilling cement at 4:30pm with a 7.875" PDC bit.

05/04/2003 – Drilling at 2579' at 8:00am. Displaced mud with a starch and gel pre-mix at 2670', drilled to a total depth of 2820' at 11:40am, and circulated 45 minutes. Dropped a straight-hole survey, and tripped out of the hole to lay down drill pipe. Hole deviation was 1°. Ran a guide shoe with a latch-down baffle, and 67 joints (2813') of new 15.5# 5.500" LTC casing with 10 centralizers. Used a 9' landing joint to tag bottom, and landed the casing 3' off bottom. Circulated the casing 30 minutes, and Halliburton cemented the casing with 245 sx of Midcon C (w/.25# Flocele) and 145 sx of Premium+ C (w/.5% Halad-322 and .25# Flocele). Displaced the latch-down plug with water, landed the plug w/1125psig at 6:00pm, circulated 15 bbls of cement to the pit, released the pressure and the plug held. Set the casing slips, and shut down. Waiting on cement to begin completion.

05/09/2003 – Moved-in and rigged-up Post & Mastin Well Service Rig #39. Ran the casing tools to get a bottom flag, and Halliburton ran a G/R-DSN-CCL and G/R-CCL-CBL logs from 2807' to ground level, with the top of the cement at approx. 90'. Swabbed the casing to 1800', and Halliburton perforated the casing from 2774'-2780' and 2745'-2755' with 4spf (64 holes). Swabbed the casing to 2780' with 150' of gas (flared) above the fluid on the last swab run. Halliburton treated the casing with 1600 gallons of 20% MCA-FE acid, 100 ball sealers, and 2800 gallons of 2% KCl water for flush. Maximum treating pressure was 1927# and average treating pressure was 300# at an average rate of 6 bpm, with good ball-sealing action throughout. Instant shut-in pressure was 70#, and 5 minute shut-in pressure was 34#. Total treatment load left was 105 bbls. Bled off the casing pressure, rigged-down Halliburton, and started swabbing the casing. Swabbed back approximately 55 bbls of treatment load, left the casing open to the pit, and shut down. Total treatment load left to recover was estimated to be 50 bbls.

05/10/2003 – The casing was flowing an estimated 20-30mcfd. Made 2 swab runs to recover 650' of gassy, foamy fluid. Halliburton rigged-up and treated the casing with 25,000# of 12-20 sand, 166,000 scf N_2, and 185 bbls of treated water. Maximum treating pressure was 1148#, and the average treating pressure was 980# at an average rate of 15 bpm. The instant shut-in pressure was 1060#, and the 10 minute shut-in pressure was 876#. Total treatment loads left to recover were approximately 235 bbls. Rigged-down Halliburton, and opened the casing to the pit through a 2" flow line 50 minutes after shut in. Left the well open to the pit and shut down at 1pm, with the well still unloading fluid (no sand) to the pit.

05/11/2003 – Shut down.

05/12/2003 – Casing was not flowing gas or fluid. Ran the swab tools to check bottom at approximately 2790' (17' of fill-up). Started to swab casing with the fluid level at 2000'. Swabbed until 3:00pm, and recovered an estimated 65 bbls of actual fluid. Ran the sand pump to recover approximately 15 gallons of sand, with ball sealers on the last run. Swabbed the casing to recover an estimated 25 bbls of actual fluid, and shut the casing in and shut down.

05/13/2003 – Shut-in casing pressure was 320# at 8:00am. Opened the casing to blow down, and swabbed the casing to recover an estimated 15 bbls of fluid. Installed an orifice tester with a .500" plate on the 2" flow line, with back pressures indicating gas flows as follows:

9:48am – install tester w/.500" plate
9:49am – 4# (69 mcfd)
9:50am – 6# (86 mcfd)
9:51am – 7.5# (98 mcfd)
9:52am – 9# (108 mcfd)
9:53am – 10# (116 mcfd)
9:54am – 11# (121 mcfd)
9:55am – 12# (129 mcfd)
9:56am – 12.5# (132 mcfd)
9:57am – 12.5# (132 mcfd).

Swabbed the casing to recover an estimated 10 bbls of fluid, and installed an orifice tester with a .500" plate with back pressures and gas flows as follows:

11:01am – install tester w/.500" plate
11:02am – 4# (69 mcfd)
11:03am – 6# (86 mcfd)
11:04am – 8# (101 mcfd)
11:05am – 9.5# (112 mcfd)
11:06am – 11# (121 mcfd)
11:07am – 12# (129 mcfd)
11;08AM – 12.75# (133 mcfd)
11:09am – 13.5# (137 mcfd)
11:10am – 14# (141 mcfd)
11:11am – 14.5# (144 mcfd)
11:12am – 14.5# (144 mcfd).

Ran the casing tools to tag bottom at 2807' (no fill-up). Opened the casing through the 5.5" orbit valve and prepared to run tubing. Casing started to unload fluid, and installed a 2" flow line. For 2 hours, well would unload fluid through the 2" flow line approximately every 20 minutes (for 7-8 minutes). Pumped 30 bbls of saltwater down the casing, and rigged-up to run tubing. Ran a 6' x 2.375" closed-end mud anchor, a 1.1' seating nipple, and 90 joints (2790') of new 2.375", EUE tubing. Tagged bottom and landed the tubing string 10' off bottom with the seating nipple at 2790'. Ran a 4' x 1" gas anchor, a 2" x 1.500" x 10' RWBC insert pump, 98 used .625" rods (replaced some damaged couplings), 12 new .625" rods, one 6' and two 4' pony rods, and an 11' x 1.125" polish rod w/5' x 1.375" liner. Landed the rod string, and checked pump action as good. Set a pumping unit, hung on the rod string, and shut down. The shut-in casing pressure was 130# after one hour of shut in time.

Ron Osterbuhr
05/2003