

Drilling Report Single Well History

9805 JV-P Warwink #2

(BTA 100% WI)

7/22/2010 (days) Proposed depth 11,800'. LOCATION: 1,980' FNL & 660' FWL of Section 27; Block 18; University Lands Survey; Ward County, Texas. ELEVATION: 2,819' G.L.; 2,837' K.B. CONTRACTOR: O'Ryan Drilling Co. - Rig #6. Location graded. MIRT.

CC: \$0

Casing: Ran 8 5/8" First Intermediate Casing as follows:

Joint Description		<u>Footage</u>
Float Shoe		1.40 '
32# HCK55 LTC		86.13 '
		1.16 '
32# HCK55 LTC		1,288.16 '
32# J55 LTC		3,720.89 '
	Total Casing	5,097.74
114 joints	Less Above KB	12.74
	Casing set @	5,085 '
	Float Shoe 32# HCK55 LTC Float Collar	Float Shoe 32# HCK55 LTC Float Collar 32# HCK55 LTC 32# J55 LTC Total Casing Less Above KB

7/24/2010 (days) Proposed depth 11,800'. MIRT.

CC: \$0

7/25/2010 (days) Proposed depth 11,800'. Rigging-up.

CC: \$0

7/26/2010 (days) Proposed depth 11,800'. Rigging-up.

CC: \$0

7/27/2010 (1 days) Depth 90' (90') Rigged-up. SPUDDED: 4 AM 7/27/10. Drilling 17 1/2" hole in surface rock w/ spud mud.

CC: \$155,800

(BTA 100% WI)

7/28/2010 (2 days) Depth 430' (340') Drilled 17 1/2" hole in surface rock & red beds w/ spud mud. DEV: 226' - 1/4; 425' - 1/2. Circ & POH. 13 3/8" C @ 430' (10 jts 48# H40 STC) w/ 480 sx. PD: 1:30 AM 7/28/10. Cmt circ. WOC.

CC: \$208,100

7/29/2010 (3 days) Depth 430' (0') WOC, cut-off & installed csg head. NU & repairing BOP's.

CC: \$225,700

7/30/2010 (4 days) Depth 430' (0') Repaired & tested BOP's. PU BHA & WIH. Drilling-out.

CC: \$240,500

7/31/2010 (5 days) Depth 990' (560') Drilling 11" hole in sand & red beds w/ brine. DEV: 631' - 3/4; 856' - 1/2.

CC: \$262,100

8/1/2010 (6 days) Depth 1,745' (755') Drilling 11" hole in salt & anhydrite w/ brine. DEV: 1,323' - 1/2.

CC: \$278,800

8/2/2010 (7 days) Depth 2,645' (900') Drilling 11" hole in salt & anhydrite w/ brine. DEV: 1.804' - 1 1/2; 2,208' - 1 1/4; 2,562' - 2...

CC: \$310,800

8/3/2010 (8 days) Depth 2,961' (316') Drilled 11" hole in salt & anhydrite w/ brine. DEV: 2,961' - 3 1/4. Tripping for BHA.

CC: \$325,900

8/4/2010 (9 days) Depth 3,254' (293') Drilling 11" hole in salt & anhydrite w/ brine. DEV: 3,214' - 1 1/2.

CC: \$341,000

(BTA 100% WI)

8/5/2010 (10 days) Depth 3,745' (491') Drilling 11" hole in anhydrite w/ brine. DEV: 3,652' - 1/4.

CC:

\$358,100

8/6/2010 (11 days) Depth 4,202' (457') Drilling 11" hole in anhydrite w/ brine. DEV: 4,190' - 2 1/4.

CC:

\$371,700

8/7/2010 (12 days) Depth 4,452' (250') Drilling 11" hole in anhydrite w/ brine. DEV: 4,420' - 1/2.

CC:

\$390,200

8/8/2010 (13 days) Depth 4,588' (136') Tripped for new bit. Drilling 11" hole in anhydrite & lime w/ brine.

CC:

\$406,300

8/9/2010 (14 days) Depth 4,930' (342') Drilling 11" hole in dolomite, anhydrite & lime w/brine. DEV: 4,823' - 1 1/4.

CC:

\$421,900

8/10/2010 (15 days) Depth 5,085' (155') Drilled 11" hole in anhydrite & lime w/ brine. DEV: 5,035' - 3/4. Circ & POH. LD BHA & RU casing tools. Running 8 5/8" csg.

CC:

\$455,100

8/11/2010 (16 days) Depth 5,085' (0') 8 5/8" C @ 5,085' (See report dated 7/22/10 for casing detail.) w/ 1,250 sx. PD: 5 PM 8/10/10. Cmt circ. Set slips, cut-off & installed csg spool. NU BOP's.

CC:

\$665,200

8/12/2010 (17 days) Depth 5,138' (53') NU & tested BOP's. PU BHA & WIH. Tested csg to 1,500 psi - okay. Drilled-out. Drilling 7 7/8" hole in anhydrite & lime w/ fresh water.

CC:

\$679,500

(BTA 100% WI)

8/13/2010 (18 days) Depth 6,251' (1113') Drilling 7 7/8" hole in anhydrite, shale & dolomite w/ fresh water. DEV: 5,925' - 1/4.

CC:

\$710,116

8/14/2010 (19 days) Depth 7,383' (1132') Drilling 7 7/8" hole in sand ,shale & lime w/ fresh water. DEV: 7,253' - 3/4.

CC:

\$727,000

8/15/2010 (20 days) Depth 8,181' (798') Drilling 7 7/8" hole in sand & shale w/ fresh water. DEV: 8,068' - 1.

CC:

\$740,500

8/16/2010 (21 days) Depth 8,405' (224') Drilled 7 7/8" hole in sand & shale. DEV: 8,260' - 1. Tripping for new bit. MW (Cut brine) 8.8, Vis 28,

CC:

\$740,500

8/17/2010 (22 days) Depth 8,714' (309') Finished trip for bit. Drilling 7 7/8" hole in shale & sand DEV: 8,671' - 1 1/4. MW (Cut brine) 8.8, Vis 28,

CC:

\$767,900

8/18/2010 (23 days) Depth 9,205' (491') Drilling 7 7/8" hole in shale & lime DEV: 9,082' - 1 3/4. MW (Cut brine) 8.8, Vis 28,

CC:

\$810,100

8/19/2010 (24 days) Depth 9,575' (370') Drilling 7 7/8" hole in lime & shale DEV: 9,544' - 1 1/2. MW (Cut brine) 8.8, Vis 28,

CC:

\$832,600

8/20/2010 (25 days) Depth 9,675' (100') Tripped for new bit. Drilling 7 7/8" hole in shale, lime & sand DEV: 9,667' - 2 1/4. MW (Cut brine) 8.8, Vis 28,

CC:

\$846,200

(BTA 100% WI)

8/21/2010 (26 days) Depth 10,100' (425') Drilling 7 7/8" hole in shale, lime DEV: 9,879' - 1 1/2. MW (Cut brine) 8.8, Vis 28,

CC:

\$871,200

8/22/2010 (27 days) Depth 10,559' (459') Drilling 7 7/8" hole in lime & shale. DEV: 10,153' - 1 3/4 MW (Cut brine) 8.8, Vis 28,

CC:

\$886,400

8/23/2010 (28 days) Depth 10,814' (255') Drilled 7 7/8" hole in lime & shale. DEV: 10,534' - 3 3/4. Tripped due to pressure loss - found hole in DP @ 6,445' & DC parted in connection. Left 7 DC's & BHA in hole (Top of fish @ 10,580'). Waiting on overshot. MW (Cut brine) 8.8, Vis 28,

CC:

\$899,300

8/24/2010 (29 days) Depth 10,814' (0') WIH w/ overshot. Circ @ TOF - 10,580'. Latched fish & POH. Recovered all of fish. Waiting on DC inspectors.

CC:

\$899,300

8/25/2010 (30 days) Depth 10,924' (110') Inspected BHA & WIH. Drilling 7 7/8" hole in lime & shale. DEV: 10,796' - 2 1/4 MW (Cut brine) 9.1, Vis 28,

CC:

\$945,200

8/26/2010 (31 days) Depth 11,112' (188') Tripped for hole in DP. Found hole @ 4,380'. Drilled 7 7/8" hole in lime & shale. Tripping for new bit due to low ROP. MW (Cut brine) 9.1, Vis 28,

CC:

\$973,900

8/27/2010 (32 days) Depth 11,209' (97') Tripped for new bit. Drilling 7 7/8" hole in lime, shale & sand. MW (Cut brine) 9.3, Vis 28,

CC:

\$995,300

(BTA 100% WI)

8/28/2010 (33 days) Depth 11,465' (256') Drilling 7 7/8" hole in lime, shale & sand. DEV: 11,255' - 1/2. MW (Cut brine) 9.3, Vis 28,

CC: \$1,009,000

8/29/2010 (34 days) Depth 11,665' (200') Drilled 7 7/8" hole in shale & lime. Made short trip & circ. POH to run open-hole logs MW (Cut brine) 9.3, Vis 28,

CC: \$1,021,900

8/30/2010 (35 days) TD 11,665' POH - left 5 DC's & BHA in hole (Top of fish @ 11,496'). PU overshot & fishing tools. WIH - inspected DC's. Latched fish. Worked fish free. POH. MW (Cut brine) 9.3, Vis 28,

CC: \$1,042,000

8/31/2010 (36 days) TD 11,665' POH. Recovered fish (Left 2" X 6' inclination survey tool in hole - WILL NOT FISH). LD fish, fishing tools & BHA. GIH to condition hole for open-hole logs. MW (Cut brine) 9.3, Vis 28,

CC: \$1,072,400

9/1/2010 (37 days) TD 11,665' Circ & cond hole. POH & ran open-hole logs. GIH to cond hole for 5 1/2" csg. MW (Cut brine) 9.3, Vis 28,

CC: \$1,108,900

9/2/2010 (38 days) TD 11,665' WIH, circ & spotted high vis pill on bottom. POH, LD DP & BHA. Running 5 1/2" csg. MW (Cut brine) 9.5, Vis 28,

CC: \$1,121,800

9/3/2010 (39 days) TD 11,665' PB 11,561' 5 1/2" (258 jts 20# L80 LTC) C @ 11,654' w/ 1,700 sx. PD: 9:46 PM 9/2/10. Cmt did not circ. Set slips, cut-off. & installed tbg head. Cleaning pits.

CC: \$1,471,400

(BTA 100% WI)

9/4/2010 (40 days) TD 11,665' PB 11,561' RELEASED RIG: 9 AM 9/3/10. Rigging-down. Top of cmt by temp survey @ 1,066'. Dropping from report pending completion operations.

CC: \$1,491,600

9/27/2010 (41 days) TD 11,665' PB 11,561' Start moving in & setting frac tanks, NU 7-1/16" x 5K frac vlv, Hook up ck on csg, SWI, WO WL trk to log & perf.

CC: \$1,495,600

9/28/2010 (64 days) TD 11,665' PB 11,561' SDWO WL trk to log & perf.

CC: \$1,495,600

9/29/2010 (65 days) TD 11,665' PB 11,561' RU Baker WL trk & mst trk, RIH w/ GR-CCL-Perf gun, Set dn @ 11,472' (Btm perfs 11,474 - 486'), Setting dn solid, POH w/ guns, RD WL, SDFN. Will MI pulling unit to run bit & tbg to CO.

CC: \$1,503,100

9/30/2010 (66 days) TD 11,665' PB 11,561' MIRU WO rig, Unload tbg, ND frac vlv, NU BOP, RIH w/ 4-5/8" bit, 6 - 3-1/2" DC's, Tag fill @ 11479', RU Rev unit, SDFN.

CC: \$1,603,100

10/1/2010 (67 days) TD 11,665' PB 11,610' Drill cmt & wiper plug to 11,610', Circ clean, Raise bit to 11,486', Displace hole w/ clean 2 % KCl wtr, Spot 200 gals 10% acetic acid, POH LD all tbg & DCs, ND BOP, NUfrac vlv. SD For Wkend.

CC: \$1,614,500

10/2/2010 (68 days) TD 11,665' PB 11,610' SD For Wkend.

CC: \$1,614,500

10/3/2010 (69 days) TD 11,665' PB 11,610' SD For Wkend.

CC: \$1,614,500

(BTA 100% WI)

10/4/2010 (70 days) TD 11,665' PB 11,610' RU Baker WL, RIH w/ GR-CCL, Log from 11594' to 10500', Correlate to Baker Comp Density - Comp Neutron Log dated 8-31-10, Perf 11396 - 11412'; 11460 - 11468' & 11474 - 11486' w/ 2 JSPF (75 holes), No press chg when perfd, POH & RD WL, RU kill truck, BD perfs @ 1100 psi, Displ acetic acid @ 2.5 BPM @ 1250 psi, ISIP 900 psi, 5 min SI 400 psi, 10 min SI 150 psi, SWI, RD kill truck, WO frac equip.

CC: \$1,642,000

10/5/2010 (71 days) TD 11,665' PB 11,610' WO frac equip.

CC: \$1,642,000

10/6/2010 (72 days) TD 11,665' PB 11,610' WO frac equip.

CC: \$1,642,000

10/7/2010 (73 days) TD 11,665' PB 11,610' RU Halliburton frac equip, Install tree saver in WH, Acidize dn csg w/ 3000 gals 10% MCA acid, AIR on acid 50 BPM @ 4900 psi, Frac dn csg w/ 127,500 gals, Hybor G-R (21) X-Link gel, cont 200,000# Versaprop (Prop conc. 1-6 ppg), AIR on frac 70 BPM @ 5411psi, Max press 6327 psi, ISIP 4441psi, 5 min SI 4328 psi,10 min 4304 psi, 15 min SI 4285 psi. SI @ 7PM, RD & MO frac equip, 4138 BLWTR, This am: SICP slight vac.

CC: \$1,912,000

10/8/2010 (74 days) TD 11,665' PB 11,610' 13.5 hr SITP slight vac, RU slick line, RIH, Tag up at 11,562' (76' below btm perf), POH, RD slick line, Left well SI, WO pulling unit. 4138 BLWTR

CC: \$1,916,000

10/9/2010 (75 days) TD 11,665' PB 11,610' SI, WO pulling unit. 4138 BLWTR

CC: \$1,916,000

10/10/2010 (76 days) TD 11,665' PB 11,610' SI, WO pulling unit. 4138 BLWTR

CC: \$1,916,000

(BTA 100% WI)

10/11/2010 (77 days) TD 11,665' PB 11,610' SICP slight blow did not reg press on gauge, Unload rods & prod equip, MIRU pulling unit, ND frac vlv, NU BOP, SDFN. 4138 BLWTR

CC: \$1,975,200

10/12/2010 (78 days) TD 11,665' PB 11,610' Open well, no press, GIH w/ 3" Mother Hubbard gas seperater @ 10,535', 2" SN @ 10,501', 1 jt 2-7/8" tbg, 5-1/2" TAC @ 10,469', 325 jts 2-7/8 tbg, ND BOP, NU WH, GIH w/ 2" x 1-1/4" x 26' pump, 9 - 1-5/8" K bars, 292 - 3/4" rods, SDFN. 4138 BLWTR

CC: \$1,985,100

10/13/2010 (79 days) TD 11,665' PB 11,610' RIH w/ 117 - 7/8" rods, 1 - 6' x 7/8" sub, Hung well on, Load tbg w/ 22 BW, Check pump OK, RD & MO pulling unit, Left pmp'g @ 6-1/2 SPM x 144" SL. 4138 BLWTR.

CC: \$1,993,000

10/14/2010 (80 days) TD 11,665' PB 11,610' Pmp 23 hrs, Rec 2 BO, 90 BW, NR on gas. 4048 BLWTR.

CC: \$1,993,000

10/15/2010 (81 days) Pmp 24 hrs, Rec 20 BO, 93 BLW, 17 MCF. 3955 BLWTR.

CC: \$1,993,000

10/16/2010 (82 days) Well dwn on high press kill, back press valve plugged w/ parafin, Pmp 6 hrs, Rec 1 BO, 24 BLW, 30 MCF. 3931 BLWTR.

CC: \$1,993,000

10/17/2010 (83 days) Pmp 24 hrs, Rec 34 BO, 65 BLW, 21 MCF. 3866 BLWTR.

CC: \$1,994,500

10/18/2010 (84 days) Pmp 24 hrs, Rec 22 BO, 66 BLW, 39 MCF. 3800 BLWTR. Well set up to move 145 BF. Will get FL & dynamometer test.

CC: \$1,994,500

(BTA 100% WI)

10/19/2010 (85 days) Pmp 24 hrs, Rec 39 BO, 66 BLW, 64 MCF. 3734 BLWTR.

CC: \$1,994,500

10/20/2010 (86 days) Pmp 24 hrs, Rec 34 BO, 84 BLW, 64 MCF. 3650 BLWTR.

CC: \$1,994,500

10/21/2010 (87 days) Pmp 24 hrs, Rec 36 BO, 88 BLW, 62 MCF. 3562 BLWTR.

CC: \$1,994,500

10/22/2010 (88 days) Pmp 24 hrs, Rec 31 BO, 92 BLW, 52 MCF. 3470 BLWTR.

CC: \$1,994,500

10/23/2010 (89 days) Pmp 24 hrs, Rec 23 BO, 77 BLW, 63 MCF. 3393 BLWTR.

CC: \$1,994,500

10/24/2010 (90 days) Pmp 24 hrs, Rec 54 BO, 70 BLW, 125 MCF. 3323 BLWTR. Final Report.

CC: \$1,994,500