

# PETROLEUM DEVELOPMENT CORPORATION

## Well History

<b>2001-C-#06</b> <b>National Hog Farm #32-21</b> <b>SWNE 21 5N 63W</b> <b>Weld Co., CO</b> <b>Permit #051232037200</b> <b>AFE #01058</b> <b>LS #648200</b> <b>(UXP)</b>	11/25/2001	Caza Rig #1: MIRU. Drill rat and mouse holes and spud 12 ¼" hole at 2:30 PM. TD 12 ¼" hole at midnight at 471'.
	11/26/2001	Caza Rig #1: Condition mud and circulate and survey (1/4 degree at 471'). Trip out and rig up Casers. Ran 10 joints of new, 24#, J-55, 8 5/8" casing to 445'. Set at 455'. Rig up Cementer's Well Service and pumped 320 sacks of Neat cement + 3% CaCl + ¼# flake per sack. Plug down at 4:30 AM with good returns. Waiting on cement.
	11/26/2001	Caza Rig #1: Wait on cement until 1:30 PM. Test BOP for 15 minutes at 500 psi – held OK. Began drilling rubber plug with 7 7/8" bit at 1:45 PM and continue to drill new 7 7/8" hole. Survey at 6:45 PM was ¾ degree at 1026'.
	11/27/2001	Caza Rig #1: At 2243' and drilling 7 7/8" hole. Last survey: ¼ degree at 1779'.
	11/28/2001	Caza Rig #1: At 4618' and drilling 7 7/8" hole. Last survey: 1.75 degrees at 4058'.
	11/29/2001	Caza Rig #1: At 6362' and drilling 7 7/8" hole. Last survey: 1.25 degrees at 5926'.
	11/30/2001	Caza Rig #1: At 7033' and drilling 7 7/8" hole. Last survey: 1 degree at 6990'.
	12/01/2001	Caza Rig #1: At 7336' and drilling 7 7/8" hole.
	12/02/2001	At 7435' and drilling 7 7/8" hole.
	12/03/2001	Caza Rig #1: TD 7 7/8" hole @ 7550' KB. MIRU PSI and ran Comp Density/Comp Neutron/Dual Induction. LTD @ 7572' KB. RU casing crew and ran 14' shoe joint, 175 joints of 10.5 #/ft, M-65, 4 ½" casing and 1 joint of 11.6 #/ft, N-80 on top of string. Casing set @ 7476' KB. MIRU BJ Services. Pumped 10 bbl pre flush, 10 bbl mud flush, 5 bbl Class G (20 sx), 178 bbl Premium Lite + additives (250 sx) and 90 bbl Class G + additives (250 sx). Released wiper plug and displaced with 118.5 bbl treated water. Plug down OK @ 4:05 am 12/4/01. ECT @ 3000' KB. Released rig @ 5:30 am.
	12/10/2001	MIRU Nuex Wireline. Ran GR/VDL/CBL log. PBTD @ 7450' KB. <b>Perforated the Dakota from 7317'-19' and 7325'-27' KB with 12, .34 diameter holes, 3 spf, 120 deg phasing.</b>
	12/11/2001	MIRU BJ Services. Broke Dakota down with 2690 psig and 10 bbl treated water @ 1.5 bpm rate. ISIP @ 1635 psig; 5 min @ 451 psig; 10 min @ 212 psig; SWI, RDMO BJ, MIRU swab rig. Swab 60 bbl SWIFN.
	12/12/2001	TIH with 4" swab. During first run, lost swab and 500' of line in casing. Shut down until workover rig arrives first of next week.
	01/02/2002	MIRU completion rig to pull 2 3/8" tubing & prepare to Frac D Sand formation. Gauged casing pressure 1700#. Tubing pressure 300#. Blow down well. LR 44 bbls. Install BOPs & SDFN.
	01/03/2002	Pulled & lay down 2 3/8" tubing, install 4 ½" frac gate. SI well. RDMO completion rig.
	01/07/2002	MIRU BJ Services. Frac'd the Dakota with 914 bbl 18# Vistar fluid, 42000# 20/40 mesh white sand and 8000# 20/40 mesh Tempered DC. ATP – 2450 psig; AIR – 12.3 bpm; 4 ppa sand; ISIP – 2671 psig; 5 min – 2262 psig; flushed with 115 bbl. Open well on 12/64 choke to tank.
	01/09/2002	MIRU Key completion rig. RU BOPs. TIH tallying 2 3/8 tubing. Tag sand fill @ 7280' with 223 jts. RU J head, pull 2 stands & SDFN. (Dakota formation 7317-27)
	01/10/2002	Circ hole & clean out to 7461. Roll hole 1 hr on btm. Pull tubing up hole & land with 223 jts @ 7301' KB depth. ND BOP & flange up wellhead. RDMO completion rig. MIRU DJR swab rig. IFL 500'. LR 65 bbls. FFL 1500'. SDFN.
	01/11/2002	Gauged SI well pressures, vac on casing & tubing. IFL 800. LR 175. FFL 2600. SDFN.

	01/12/2002	Gauged SI well pressures, 20# casing & 40# tubing. IFL 1400. LR 150. FFL 3600. Final well pressures, 175# casing pressure with strong blow on tubing. SDFWE.
	01/14/2002	Gauged SI well pressures, 500# casing & 490# tubing. IFL 2000. LR 113. Final well pressures, 400# casing & 0# tubing. FFL 3700. SDFN.
	01/15/2002	Gauged SI well pressures, 600# casing & 410# tubing. IFL 2200. LR 127. FFL 3700. Final pressures 550# casing with blow on tubing. TR 630. SI well & SDFN.
	01/16/2002	Gauged SI well pressures, 900# casing & 700# tubing. IFL 1700. LR 79. FFL 4200. TR 709. Tried to flow several times. Final pressures, 640# casing & strong blow on tubing. SDFN.
	01/17/2002	Gauged SI well pressures, 1000# casing and 250# tubing pressures. Blow down tubing. IFL 1800. Swab well. LR 67 bbls. Well flowed intermittently during the day. FFL 4200 and scattered to btm. Kicked off tubing with 780# casing pressure. FL tubing pressure 80#. Flowed for 3 hrs, casing pressure broke to 500#. Well flow went to all gas. SI well with 500# casing & 500# tubing pressure. AM SI pressures, 950# casing & 1100# tubing.
	01/18/2002	Gauged initial SI pressures, 1100# tbg & 950# casing pressure. Swab well & intermittently flowed well 5 hrs during the day. LR 46.
	01/19/2002	Gauged SI well pressures, 975# casing & 800# tubing. IFL 1800. Swab & intermittently flowed well during the day. LR 50 bbls. SI well with 600# casing & 40# tubing. RDMO swab rig.
	01/21/2002	Gauged well SI pressures, 1150# tubing pressure and 1050# casing pressure. Hook up flowback line to tank. Leave well SI.
	05/04/2002	MIRU completion rig to pull 2 3/8" tubing & prepare well for J-Sand completion. SD operations & SIWFWE.
	05/06/2002	MIRU completion rig, blow off well & NU BOPs. Pull 2 3/8" tubing string from well & lay down. ND BOPs. RDMO completion rig.
	05/07/2002	MIRU Nuex Wireline. Set a solid bridge plug @ 7250' KB above perforation in the Dakota. Perforated the J Sand from 7033' to 7043' KB with 20, .34 diameter holes, 2 spf, 120 deg phasing.
	05/08/2002	MIRU BJ Services. Frac'd the J Sand with 1855 bbl Vistar 20# fluid system, 176620# 20/40 mesh white sand and 2000# 14/30 mesh FlexSand MSE in the last 16000# of sand pumped. Breakdown @ 1856 psig; MTP - 1548 psig; ATP - 835 psig; AIR - 14.1 bpm; 4 ppa sand; ISIP - 1172; flushed with 110.5 bbl. Open well to tank on 12/64 choke.
	05/09/2002	MIRU completion rig & prepare to rerun 2 3/8" tubing after frac of J-Sand. SDFN.
	05/10/2002	RIH with 2 3/8" tubing, tag sand @ 7068. Circ hole and clean out to 7100. (Lost Circulation) Land tubing with 214 jts + 14' of subs @ 7024. Broach tubing & SI well.
	05/13/2002	MIRU swab rig. Swab well, IFL 900. LR 158. FFL 1800'. SIWFN.
	05/14/2002	Gauged SI pressures, ICP 20 and ITP 50. Swab well. IFL 1800. Swab well all day. LR 211. FFL 2400. TLR 428. TLTR 1422.
	05/15/2002	Gauged SI well pressures, ICP 20 and ITP 180. Swab well all day, LR 160. IFL 1100. FFL 2800. FCP 125 with blow on tubing. TLR 588. TLTR 1262. SIWFN.
	05/16/2002	Gauged well SI pressures, ICP 175 and ITP 150. Swab well all day, IFL 1700. LR 208. FCP 350 with blow on tubing. FFL 2500. TLR 796. TLTR 1054. SIWFN.
	05/17/2002	Gauged SI well pressures, ICP 485 and ITP 150. Flowed tubing & swab well. IFL 1500. Well trying to flow all day. TLR 108. FCP 740 with blow on tubing. FFL scattered to btm. TLR 904. TLTR 946. SIWFWE.
	05/20/2002	Gauged SI well pressures, ICP 960 and ITP 175. Swab well, IFL 1600. Well would flow approx. 1/2 hr. after each run. FFL 2800 and scattered to btm. FCP 1160. LR 110. TLR 1014. TLTR 836. SIWFN.
	05/21/2002	Gauged SI well pressures, ICP 1200 and ITP 200. IFL 1200'. Swab all day (well would flow off & on during operation). FCP 1550 and FTP

		slight blow. FFL 3200 and scattered. LR 146. TLR 1160. TLTR 690. SIWFN.
	05/22/2002	Gauged SI well pressures, ICP 1660 and ITP 800. Swab well, IFL 1500. Swab well all day. LR 89. Kick off tubing & flow well thru 18/64 choke to tank overnight. FCP 1470 and FFTP 460. Recovered 140 bbls overnight. SI well to hookup & turn in to sales. FCP 1500 and FTP 1200. Flowed thru choke with 14 bbls/hr water. RDMO swab rig.