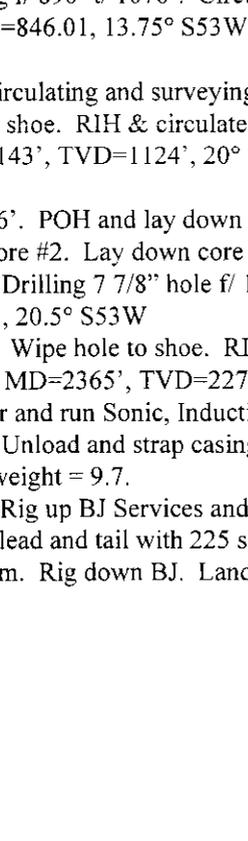


STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
800 NE Oregon Street #28, Portland OR 97232

HISTORY OF OIL OR GAS WELL
(In compliance with rules and regulations pursuant to ORS 520)

NW Natural (Company or Operator)	Northwest Natural Gas (Lease)	OM 32-22-65 (Well No.)
Sec. 22 T. 6N R. 5W	Surveyed Coordinates (if directional, BHL & SHL): SHL ; 1884.04' South & 1261.26' East from the NE Corner of Section 22, T6N, R5W, WB & M. BHL ; 330.55' S & 452.33' W from surface location	
Wildcat:	(or) Field Name: Calvin Creek Storage Field	County: Columbia
Date: <u>12/1/98</u>	Signature: 	
	Position: Storage Development Engineer	

Use this form in reporting the daily operations at the well. (Operator may use his own forms, but heading of this form must also be completed and submitted.) Please submit a complete history of the well. Include such information as bit sizes, mud weights, casing sizes and depths set, amount of cement used, drilling depths, fishing, logging, perforating, and plugging procedures, and anything else pertinent to the operation. Do not include lithology.

Date	
7/15/98	Rig up, pick up Kelly, make up bit, mix mud. Pick up drill collars, spud well with 12 1/4" bit. Drilling f/ 30' t/ 204'
7/16/98	Drilling 12 1/4" hole f/ 204' t/ 438'. Wipe hole to surface & circulate. POH for casing. Rig up and run 10 jts, 428' of 8 5/8", 24#/ft, J-55 casing and run to 425'. Cement casing w/ 192 sx Class G mixed with 2% CaCl. Bump plug @ 12:45 pm. WOC. Cut off casing and weld on wellhead.
7/17/98	Weld on wellhead. Test weld to 1000 psi. Nipple up BOPE. Change gasket on BOP. Repair mud pits. Test blind Rams to 775 psi. Make up bit & RIH to 346'. Test BOPE with State Rep witnessing. Drill plug, float, cement, and shoe. Drilling 7 7/8" hole f/ 438' t/ 497'. Circulate and condition mud. POH for mud motor.
7/18/98	Make up directional drilling assembly. RIH. Directional drilling f/ 497' t/ 522'. Survey and orient tool. Drilling and survey f/ 522' t/ 890'. Circulate and wipe hole to shoe. Drilling f/ 890' t/ 1076'. Circulate and POH. Mud weight = 9.4. MD=632', TVD=631.75', 6° S62W; MD=850', TVD=846.01, 13.75° S53W; MD=1004', TVD=933.3', 19° S53W
7/19/98	RIH with new BHA. Spot ream f/ 766' t/ 1076'. Rotary drilling, circulating and surveying f/ 1076' t/ 1291'. Wipe hole 6 stds. Slick. Drilling, survey f/ 1291' t/ 1615'. Wipe hole to shoe. RIH & circulate. Survey POH and lay down BHA. Make up core barrel, RIH. Mud weight = 9.5. MD=1143', TVD=1124', 20° S53W; MD=1380', TVD=1347, 20° S53W
7/20/98	RIH. Wash 60' to bottom. Circulate clean. Coring f/ 1615' t/ 1616'. POH and lay down core barrel. Make up New bit, core barrel and RIH. Coring f/ 1616' t/ 1622'. POH w/ core #2. Lay down core (1' recovery). Repair Rotary clutch. RIH w/ drilling assembly. Ream f/ 1578' t/ 1622'. Drilling 7 7/8" hole f/ 1622' t/ 1837'. Circulate & wipe hole to 1547'. Mud weight = 9.7. MD=1615', TVD=1568', 20.5° S53W
7/21/98	Trip in hole. Drilling f/ 1837' t/ 2365' (TD). Circulate hole clean. Wipe hole to shoe. RIH. Circulate and survey. Circulate. Wipe hole to shoe. Slick. Circulate. Mud weight = 9.8. MD=2365', TVD=2274', 18.5° S53W
7/22/98	Circulate and wait on loggers. POH for logs. Rig up Schlumberger and run Sonic, Induction, Neutron Density. and Formation Micro Image logs. RIH and condition mud. Circulate. Unload and strap casing. POH and lay down Drill pipe. Break kelly and saver sub. Rig up to run casing. Mud weight = 9.7.
7/23/98	Run 56 jts, 2315' of 5 1/2", J-55 casing to 2311'. Circulate casing. Rig up BJ Services and cement casing w/ 105 sx Type III w/ 3% SMS + .75% CD-32 + 1% CaCl + 5% CSE lead and tail with 225 sx Type III w/ 5% KCl + 1.5% FL-62 + 3% BA-58 + .5% CD-32 + 3% EC-1. CIP @ 3:40 am. Rig down BJ. Land tree, lay down Kelly. Load out trucks, clean mud pits. Release Taylor Drilling Rig #7 @ 4pm 7/23/98