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

WELL SUMMARY REPORT

(In compliance with rules and regulations pursuant to ORS 520)

NW Natural			Northwest Natural Gas					IW 23a-22-65					
(Company or Operator)			(Lease)						(Well No.)				
				Coordinates (if directional, BHL & SHL):					SHL; N03°03'15"E 2280.65' &				
S86°56'45"E 1923.76' from the SW corner of section				ion 22, T61	on 22, T6N, R5W; BHL; 375.37' S & 730.41' E from						urface location		
Wildcat: (or) Field Name: Calvin Creek Storage Field County: Columbia													
Wildcar.	(or) Field Frame. Cutvin Creek Storage Field County. Columbia												
						Sign	atur e.	<i>k</i>	$\bigcup Q \bigcup$	Lowy	/		
.	e: 2/10/98 Position: Storage Development Engineer												
Date: 2/1	0/98					Posi	tion: Stor	age De	evelopment I	Engineer			
					eted drilling: 10/9/97 P&A:								
Total depth: MD 2298' TVD 2069' Redrill depth: Logs run: DIL, GR, SP, FMS, FDCN, Sonic, Caliper, EMT, CET													
Lugs run. Dil., dr., 5r., rivis, riven, sonic, camper, EM1, CE1													
	Size of		Size of		Wt. in lb)S.	Grade	:			Amo	unt of	
	hole	I .	casing	- 1	per ft.		Туре		Dep	th	ceme		
	17 ½"		13 3/8"		48#/ft		H-40		355		269 9		
CASING		, <u>, , , , , , , , , , , , , , , , , , </u>											
RECORD	ORD 12 1/4" 8 5/8"		32#/ft			J-55		1394	1394'		SX		
									- 				
					<u>.</u>								
	Goologi	Geological Marker					Depth						
			Geologi	Geological Marker					Берш				
Plugs			Keasey						644' MD				
					Cowlitz						1140' MD		
Junk				Clark &	Clark & Wilson						1394' MD		
								Method of Perforating					
Size of						Gt	•	Jet E		D 11			
Perforations	Casing 5 1/2"	From 1359			To 1470'		Shots/ft.			Bullet	SI	otted Liner X	
or	3 72	1339		1470				 				А	
Liner		-					-						
_		T	. 1				F.T.P.	1					
	Date Clean Oil bbl/day		I .	I		Percent			F.C.P.	S.I.T.P.		S.I.C.P.	
Initial	Jale	bbl/day	Gra	avity	Water					-			
Production													

wellsumm.doc 2/11/98