

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 (Company or Operator)	Northwest Natural Gas (Lease)	IW 22dH-22-65 (Well No.)
Sec. 22    T. 6N    R. 5W	Surveyed Coordinates (if directional, BHL & SHL): SHL; N03°03'15"E 2286.41' & S86°56'45"E 1915.61' from the SW corner of section 22, T6N, R5W; BHL; 1264.37' N & 1189.94' E from surface location	
Wildcat:	(or) Field Name: Calvin Creek Storage Field	County: Columbia
Date: <u>2/24/98</u>	Signature: <u><i>Todd A. Glauz</i></u> Position: Storage Development Engineer	

Commenced drilling: 12/11/97	Completed drilling: 1/27/98	P&A:
Total depth: MD 2746' TVD 1370'	Redrill depth:	
Logs run: DIL, GR, SP, FDCN, FMS, Sonic, CET		

CASING RECORD	Size of hole	Size of casing	Wt. in lbs. per ft.	Grade Type	Depth	Amount of cement
	17 1/2"	13 3/8"	48#/ft	H-40	426'	300 sx
	12 1/4"	8 5/8"	32#/ft	J-55	1995'	810 sx

	Geological Marker	Depth
Plugs	Keasey	652' MD
	Cowlitz	1174' MD
Junk	Clark & Wilson	2036' MD

Perforations or Liner	Size of Casing	From	To	Shots/ft.	Method of Perforating		
					Jet	Bullet	Slotted Liner
	5 1/2"	2740'	2020'				X

Initial Production	Date	Clean Oil bbl/day	Gravity	Percent Water	F.T.P.	F.C.P.	S.I.T.P.	S.I.C.P.

1997-98