

STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
910 State Office Building      Portland, OR 97201

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

Northwest Natural Gas Co.      Northwest Natural Gas Co.      IW 33ac-3  
(Company or Operator)      (Lease)      (Well No.)

Sec. 10      T: 6N      R: 5W      Surveyed Coordinate (if directional, BHL & SHL): SHL= 1706' W & 1470' N from the SE corner Sec 3; T6N; R5W--BHL=340' N & 292' W of SHL @ 2603' MD

Wildcat: \_\_\_\_\_ (or Field Name): Mist Storage      County: Columbia  
Signature: Yodd A. Thomas  
Date: 5-Mar-91      Position: Senior Operations Superintendent

Commenced drilling: 11/19/90      Completed drilling: 12/4/90      P & A: no  
Total depth: 2897'      Redrill depth:  
Log runs: 2 runs-DIL, SFL, GR Neutron Denstiy, Dipmeter--1 run-Vertilog, Photon

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"	54.5#	K-55	574'	596 sx
12 1/4"	8 5/8"	32#	K-55	2603'	1542 sx	

	Geological Marker	Depth
Plugs	cement f/2765'-2698'	Clark & Wilson Sand 2604'
Junk	NONE	

Perforations or Liner	Size of Casing	From	To	Shot/ft	Method of Perforating		
					Jet	Bullet	Slotted Liner
	5 1/2"	2698'	2581'			YES	

Initial Production	Date	Clean Oil bbl/day	Gravity	Percent Water	FTP FCP	SITP SICP

1990

STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
910 State Office Building      Portland, OR 97201

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

Northwest Natural Gas Co.      Northwest Natural Gas Co.      IW 33ac-3  
(Company or Operator)      (Lease)      (Well No.)

Sec. 10      T: 6N      R: 5W      Surveyed Coordinate (if directional, BHL & SHL): SHL= 1706' W & 1470' N from the SE corner Sec 3; T6N; R5W--BHL=340' N & 292' W of SHL @ 2603' MD

Wildcat: \_\_\_\_\_ (or Field Name): Mist Storage      County: Columbia  
Signature: Edd A. Thomas  
Date: 5-Mar-91      Position: Senior Operations Superintendent

Commenced drilling: 11/19/90      Completed drilling: 12/4/90      P & A: no  
Total depth: 2897'      Redrill depth: \_\_\_\_\_  
Log runs: 2 runs-DIL, SFL, GR Neutron Denstiy, Dipmeter--1 run-Vertilog, Photon

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"	54.5#	K-55	574'
	12 1/4"	8 5/8"	32#	K-55	2603'	1542 sx

	Geological Marker	Depth
Plugs	cement f/2765'-2698'	Clark & Wilson Sand 2604'
Junk	NONE	

Perforations or Liner	Size of Casing	From	To	Shot/ft	Method of Perforating		
					Jet	Bullet	Slotted Liner
	5 1/2"	2698'	2581'			YES	

Initial Production	Date	Clean Oil bbl/day	Gravity	Percent Water	FTP FCP	SITP SICP

1990