

JJG

Rock business is a blast

By Alan Gustafson
Of the Statesman-Journal

PHILOMATH — George Neuman's favorite kind of rock lacks a beat, but he sure does dig it.

He excavates and sells almost 90,000 tons of rock a year at two quarries near Philomath.

Standing on the rim of a craggy pit, Neuman saw beauty in the boulders below.

"The gray rock is the good rock," he said. "It's a member of the granite family, and it's a hard, durable rock."

Durability is a prized quality in the rock business. People who build roads and buildings pay Neuman good money, ranging from \$4.25 to \$5.50 a yard, for various sizes of rocks.

Neuman said he sold up to 70,000 yards of rock a year. That is equivalent to about 1.9 million cubic feet, or almost 90,000 tons.

Anyway you measure it, "That's a lot of rock," he said.

And it takes a lot of blasting, a process called drilling and shooting, to unearth new supplies of rock. This consists of drilling a hole in the quarry floor, as deep as 50 feet, and packing dynamite charges in the opening. The explosions excavate jagged rocks, which then are smashed into assorted sizes by a motor-driven machine.

Neuman said the blasting work wasn't particularly dangerous.

"No more than walking down the street," he said.

A former logger, Neuman, 61, worked for another rock-selling business before starting his own operation in 1967.

"Everything was so high-priced, I figured why not do it myself," he said. "And I happened to know where the rock was — the good rock."

Neuman Quarry and Excavating is a family business. George and his wife, Betty, have 10 children, their ages ranging from 35 to 22. Five of their six sons work in the quarries.

It's a solid business, too.

"There's always a demand for rock," Neuman said. "Rock is necessary in any construction you do. Roads, revetment — you name it, it's there. Without rock, people wouldn't be driving all their fancy cars on nice roads."

People

Name: George Neuman.

Address: Philomath.

Born: May 12, 1926.

Occupation: Quarry owner.

Family: His wife, Betty, and the couple's 10 children: Marjorie, 35; Tony, 34; David, 33; Jerry, 32; Susan, 30; Tim, 29; Paul, 28; Peter, 27; Jacqueline, 23; and Mary, 22.

Hobbies: Elk and deer hunting.

Quote: "I guess my real hobby is work. That's what my wife says anyway."

People stories are profiles of ordinary people who symbolize the variety and attraction of life in Oregon — and specifically in the Mid-Willamette Valley and coast areas. If you know people who would make good People story subjects, please mail their names and descriptions to People Editor, The Statesman-Journal, P.O. Box 13009, Salem 97309.

Not everyone appreciates a quarry, however. Neighbors of one of Neuman's rock pits have complained about noise and dust. Their protests triggered a protracted legal battle that led to restrictions being placed on his crushing and hauling operations.

From June 1 until Nov. 1, Neuman said, no crushing can be done at the site. Weekend hauling operations also are banned.

Neuman bristled at the restrictions, saying they are symbolic of the type of land-use controls that have given Oregon an anti-business image.

"I feel like until we get rid of the Land Conservation and Development Commission, this state is going to keep going under," he said.

From his perspective, the deep pit will not be a permanent scar on the land.

"It can be reclaimed, someday," he said. "Maybe it will never be exactly the way it was, but it can be somewhat restored."

Meanwhile, more rocks will be mined.

What is the life expectancy of this quarry?

Neuman shrugged, looked into the pit and said he didn't know.

Then he smiled and said, "I'm not going to run out of rock very soon."

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STATE ARTICLE CONCERNS: OREGON

AFTER FIVE-YEARS

Court OKs Morse Bros. operation

CORVALLIS—Morse Brothers Inc. has won a battle to expand its gravel-extraction operation near the Willamette river, southeast of Corvallis.

"What's happened is we've just been harrassed for five years and finally justice has been served," says Frank Morse, president and one of the principals of the company.

After a five-year battle, the Oregon Court of Appeals settled

the matter last week by dismissing an appeal by Friends of Benton County to block the gravel operation's expansion into farmland. The local group charged the expansion would violate state goals that seek to preserve farmland, reports the Corvallis Gazette-Times.

But the court dismissed the appeal, saying the group had no case because the state Land Conservation and Development

Commission approved the county's comprehensive land-use plan. One of the areas the state commission considers before granting its approval is the plan's compliance with the state goals for preserving farmland.

Several options

The court's decision could be appealed to the state Supreme Court within 30 days, or Friends of Benton County could ask the Court of Appeals to review its decision. Either of those courts could refuse to hear or review the case. Ben Fetherston, the attorney for the local group, could not be reached to comment on whether there are further plans to appeal the case.

Morse Brothers will start to use the new gravel site right away, says Frank Morse.

"It now gives us the freedom to do our long-range planning and make our operation efficient. It's hard to believe we could be harrassed for that length of time," he says about the court battles.

The company will file a petition with the court to recover attorney's fees in the case, says Edward F. Schultz, attorney for Morse Brothers. As of Monday, he had no idea how much that would be. He says his law firm's bookkeeper would have to go over the accounts and figure the total sum.

7/2/84 Daily Journal of
COMMERCE

$$Y = a + bX$$

State

Valley

Benton

1940 ~~X~~ =

Year	State	Valley	Benton
1944	X ₀ 4,261	1823.000	66,590
	X ₅ 9,947	4683	13,715
	X ₁₀ 15,632	7544	20,7713
	X ₁₅ 21,318	10405	
	X ₂₀ 27,003	13286 10405	278,276
	X ₂₅ 32,689	16,126	348,838
	X ₃₀ 38,374	18,987	419,400
	X ₃₅ 44,059	2295	489,962
	X ₄₀ 49,745	21,848	560,525
	X ₄₅ 55,430	24,709	631,087
	X ₅₀ 61,116	27,569	701,649
	X ₅₅ 66,801	30,430	772,211
	X ₆₀ 72,487	33,291	842,774
2000	X ₆₀ 72,487	36,152	913,336

n=36 X₀=1940

n=36 X₀=1940

n=36 X₀=1940

r ²	0.72578	0.86659	.45773
a ₀	4261.43094	1822.72673	66588.99
a.	1137.08649	572.14736	14112.45

logarithmic

$$y = a + b \log_e X$$

	State	Valley	Benton
r^2	0.72231	0.85446	0.40301
a_0	-65247.81903	-32943.59	-71728.2497
a_1	27670.55715	13858.41692	321269.817

1940 = X_{10}	-1534	-1033 10	22623
X_{15}	9685	4586	152887
X_{20}	17646	8573	245310
X_{25}	23820	11665	316999
X_{30}	28865	14,192	375574
X_{35}	33131	16328	425098
X_{40}	36826	18,178	467,997
X_{45}	40085	19811	505838
X_{50}	43000	21271	539,687
X_{55}	45637	22592	570,307
X_{60}	48045	23798	598261
X_{65}	50260	24907	623976
X_{70}	52310	25934	647,785
X_{75}	54219	268 ⁸⁰	669950

Exponential

$$\text{Log}_e Y = a + bX$$

State	Valley	Benton
$n=36 \quad X_0=1940$	$n=36 \quad X_0=1940$	$n=36 \quad X_0=1940$
$r^2 \quad 0.83040$	0.86548	0.49539
$a_0 \quad 7109.841$	3327.5123	93956.3686
$q_1 \quad .05868$	$.06124$	$.05355$

$1940-X_0$	7110	3328	93956
	9534		
X_5	7110	4520	122804
X_{10}	12785	6139	160509
X_{15}	17144	8338	209790
X_{20}	22989	11325	274202
X_{25}	30827	15382	358391
X_{30}	41338	20892	468429
	74333		
X_{40}	74333	38542	800232
X_{45}	99678	52349	1045928
X_{50}	133664	71102	1367062
X_{55}	179238	96574	1786793
X_{60}	240350	131171	2335396

Power Curve Fit

$$y = ax^b$$

$$\text{Log} y = \text{Log} a + b \text{Log} x$$

State

Valley

Benton

$n=36$ $X_0=1930$

$n=36$ $X_0=1930$

$n=32$
 $X_0=1930$

$n=36$ $X_0=194$

r^2 0.87963

12.04392 0.92882 11.08926

0.65944

0.46992

a_0 170.06310

65.46455

1841.42201

3931.80439

a_1 1.47312

1.54747

1.49406

1.27226

2.0615

X_{10}^{40}

5055

2309

73596

X_{15}^{45}

9186

4325

105,271 123 278

X_{20}^{50}

14034

6750

161,799 177,763 110,964

X_{25}^{55}

19496

9534

225,822 236,121 175,781

X_{30}^{60}

25503

12642

296,529 297,765 255,98

X_{35}^{65}

32005

16047

373,328 362,283 351,745

X_{40}^{70}

38962

19731

455,759 429,367 463,215

X_{45}^{75}

46344

23676

543,431 498,779 590,625

X_{50}^{80}

62284

27868

636,099 570,326 733,789

X_{55}^{85}

70802

32297

733,446 643,852 893,111

X_{60}^{90}

79663

36952

835,269 719,222 1068,58

X_{65}^{95}

88852,000

41825

941,377 796,323 1,260,30

X_{70}^{100}

88,852,000

46907

1,051,577 875,057 1,46,833

Exponential Curve Fit

$$\text{Log}_e Y = 15.869 + .0470 X$$

$$X_0 = 1940$$

$$h = 6$$

$$r^2 = .75$$

$$r^2 \hat{y} = 0.74892$$

$$a_0 = 7795,828,58$$

$$a_1 = .04699$$

31.92 $\times 10^6$	X10
40.37 $\times 10^6$	X15
51.07 $\times 10^6$	X20
64.59 $\times 10^6$	X25
81.71 $\times 10^6$	X30
103.33 $\times 10^6$	X35
130.7 $\times 10^6$	X40

ok

$$\text{Log}_e Y = \del{17.304} + .00337 X$$

$$X_0 = 1940$$

$$h = 16$$

$$r^2 = .01 \text{ (.16 averaged)}$$

$$r^2 \hat{y} = .00603 \text{ (.5466)}$$

$$a_0 = 32741.61933$$

$$a_1 = 0.0337$$

35.02
35.62
36.22
36.84
37.47
38.10
38.75
39.41
40.07

$$\text{Log}_e Y = a + bx$$

$$\text{Log}_e Y = 15.777 + .0587x$$

~~$$\text{Log}_e Y = 15.861 + 0.0390$$~~

$$X_0 = 1940$$

$$n = 26$$

$$r^2 = .60 \quad (.72 \text{ averaged } 65+66)$$

~~$$\hat{y} = 74.993$$~~

~~$$a = 77.35, 59.925 \quad 11782.$$~~

~~$$a = .05309 \quad 0.03896$$~~

$$X_0 = 1940$$

$$n = 36$$

$$0.59981 \quad r^2 = 0.83$$

$$0567$$

$$7.11 \times 10^6$$

$$9.53$$

~~$$17.40 \quad 13,420$$~~

~~$$21.14 \quad 17,675$$~~

~~$$25.68 \quad 22,280$$~~

~~$$31.21 \quad 30,662$$~~

~~$$37.22 \quad 40,386$$~~

~~$$46.07 \quad 53,182$$~~

~~$$55.28 \quad 70,060$$~~

~~$$68.02 \quad 92,277$$~~

~~$$82.65 \quad 121,539$$~~

~~$$100.42 \quad 160,080$$~~

~~$$122.02 \quad 210,843$$~~

$$12.78$$

$$17.14$$

$$22.99$$

$$30.83$$

$$41.34$$

$$55.43$$

$$74.34$$

$$99.68$$

$$133.69$$

$$179.23$$

$$240.40$$

100,000,000

10,000,000

EUGENE DIETZGEN CO.
MADE IN U. S. A.

State

Willamette Valley

1,000,000

NO. 340-L410 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
4 CYCLES X 10 DIVISIONS PER INCH

Benton County

100,000

10,000

1940 X

1945

1950

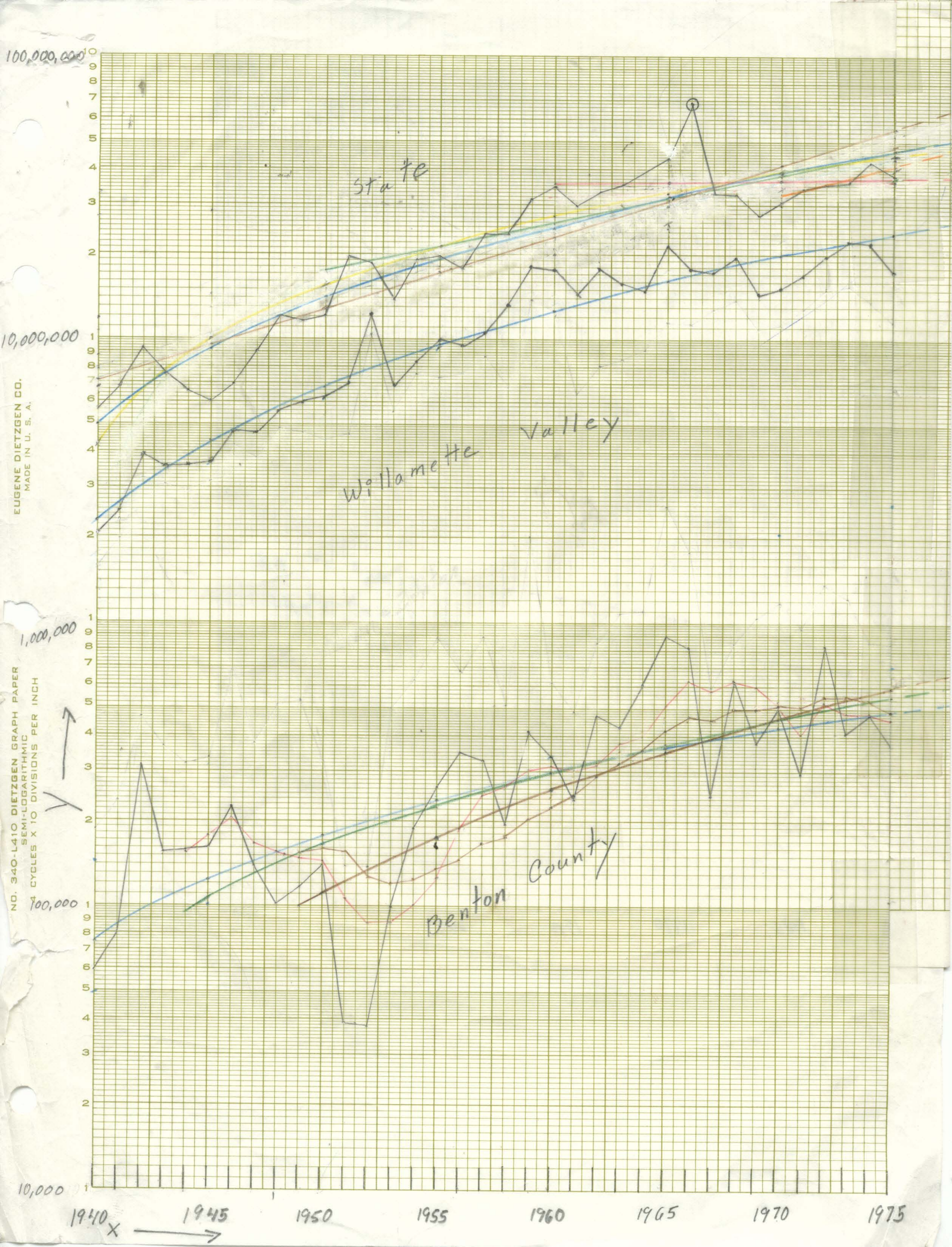
1955

1960

1965

1970

1975



PATENT PENDING

DATE _____ ASSIGNMENT _____

FILE NO. _____



FILE NO.

ASSIGNMENT

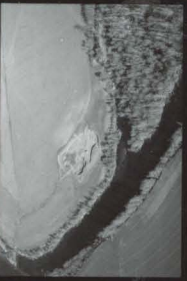
DATE

35



KODAK SAFETY FILM

34



33



KODAK PLUS X PAN FILM

32

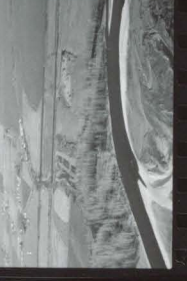


31



KODAK SAFETY FILM

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21



20



19



18



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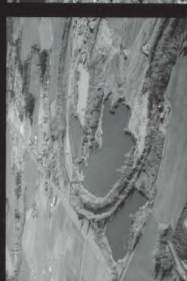


KODAK PLUS X PAN FILM

15



14



13



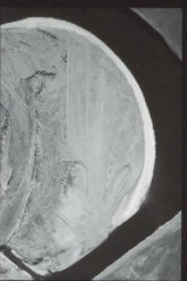
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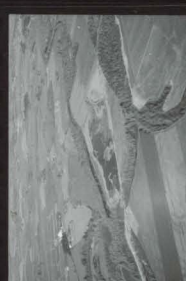


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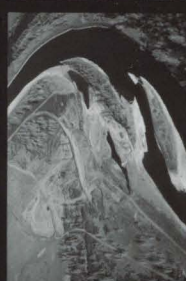


KODAK SAFETY FILM

9



8



7



6



5



4



KODAK SAFETY FILM

KODAK PLUS X PAN FILM

3



2



1



12



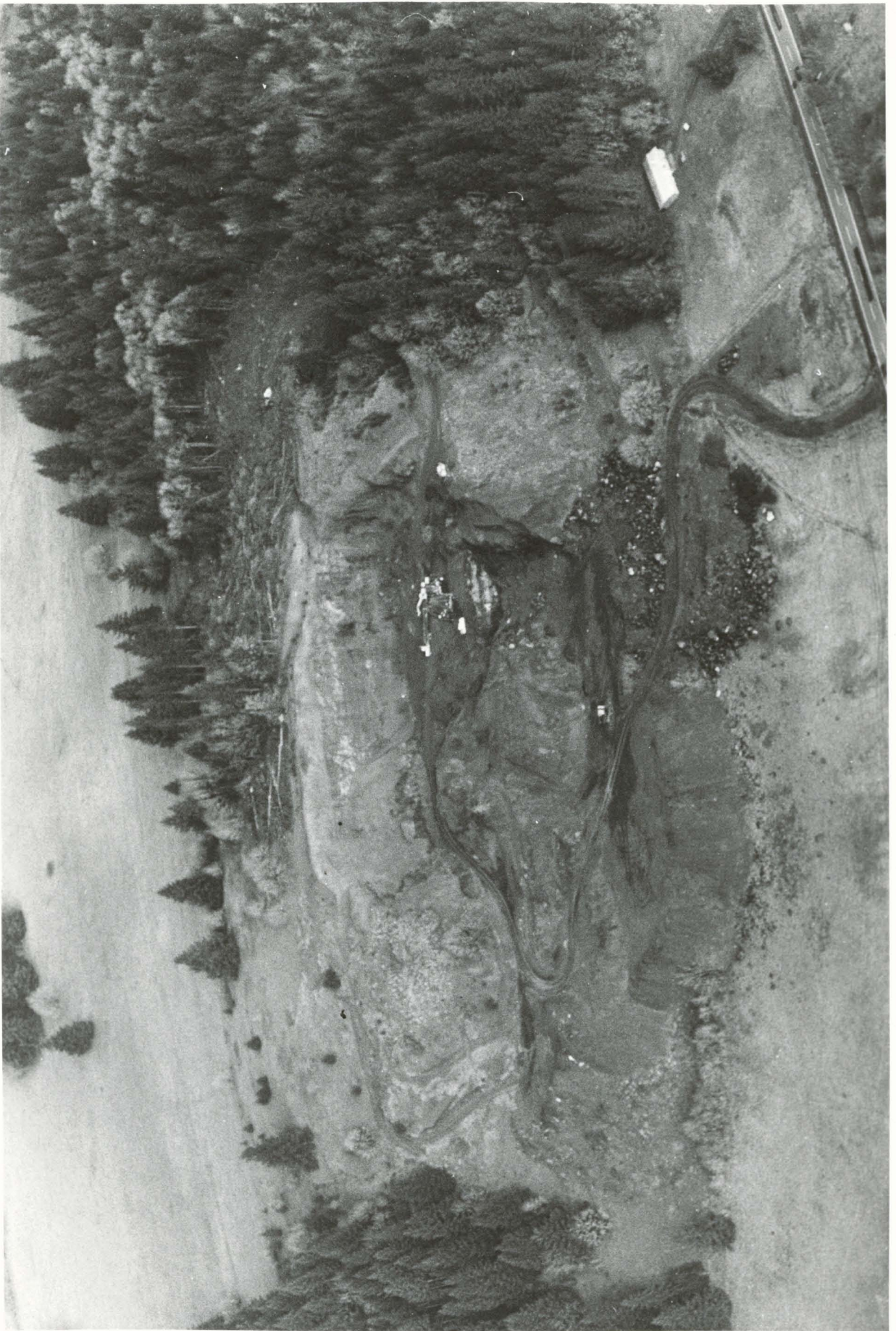
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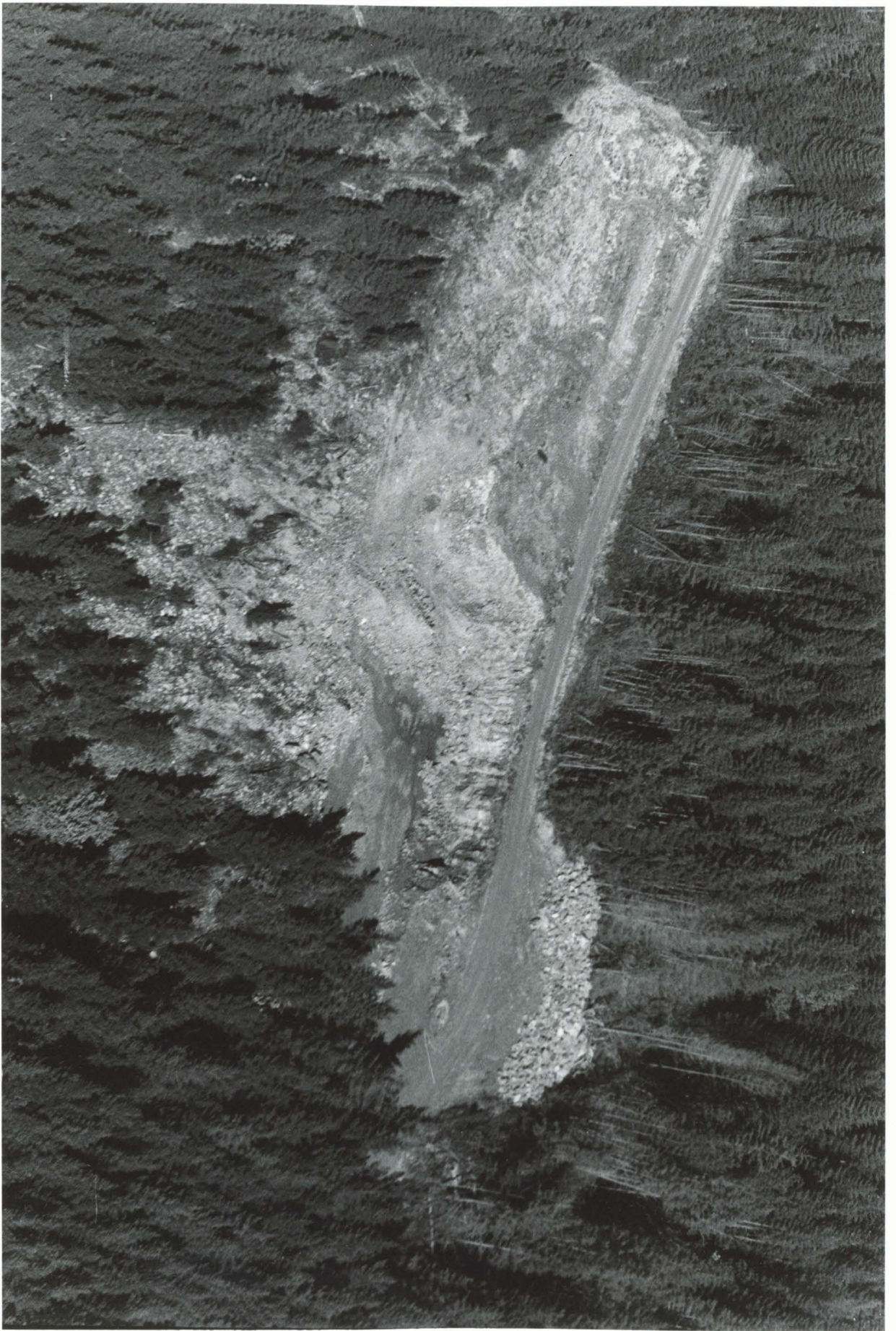
10



KODAK PLUS X PAN FILM













Benton County

$\bar{X} = 0.929$
 $\bar{Y} = 0.0621X$
 $r^2 = 0.152$
 $\log \bar{Y} = -0.0780 - 0.0824$
 $\log \bar{Y} = 0.427 - 2.02 \log e$

	Ratio $\frac{S+G}{S+G+S}$	$\log \bar{Y}$	$\log \bar{Y}$	$\log \bar{Y}$
0	1.000	0.929	.923	0.963
1	1.000			
2	1.000			
3	.815			
4	.902			
5	.844	0.898	.886	0.888
6	.769			
7	.761			
8	1.000			
9	1.000			
10	1.000	0.867	.850	0.837
11	1.000			
12	1.000			
13	0.915			
14	0.656			
15	.897	0.836	.815	0.801
16	.733			
17	.875			
18	.807			
19	.709			
20	.947	0.805	.782	0.772
21	.643			
22	.808			
23	.830			
24	.799			
25	.786	0.774	.750	0.748
26	.742			
27	.955			
28	.781			
29	.787			
30	* .865	0.743	.720	0.728
31	* .931			
32	* .925			
33	* .776			
34	* .503			
35	* .379	0.712	.691	0.711
40		0.681	.663	0.696
45		0.650	.636	0.683
50		0.619	.610	0.671
55		0.588	.585	0.660

AG

0.883

$Y = 0.883 - .0075 X$
 $r^2 = 0.530$
 $X_0 = 1940$

$Y = -0.118 - .00102 X$
 $r^2 = 0.522$
 $X_0 = 1940$

$Y = 0.476$
 $r^2 = 0.472$
 $X_0 = 1930$

	1	2	3	4
0.819	.883	.889	0.927	
.783				
.834				
.895				
.879				
.824	.845	.844	0.841	
.829				
.800				
.891				
.842				
.837	.808	.803	0.785	
.875				
.815				
.874				
.901				
.627	.770	0.763	0.744	
.850				
.916				
.628				
.798				
.741	.733	0.725	0.713	
.628				
.673				
.591				
.707				
.713	.695	.689	0.687	
.555				
.635				
.588				
.695				
.710	.658	.655	0.665	
.721				
.720				
.587				
.633				
.642	.620	.622	0.647	
	.582	.591	0.631	
	.545	.562	0.616	
	.507	.534	0.604	
	.470	.508	0.592	

Valley

$Y = -0.00597X$
 $r^2 = 0.280$

$\log_e Y = -0.192$
 $r^2 = 0.0812X$
 $r^2 = 0.234$ $X_0 = 1910$

$\log_e Y = 0.351 - 0.210 \log_e X$
 $r^2 = 0.211$
 $X_0 = 1930$

	1	2	3	4	5
.769		0.836	0.825	0.876	
.798					
.820					
.865					
.803					
.836		0.806	0.793	0.804	
.897					
.813					
.861					
.767					
.811		0.776	.761	0.757	
.763					
.840					
.803					
.905					
0.736		0.746	.731	0.722	
.795					
.801					
.513					
.762					
.704		0.716	.702	0.695	
.445					
.453					
.531					
.625					
.538		0.686	.674	0.673	
.63					
.739					
.702					
.745					
.748		.657	.647	0.654	
.767					
.768					
.675					
.622					
.671		.627	.621	0.638	
		.597	.596	0.624	
		.567	.573	0.612	
		.537	.550	0.601	
		.507	.528	0.591	

$\log_e Y = 10.787 + 1.411 \log_e X$
 $n = 36$ $X_0 = 1930$ $r^2 = 0.88$
CRAIG
Oregon

$\log_e Y = 11.025 + 1.377 \log_e X$
 $n = 36$ $X_0 = 1930$ $r^2 = 0.89$
CRAIG
Total

²**CRAIG**
Total
S+G

³**S**

Willamette
Valley
S+G

Year	CRAG Oregon	CRAG Total	CRAG Total S+G	S	Willamette Valley S+G			
10 1940	1,247,000	1,056,000	1,463,000	1,301,000	1,066,000	235,000	1,588,000	47
11		1,681,000	1,973,000	1,545,000	428,000	1,986,000	50	
12		2,032,000	2,488,000	2,075,000	413,000	3,201,000	70	
13		2,141,000	2,562,000	2,294,000	268,000	3,092,000	48	
14		1,854,000	2,051,000	1,804,000	248,000	2,902,000	71	
15	2,210,000	1,629,000	2,557,000	1,853,000	1,527,000	325,000	3,129,000	61
16		2,108,000	2,577,000	2,138,000	440,000	4,195,000	47	
17		2,106,000	2,621,000	2,098,000	523,000	3,815,000	87	
18		3,128,000	3,529,000	3,146,000	383,000	4,835,000	77	
19		3,058,000	3,401,000	2,865,000	537,000	4,660,000	141	
20 1950	3,316,000	3,248,000	3,800,000	3,583,000	2,998,000	586,000	4,396,000	102
21		3,795,000	4,189,000	3,664,000	525,000	4,630,000	144	
22		8,421,000	8,694,000	7,084,000	1,609,000	10,257,000	194	
23		3,561,000	3,909,000	3,418,000	491,000	5,586,000	137	
24		4,010,000	4,755,000	4,284,000	470,000	7,515,000	78	
25	4,543,000	5,454,000	5,168,000	6,039,000	3,786,000	2,252,000	7,278,000	260
26		5,055,000	5,426,000	4,614,000	812,000	7,552,000	194	
27		4,698,000	4,934,000	4,519,000	415,000	8,418,000	208	
28		5,547,000	5,876,000	3,690,000	2,186,000	6,796,000	645	
29		5,292,000	5,874,000	4,687,000	1,187,000	13,813,000	432	
30 1960	5,877,000	6,092,000	6,642,000	6,493,000	4,809,000	1,684,000	12,487,000	525
31		5,122,000	5,932,000	3,725,000	2,207,000	6,420,000	800	
32		4,172,000	4,785,000	3,219,000	1,566,000	8,055,000	972	
33		5,500,000	6,723,000	3,976,000	2,747,000	8,462,000	747	
34		5,872,000	6,521,000	4,612,000	1,908,000	9,203,000	551	
35	7,305,000	6,057,000	8,213,000	8,131,000	5,794,000	2,337,000	11,523,000	989
36		5,716,000	6,905,000	3,831,000	3,074,000	11,242,000	659	
37		7,145,000	7,850,000	4,981,000	2,869,000	12,713,000	449	
38		10,369,000	11,129,000	6,539,000	4,590,000	13,774,000	584	
39		8,394,000	9,514,000	6,616,000	2,898,000	10,946,000	374	
40 1970	8,820,000	9,206,000	9,871,000	10,449,000	7,414,000	3,035,000	11,365,000	383
41		10,113,000	11,291,000	8,137,000	3,154,000	12,897,000	391	
42		12,746,000	14,258,000	10,254,000	4,004,000	15,188,000	459	
43		13,288,000	15,076,000	8,852,000	6,224,000	15,449,000	743	
44		11,307,000	12,435,000	7,870,000	4,565,000	13,699,000	832	
45 1975	10,415,000	9,607,000	11,609,000	10,805,000	6,933,000	3,872,000	11,614,000	570
50 1980	12,084,000		13,422,000					
55 1985	13,824,000		15,304,000					
60 1990	15,630,000		17,252,000					
65 1995	17,490,000		19,263,000					

