

SONAR & WELL TESTING SERVICES, INC.
SONAR CALIPER SURVEY

TREATMENT NO:

JOB NO: 3092

WELL DATA

T.D. SONAR:	497 ft.	T.D. OPERATOR:	500 ft.
CASING SIZE:	5 1/2 in.	CASING DEPTH:	452 ft.
INTERMEDIATE SIZE:		INTER. DEPTH:	
TUBING SIZE:	2 7/8 in.	TUBING DEPTH:	out

I & W, Inc. .
Eugenie No. 1
Carlsbad, N.M.
October 19, 1996

GENERAL COMMENTS:

Zero at 5 1/2 in. casing flange.
No depth corrections.

MAILING ADDRESS:

P.O. Box 939
Lovington, N.M. 88260

Attn: George Parchman

CUSTOMER REP:

George Parchman

SONAR ENGINEER:

Bill Schnitger

SONAR & WELL TESTING SERVICES
SONAR CALIPER SURVEY

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I & W, Inc.
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VOLUME CALCULATIONS

	DEPTH	INCR CU FT	TOTAL CU FT	INCR BBLs	BBLs
ABOVE	452	54,064.	54,064.	9,629.	9,629.
	454	25,738.	79,802.	4,584.	14,213.
	456	20,976.	100,779.	3,736.	17,949.
	458	16,519.	117,297.	2,942.	20,892.
	460	13,125.	130,422.	2,338.	23,229.
	462	10,355.	140,777.	1,844.	25,074.
	464	8,270.	149,047.	1,473.	26,546.
	466	6,968.	156,015.	1,241.	27,787.
	468	5,628.	161,643.	1,002.	28,790.
	470	4,247.	165,890.	756.	29,546.
	472	3,092.	168,982.	551.	30,097.
	474	2,126.	171,108.	379.	30,476.
	476	1,405.	172,513.	250.	30,726.
	478	678.	173,190.	121.	30,846.
	480	139.	173,329.	25.	30,871.
	482	10.	173,339.	2.	30,873.
	484	28.	173,368.	5.	30,878.
	486	33.	173,400.	6.	30,884.
	488	8.	173,408.	1.	30,885.
	490	18.	173,426.	3.	30,888.
	492	29.	173,455.	5.	30,894.
	494	20.	173,475.	4.	30,897.

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SONAR CALIPER SURVEY

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I & W, Inc.
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VOLUME CALCULATIONS

DEPTH	INCR CU FT	TOTAL CU FT	INCR BBLs	BBLs
496	10.	173,485.	2.	30,899.
497	3.	173,487.	0.	30,899.

SONAR & WELL TESTING SERVICES
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RADII IN FEET

DEPTH	ANGLE	N	S	E	W	NE	SW	SE	NW
452	90	63.1	65.1	66.4	70.5	65.5	73.1	65.4	70.4
454	90	63.4	57.5	57.3	62.3	61.2	64.7	61.8	63.9
456	90	48.2	56.6	46.8	63.5	47.2	65.6	51.8	52.9
458	90	39.4	50.3	46.2	46.4	41.6	60.9	46.4	44.7
460	90	36.4	46.3	45.1	42.1	39.0	58.7	45.4	40.6
462	90	32.9	44.8	42.5	38.1	33.9	34.0	43.5	35.9
464	90	26.5	43.9	39.9	36.3	28.6	32.6	38.3	27.3
466	90	24.1	40.7	36.9	33.1	28.2	28.1	36.4	25.4
468	90	21.8	33.4	33.7	30.2	26.3	25.8	29.1	22.6
470	90	19.2	31.6	30.0	24.0	20.4	22.7	24.3	21.6
472	90	15.9	21.5	26.0	21.0	16.9	20.0	19.9	17.5
474	90	14.6	18.9	21.0	16.0	16.0	14.5	15.5	14.6
476	90	10.0	10.6	17.0	14.0	10.9	13.5	16.0	12.0
478	90	4.7	5.4	5.5	10.2	4.0	10.4	2.1	8.2
480	90	1.8	1.5	2.1	1.1	1.6	1.4	1.9	1.2
482	90	0.9	0.7	0.8	0.8	0.9	0.8	0.9	0.8
484	90	3.6	3.5	2.7	0.8	3.1	3.0	3.3	3.7
486	90	0.8	2.3	0.8	0.8	0.9	0.7	0.8	0.8
488	90	1.0	1.1	0.8	1.2	0.8	1.2	1.1	1.2
490	90	1.8	2.3	1.0	2.0	0.8	4.2	2.9	2.3
492	90	2.2	1.9	0.6	2.8	0.9	2.8	0.8	3.1
494	90	1.8	0.7	1.6	0.9	1.7	1.4	0.8	2.3

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SONAR CALIPER SURVEY

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I & W, Inc.
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		RADII IN FEET							
DEPTH	ANGLE	N	S	E	W	NE	SW	SE	NW
496	90	1.3	0.8	1.0	1.4	1.2	0.8	1.1	0.8
497	90	0.9	0.8	0.7	0.7	0.7	0.7	0.8	0.8

SONAR & WELL TESTING SERVICES
SONAR CALIPER SURVEY
UPS

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RADII IN FEET

DEPTH	ANGLE	N	S	E	W	NE	SW	SE	NW
462	1	16.8	16.7	16.6	17.0	16.6	17.1	16.6	16.8
462	5	16.5	16.5	16.5	16.5	16.6	16.5	16.6	16.2
462	10	16.5	16.4	16.4	16.4	16.6	16.3	16.4	16.3
462	15	16.4	16.5	16.2	16.2	16.6	16.2	16.4	16.0
462	20	16.6	17.0	16.8	16.7	16.9	16.7	16.8	16.8
462	25	17.6	17.4	17.0	17.4	17.4	17.1	17.3	17.6
462	30	18.2	18.0	17.4	17.5	17.8	17.4	17.5	18.1
462	35	19.5	19.0	18.1	17.9	18.9	18.4	18.5	18.5
462	40	20.1	19.6	19.1	18.5	19.9	19.1	19.6	19.1
462	45	21.7	21.1	21.3	19.8	21.8	19.9	21.1	20.9
462	50	23.6	22.6	22.5	21.4	23.1	21.8	23.0	22.1
462	55	25.3	24.0	23.5	22.8	26.9	24.3	24.2	23.8
462	60	28.4	27.7	27.6	27.9	29.1	27.4	29.1	29.8
462	65	36.2	34.7	34.0	36.3	35.2	34.2	35.0	34.4
462	70	44.8	40.9	40.6	41.1	41.3	38.2	45.3	44.8
462	75	58.6	50.0	57.7	57.0	56.5	51.7	53.6	58.1
462	80	68.0	67.8	63.4	69.0	63.9	67.3	61.9	65.1
462	85	45.7	52.7	45.5	65.8	46.4	64.7	49.0	46.2

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SONAR CALIPER SURVEY
DOWNS

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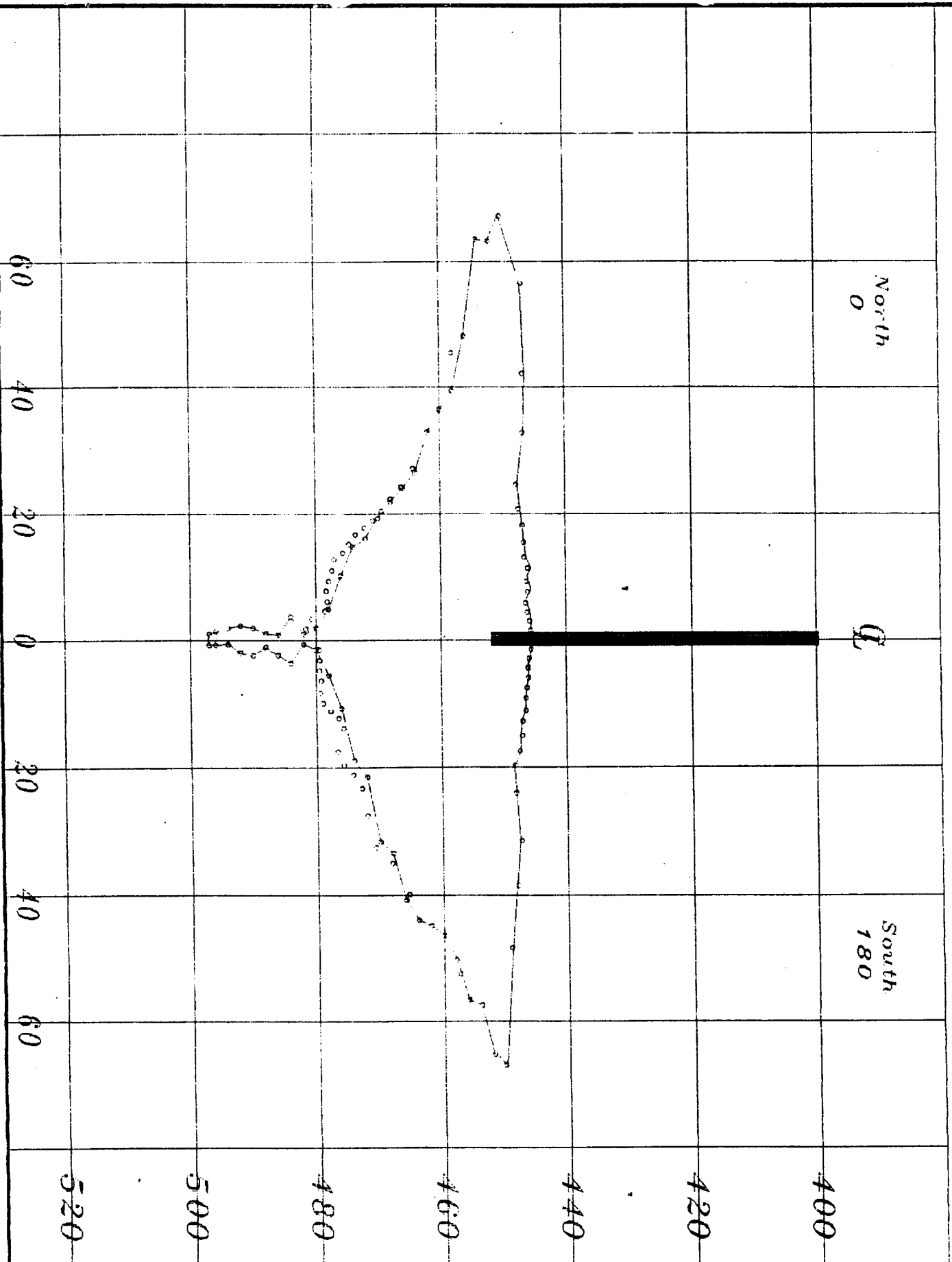
RADII IN FEET

DEPTH	ANGLE	N	S	E	W	NE	SW	SE	NW
462	95	27.2	40.0	37.7	36.0	31.9	29.5	36.4	28.1
462	100	24.6	35.5	35.4	33.7	30.9	27.9	34.6	26.0
462	105	23.1	33.6	31.9	29.0	27.9	25.3	26.8	24.5
462	110	21.7	29.3	29.5	26.5	25.3	24.2	25.1	22.8
462	115	20.8	25.7	27.5	23.5	22.7	23.9	24.2	23.1
462	120	20.4	24.4	26.8	22.4	22.0	22.9	22.8	22.2
462	125	20.2	23.9	24.7	21.7	21.5	21.2	21.8	21.5
462	130	19.7	22.8	23.7	21.8	19.6	19.5	22.1	21.0
462	135	19.3	19.4	21.9	21.2	19.2	19.6	21.8	20.1
462	140	19.6	18.9	20.8	21.4	18.9	20.0	21.2	19.8
462	145	18.8	19.2	19.2	21.3	18.8	20.8	20.0	18.5
462	150	18.4	19.5	18.8	21.8	18.7	20.0	19.3	17.7
462	155	18.0	19.1	18.4	21.4	17.8	21.0	18.4	17.6
462	160	17.2	18.3	17.6	20.8	17.8	20.4	18.2	17.2
462	165	17.1	18.1	17.5	20.9	18.3	18.9	17.4	17.4
462	170	19.0	17.7	17.3	18.2	18.2	17.7	17.1	19.0
462	175	19.7	17.6	17.3	17.9	18.6	17.9	17.3	18.2

I & W, Inc.
Eugenie No. 1

VERTICAL CROSS SECTION

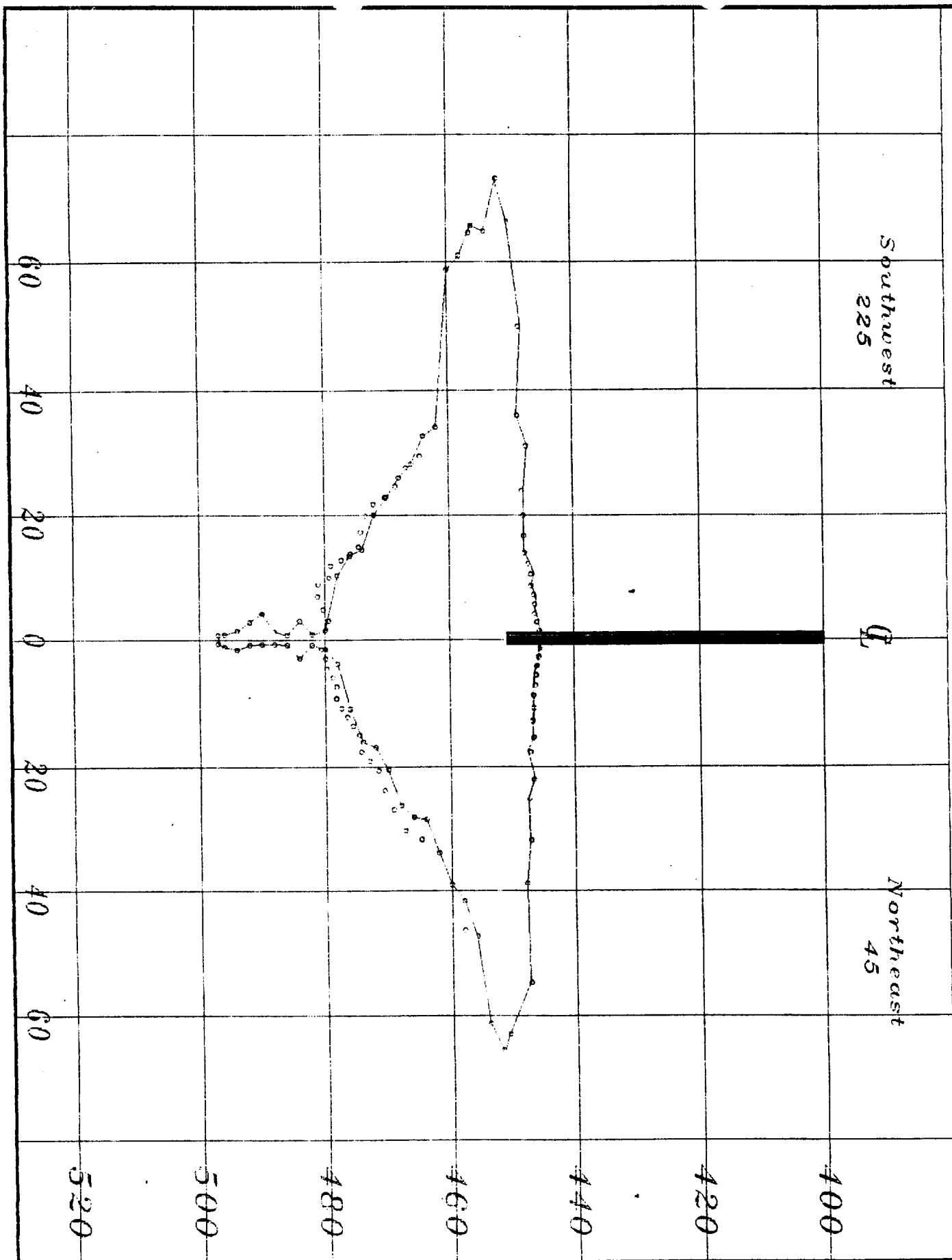
Carlsbad, N.M.
October 19, 1996
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I & W, Inc.
Eugenie No. 1

VERTICAL CROSS SECTION

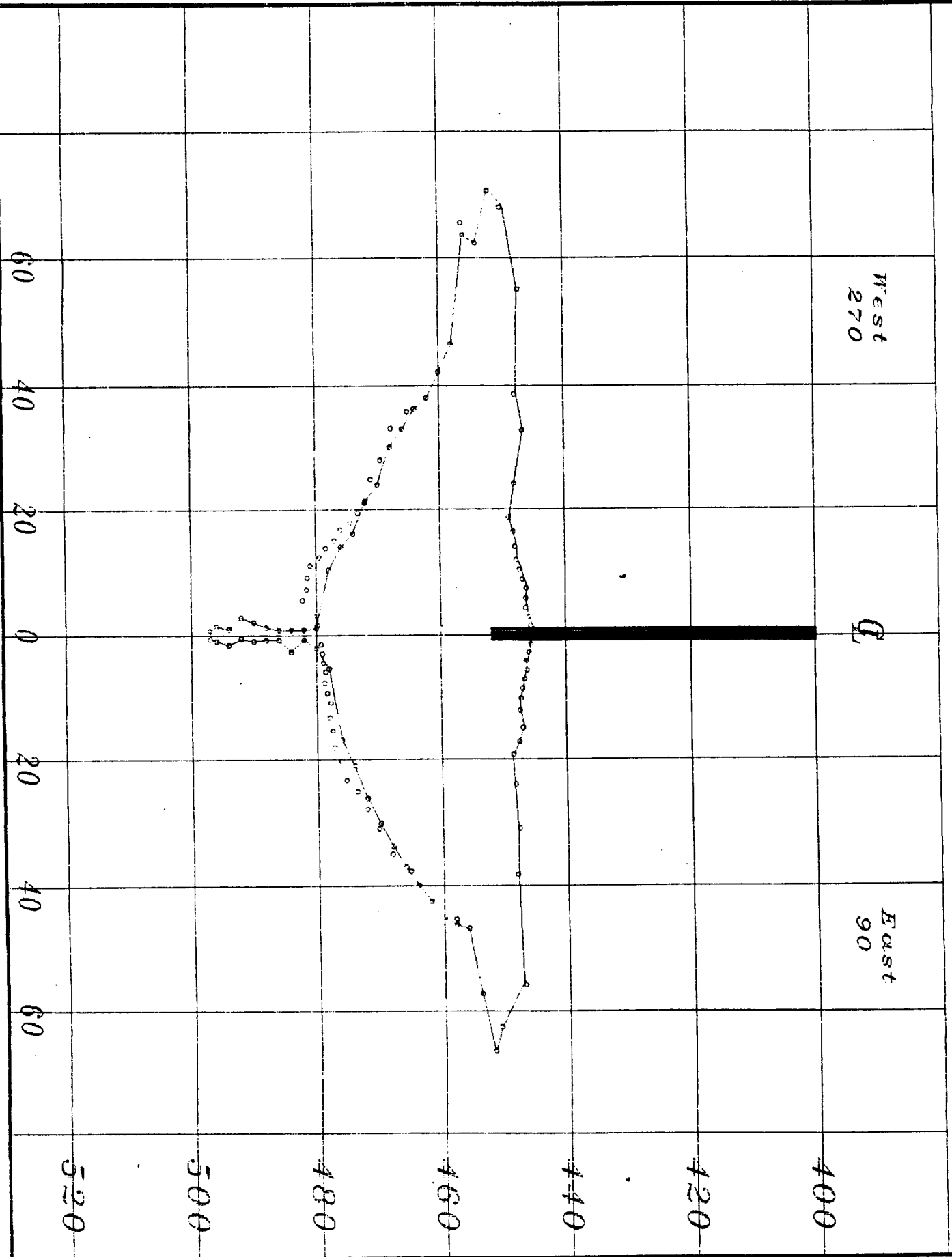
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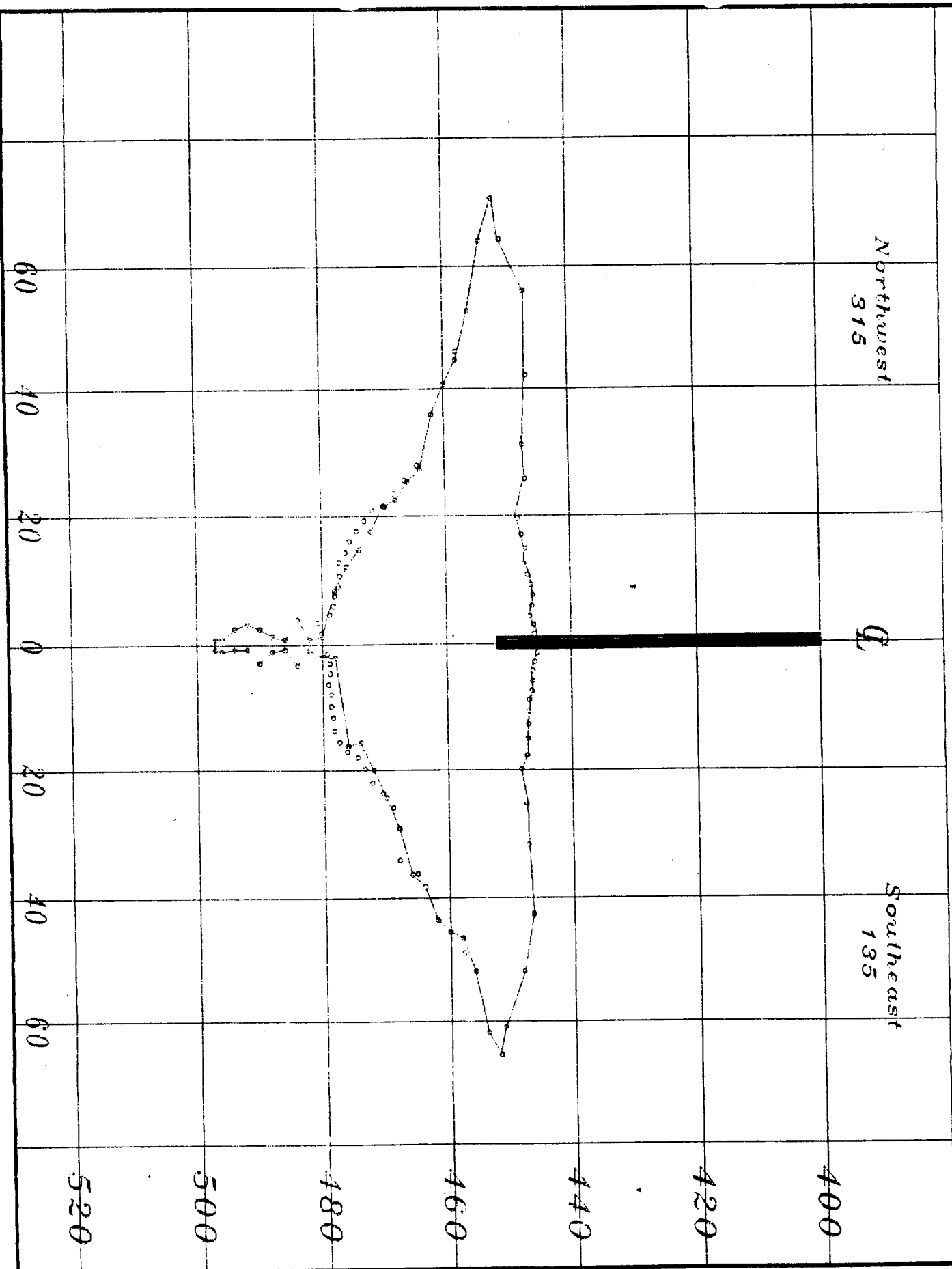
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I & W, Inc.
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VERTICAL CROSS SECTION

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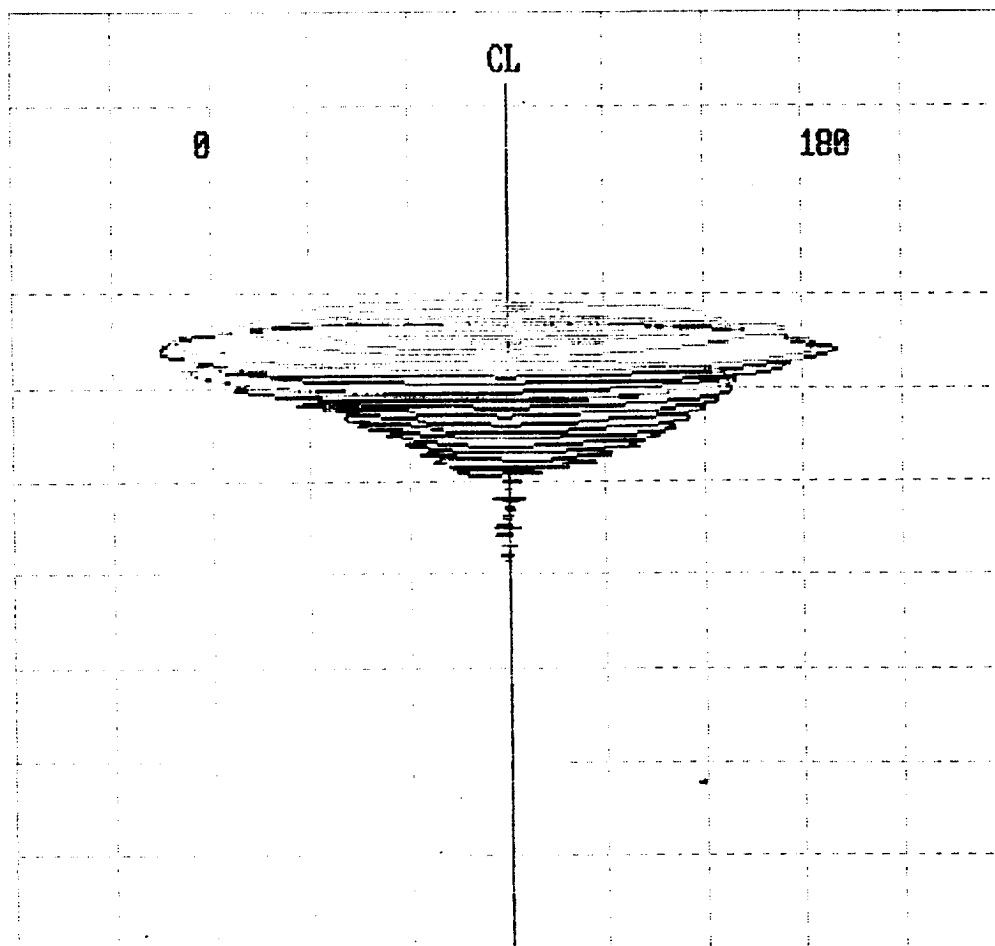


I & W, Inc.
Eugenie No.1

VERT = 20
HORZ = 20

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380 Ft



I & W, Inc.
Eugenie No.1

VERT = 20
HORZ = 20

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380 Ft

