

BRIAN SANDOVAL
Governor

STATE OF NEVADA

AMY ROUKIE, MBA
Administrator, DPBH

RICHARD WHITLEY, MS
Director, DHHS



JOHN DIMURO, D.O., MBA
Chief Medical Officer

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH
Bureau of Preparedness, Assurance, Inspections and Statistics**

Radiation Control Program
675 Fairview Drive, Suite 218
Carson City, Nevada 89701
Telephone: (775) 687-7550 · Fax: (775) 687-7552

January 2, 2018

MEMORANDUM

To: Beatty File

From: John Follette, Radiation Control Specialist *JF*

Subject: Beatty Inspection Summary November 15, 2017

An inspection of the Beatty Low-Level Waste landfill (closed) was conducted on November 15, 2017 by John Follette. The radiological survey was performed by driving the BNC Model RD-120 GN (SN 120009) backpack around the site boundary access road and in a grid pattern across the cap to detect radiological anomalies. None were detected. Dose rate readings on the cap remain about twice background*, as read on the access road. Pictures of the repairs to erosion along the site boundary fence were taken on December 7, 2017 and the report revised to include the pictures on January 2, 2018.

Status of Previous Inspection Items:

The markers for the trenches are not in place on the cap. They are still stacked off to the side of the cap, inside of the fenced area.

Our lock to the site needs to be replaced or serviced. The key continues to stick inside the lock and is difficult to remove.

- Lubricant was sprayed into the lock. The key turns easily but it was still difficult to remove. I will continue to use lubricant on the lock until the key can be easily removed. This item will be removed from the report because there was some improvement.

Along the site boundary fence, there is erosion due to runoff from the cap. Erosion along the site boundary fence indicates that water is running off the cap efficiently.

- All of the erosions along the site boundary fence have been repaired.
- In addition, there was a 16" gap between the site gate and the ground. Additional soil was added to narrow this gap to a few inches.

Site Observations:

Radiological Postings Adequate: All of the postings along the fence are adequate. However, we may want to add additional radiological postings to the new gate.

Site Boundary Fence Undamaged and Gate(s) Locked: Yes. As part of the erosion repairs around the site boundary, the soil was build-up under the gate to reduce the gap between the gate and the ground. See the enclosed picture.

Site Boundary, Access Road, and Buffer Areas Maintained: Yes

Rain Since Last Inspection:

August - 0.76", September- 0.2", October- 0.0", and November- 0.0 inches as of November 15, 2017.

Erosion, Fissures, Water Pooling, or Subsidence Concerns:

No erosion, fissures, water pooling, or subsidence concerns were identified on the cap.

All of the erosions along the site boundary fence have been repaired.

Radiation Survey Results:

Instrument: BNC Model RD-120 GN (SN 120009) Calibration date: Daily by self-calibration

Background Location: Between US 95 and the site, at the south-east side of the site entrance gate.

Background measurement: 19-22 urem/hr

Value used for twice background: 44 urem/hr

Site Boundary Highest Measurement: Within twice background*

Cap Highest Measurement: Within twice background*

*If sustained radiation measurements are above twice background, record the measurement and identify the location. Otherwise, indicate all measurements were within twice background.

For any reading above 0.5 mrem/hr contact a supervisor or the State of Nevada Radiation Control Program Manager. (Site Stabilization and Closure Plan Closure Plan for Low-Level Radioactive Waste Management Facility US Ecology, Inc. Beatty, Nevada, submittal date December 1988.)

Contacts:	Karen Beckley:	775-687-7540, kbeckley@health.nv.gov
	Adrian Howe:	775-687-7531, ahowe@health.nv.gov
	Glen Gimenez:	775-687-7542, glgimenez@health.nv.gov
	John Follette:	702-486-3017, jfollette@health.nv.gov
	Brandi Peretz:	702-486-5286, bperetz@health.nv.gov
	Haley Brown:	702-486-3015, habrown@health.nv.gov



Station Summary

Beatty 11SSE US Ecology Nevada
 Monthly Summary for **August, 2017**

Day of Month	Day of Year	Total Solar Rad. ly.	Wind Ave . mph	V. Dir. Deg	Max . mph	Air Temperature Mean	Max	Min	Humidity Mean	Max	Min	Dew Point	Wet Bulb	Total Precip . inches
						Deg. Fahrenheit			Percent			Deg. Fahrenheit		
1	213	583	8.5	166	33.4	94	109	76	17	35	11	42	62	0.00
2	214	567	9.0	146	49.7	90	108	69	36	93	16	57	67	0.60
3	215	617	7.6	200	24.0	86	100	75	44	76	23	60	68	0.02
4	216	478	9.1	174	42.1	83	99	74	46	68	24	59	66	0.00
5	217	628	6.7	179	34.8	88	99	76	35	53	22	55	66	0.00
6	218	603	7.4	215	33.2	87	100	74	36	64	20	54	65	0.04
7	219	662	7.1	189	29.2	89	101	77	25	51	10	46	62	0.00
8	220	666	5.0	182	20.6	88	102	69	19	38	11	39	59	0.00
9	221	674	6.8	229	25.8	89	103	70	16	30	8	35	58	0.00
10	222	678	6.6	208	25.1	89	104	69	13	23	6	30	56	0.00
11	223	659	8.1	195	25.5	90	103	70	19	32	12	42	61	0.00
12	224	667	8.0	197	28.7	91	105	73	18	42	3	33	59	0.00
13	225				25.2		100	69		20	5			
14	226													
15	227				16.3		91	81		23	15			
16	228	640	6.0	160	18.5	86	101	67	19	34	10	38	58	0.00
17	229	641	5.6	248	20.3	87	102	69	17	27	11	36	57	0.00
18	230	644	6.1	235	21.8	90	103	71	15	27	10	35	58	0.00
19	231	645	7.0	168	24.6	88	102	70	14	23	9	32	56	0.00
20	232	633	7.7	175	32.1	87	100	69	16	25	10	35	57	0.00
21	233	478	11.0	117	28.1	84	92	75	26	49	14	44	60	0.00
22	234	628	5.6	220	20.1	85	99	68	24	43	13	42	59	0.00
23	235	646	7.2	197	29.4	87	101	69	20	29	12	40	59	0.10
24	236	620	7.7	181	23.5	86	100	71	24	35	14	44	60	0.00
25	237	586	6.2	207	17.6	88	102	70	24	39	14	45	61	0.00
26	238	618	5.6	274	24.4	90	107	73	18	32	9	39	59	0.00
27	239	632	5.2	267	21.3	93	109	71	13	22	8	32	58	0.00
28	240	592	6.6	225	27.5	94	109	77	13	21	8	35	59	0.00
29	241	607	7.9	200	30.7	93	109	76	17	25	8	41	61	0.00

<u>30</u>	242	440	12.9	337	51.5	88	103	76	26	47	14	48	62	0.00
<u>31</u>	243	565	8.1	264	32.1	86	101	68	32	61	15	49	62	0.00

MONTHLY STATISTICS

	Total	Wind		Air Temperature			Humidity			Dew	Wet	Total	
	Solar	Ave	V.	Max	Mea	Max	Min	Mea	Ma	Mi	Point	Bulb	Precip
	Rad.	.	Dir.	.	n	.	.	n	x	n	.	.	.
	ly.	mph	Deg	mph	Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total	17099												0.76
Ave.	611	7.4	200	27.9	88.3	102.	72.	23	40	12	42	61	
Max.	678	12.9		51.5	94	109	81	46	93	24	60	68	0.60
Min.	440	5.0		16.3	83	91	67	13	20	3	30	56	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

$^{\circ} 1 \text{ ly} = 1 \text{ cal/cm}^2 = 4.1855 \text{ J/cm}^2 = 3.6855 \text{ BTU/ft}^2 = .01163 \text{ KW-hr/m}^2$



Station Summary

Beatty 11SSE US Ecology Nevada
 Monthly Summary for **September, 2017**

Day of Month	Day of Year	Total Solar Rad. ly.	Wind Ave. mph	V. Dir. Deg	Max mph	Air Temperature Deg. Fahrenheit			Humidity Percent			Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip inches
						Mean	Max	Min	Mea n	Ma x	Mi n			
1	244	568	6.7	305	21.6	89	104	76	22	42	12	44	61	0.00
2	245	596	6.1	216	29.2	92	108	74	16	29	6	36	59	0.00
3	246	503	8.4	272	31.3	90	104	78	26	37	15	49	64	0.00
4	247	399	4.9	269	16.0	88	103	73	25	39	15	47	62	0.00
5	248	445	6.1	277	31.6	88	104	73	23	35	11	45	61	0.00
6	249	472	6.5	175	28.4	88	101	76	23	33	14	45	61	0.00
7	250	541	9.9	195	35.0	86	100	70	22	36	10	40	59	0.00
8	251	410	12.5	133	37.2	80	98	69	37	70	12	48	60	0.00
9	252	529	6.2	141	16.1	74	86	64	55	88	30	56	62	0.11
10	253	559	5.2	183	17.5	80	96	64	40	69	20	51	61	0.00
11	254	380	6.0	269	31.8	85	100	71	31	44	18	50	62	0.00
12	255	532	7.3	197	51.0	83	100	70	36	68	12	51	62	0.09
13	256	520	6.3	167	21.2	82	96	68	36	72	18	50	61	0.00
14	257	549	9.4	154	21.9	77	89	64	28	53	18	41	56	0.00
15	258	530	11.6	333	28.7	77	88	65	24	51	13	36	54	0.00
16	259	547	8.1	274	29.4	76	90	64	17	26	11	28	51	0.00
17	260	527	5.2	229	17.8	77	91	60	21	32	14	34	53	0.00
18	261	532	10.2	177	32.4	78	92	60	21	38	9	33	53	0.00
19	262	445	10.1	124	24.4	75	86	66	24	36	15	36	53	0.00
20	263				26.1		87	61		38	18			
21	264	451	17.1	234	38.8	66	77	53	35	47	20	37	50	0.00
22	265	533	16.1	320	31.8	60	69	48	30	52	15	26	44	0.00
23	266	510	17.0	325	30.0	61	69	54	25	39	12	23	43	0.00
24	267	534	11.8	318	25.3	61	72	48	21	36	11	19	42	0.00
25	268	522	11.5	349	34.8	66	77	50	20	34	13	23	45	0.00
26	269	484	14.5	346	31.0	69	79	60	20	30	13	25	47	0.00
27	270	517	7.8	312	25.4	70	84	55	16	27	9	20	47	0.00
28	271	513	4.3	301	15.0	71	88	55	15	22	9	21	47	0.00
29	272	506	5.0	238	17.4	73	90	54	15	25	7	20	48	0.00

30 273 501 7.0 268 24.0 74 90 57 15 23 9 23 49 0.00
 MONTHLY STATISTICS

	Total	Wind			Air Temperature			Humidity			Dew	Wet	Total
	Solar	Ave	V.	Max	Mean	Max	Min	Mea	Ma	Mi	Point	Bulb	Precip
	Rad.	.	Dir.	.				n	x	n			.
	ly.	mph	Deg	mph	Deg.			Percent			Deg.		inches
					Fahrenheit						Fahrenheit		
Total	14653												0.20
Ave.	505	8.9	284	27.4	77.2	90.6	63.3	25	42	14	36	54	
Max.	596	17.1		51.0	92	108	78	55	88	30	56	64	0.11
Min.	380	4.3		15.0	60	69	48	15	22	6	19	42	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

° 1 ly = 1 cal/cm² = 4.1855 J/cm² = 3.6855 BTU/ft² = .01163 KW-hr/m²



Station Summary

Beatty 11SSE US Ecology Nevada
 Monthly Summary for **October, 2017**

Day of Month	Day of Year	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip inches	
			Ave mph	V. Dir. Deg	Max mph	Mean	Max	Min	Mea n	Ma x				Mi n
1	274	488	12.8	312	41.3	74	87	61	16	26	10	24	49	0.00
2	275	503	11.6	311	33.4	62	74	49	16	22	9	14	42	0.00
3	276	489	13.6	256	36.2	63	80	45	19	36	11	20	43	0.00
4	277	494	9.4	303	30.8	63	80	52	24	42	9	24	45	0.00
5	278	491	7.3	289	24.6	66	83	47	15	27	7	15	44	0.00
6	279	489	12.8	308	29.6	70	88	57	14	22	7	18	46	0.00
7	280	480	4.6	256	14.9	70	90	52	14	23	7	16	45	0.00
8	281	474	14.5	325	52.5	69	90	52	14	21	7	17	45	0.00
9	282	481	12.1	343	32.4	60	73	49	15	25	6	10	40	0.00
10	283	466	5.1	272	17.5	60	77	42	13	21	7	7	39	0.00
11	284	457	6.8	241	22.3	65	82	46	13	20	8	12	43	0.00
12	285	434	16.7	314	40.4	66	77	54	13	20	6	12	43	0.00
13	286	456	4.3	271	14.3	63	82	46	8	14	4	0	40	0.00
14	287	459	12.7	326	38.8	64	77	50	11	18	7	8	41	0.00
15	288	463	3.9	275	13.3	62	84	46	9	16	4	1	39	0.00
16	289	438	4.4	286	12.3	64	87	46	8	14	4	0	40	0.00
17	290	409	4.9	266	12.3	66	86	47	8	13	4	0	41	0.00
18	291	218	3.8	167	13.6	71	84	56	8	10	5	5	44	0.00
19	292	416	6.9	173	19.1	71	86	55	15	23	9	20	47	0.00
20	293	365	15.0	43	31.0	65	74	56	24	44	9	25	46	0.00
21	294	418	12.8	319	30.3	59	72	49	18	27	10	15	41	0.00
22	295	409	5.3	306	21.1	67	87	49	19	33	9	22	45	0.00
23	296	407	10.7	351	30.0	76	90	58	15	25	9	24	50	0.00
24	297	410	13.4	327	30.7	75	91	61	19	30	8	28	51	0.00
25	298	413	4.2	262	12.6	70	89	53	14	25	7	17	46	0.00
26	299	407	9.4	316	23.8	71	88	53	13	21	6	15	46	0.00
27	300	399	6.0	76	20.6	71	86	58	15	25	8	20	47	0.00
28	301	392	4.5	276	15.9	71	88	56	15	24	8	20	47	0.00
29	302	384	4.3	254	13.6	69	86	53	19	29	11	24	47	0.00

<u>30</u>	303	324	6.4	163	18.0	69	83	53	21	31	12	26	48	0.00
<u>31</u>	304	362	4.7	168	17.9	67	79	53	28	40	18	32	48	0.00

MONTHLY STATISTICS

	Total	Wind		Air Temperature			Humidity			Dew	Wet	Total	
	Solar Rad.	Ave .	V. Dir.	Max .	Mean	Max	Min	Mea n	Ma x	Mi n	Point	Bulb	Precip .
	ly.	mph	Deg	mph	Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total	13295												0.00
Ave.	429	8.5	302	24.7	67.1	83.2	51.7	15	25	8	16	44	
Max.	503	16.7		52.5	76	91	61	28	44	18	32	51	0.00
Min.	218	3.8		12.3	59	72	42	8	10	4	0	39	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

° 1 ly = 1 cal/cm² = 4.1855 J/cm² = 3.6855 BTU/ft² = .01163 KW-hr/m²



Station Summary

Beatty 11SSE US Ecology Nevada Monthly Summary for November, 2017

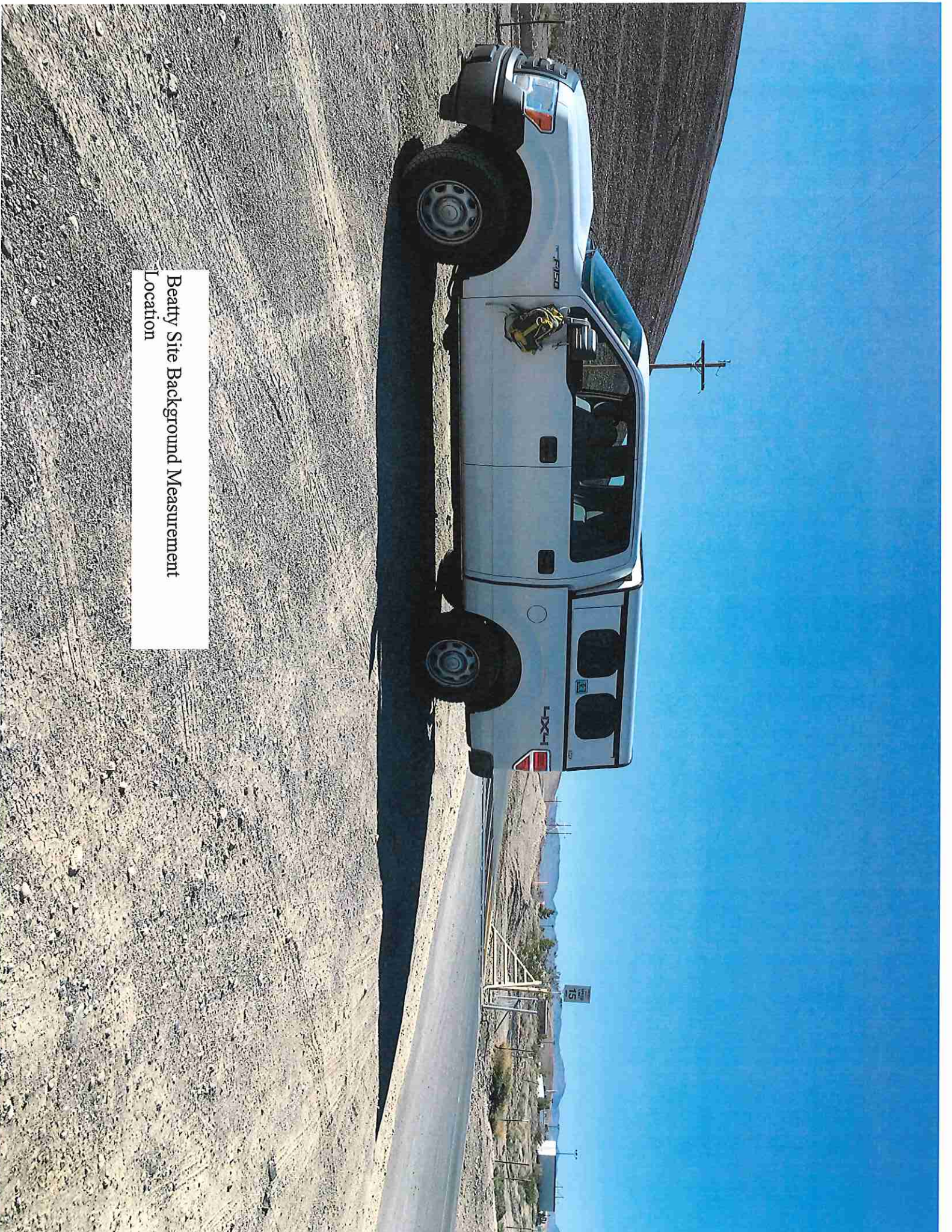
Day of Month	Day of Year	Total Solar Rad. ly.	Ave Wind mph	V. Dir. Deg	Max Wind mph	Air Temperature Deg. Fahrenheit			Humidity Percent			Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip. inches
						Mean	Max	Min	Mea n	Ma x	Mi n			
<u>1</u>	305	365	4.6	205	14.0	62	76	45	36	52	24	34	47	0.00
<u>2</u>	306	360	7.4	164	23.6	59	71	46	47	68	32	38	48	0.00
<u>3</u>	307	265	8.1	138	17.0	56	64	47	48	67	34	36	45	0.00
<u>4</u>	308	348	6.3	109	17.1	58	73	41	42	69	23	34	46	0.00
<u>5</u>	309	352	10.5	127	22.2	59	71	52	45	65	27	37	47	0.00
<u>6</u>	310	302	6.0	267	14.7	53	67	40	41	68	24	29	42	0.00
<u>7</u>	311	359	4.3	275	12.2	54	72	40	28	48	13	20	39	0.00
<u>8</u>	312	348	9.6	161	23.7	56	70	37	27	36	17	22	41	0.00
<u>9</u>	313	338	8.8	161	22.5	61	73	46	34	55	18	31	46	0.00
<u>10</u>	314	331	6.2	285	17.8	54	69	42	43	60	27	32	43	0.00
<u>11</u>	315	342	3.8	235	14.1	56	72	43	34	56	18	27	42	0.00
<u>12</u>	316	176	5.5	281	15.7	54	67	44	32	41	20	23	40	0.00
<u>13</u>	317	295	6.3	268	16.7	53	67	40	29	47	14	19	38	0.00
<u>14</u>	318	302	4.8	259	11.9	56	73	42	24	33	14	18	39	0.00
<u>15</u>	319	286	6.3	261	16.1	54	68	41	30	42	20	23	40	0.00

MONTHLY STATISTICS

	Total Solar Rad. ly.	Ave Wind mph	V. Dir. Deg	Max Wind mph	Air Temperature Deg. Fahrenheit			Humidity Percent			Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip. inches
					Mean	Max	Min	Mea n	Ma x	Mi n			
Total	4769				56.4	69.2	43.1	36	53	22	28	43	0.00
Ave.	318	6.6	190	16.8	56.4	69.2	43.1	36	53	22	28	43	
Max.	365	10.5		23.7	62	76	52	48	69	34	38	48	0.00
Min.	176	3.8		9.9	53	54	37	24	33	13	18	38	0.00

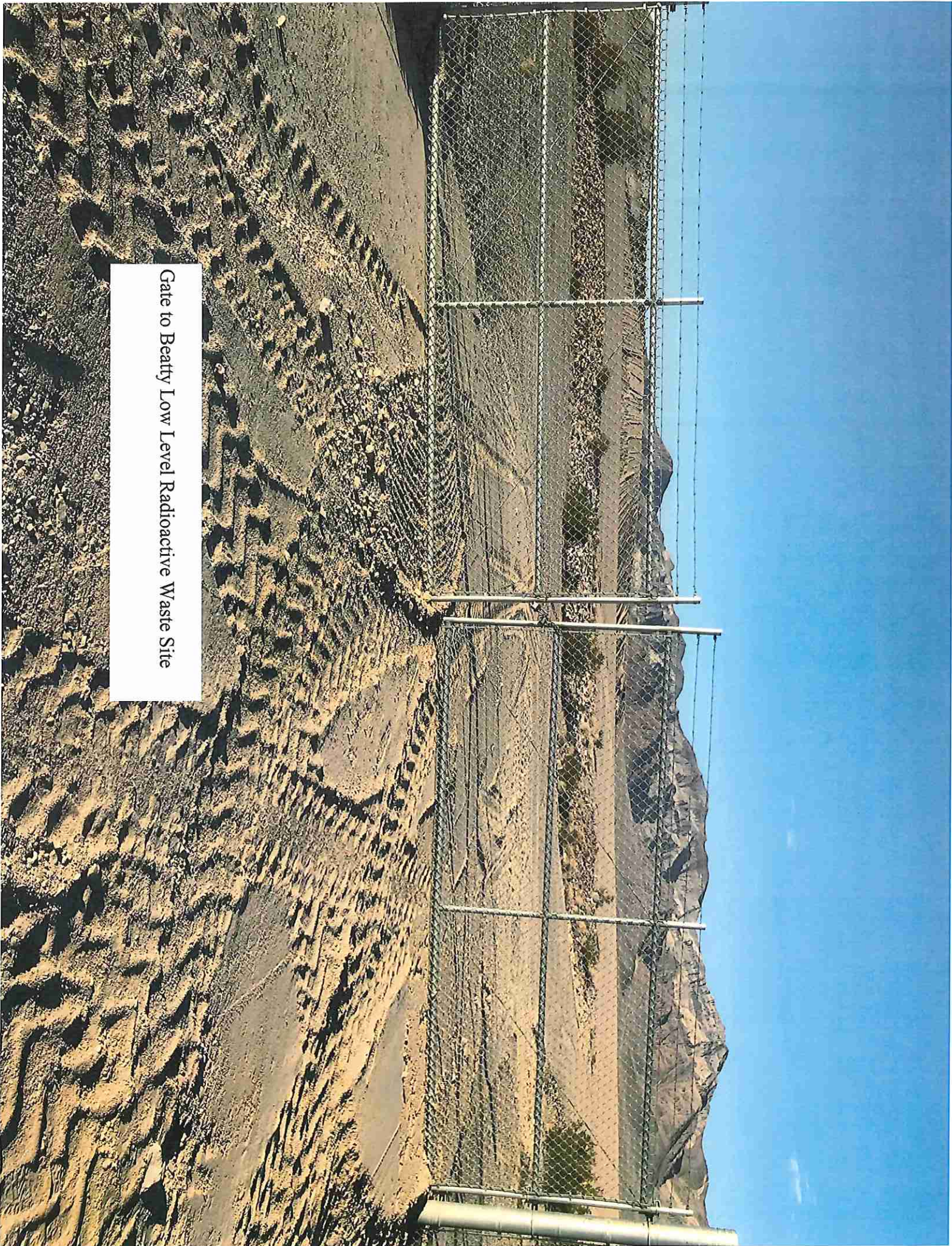
Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

$1 \text{ ly} = 1 \text{ cal/cm}^2 = 4.1855 \text{ J/cm}^2 = 3.6855 \text{ BTU/ft}^2 = .01163 \text{ KW-hr/m}^2$

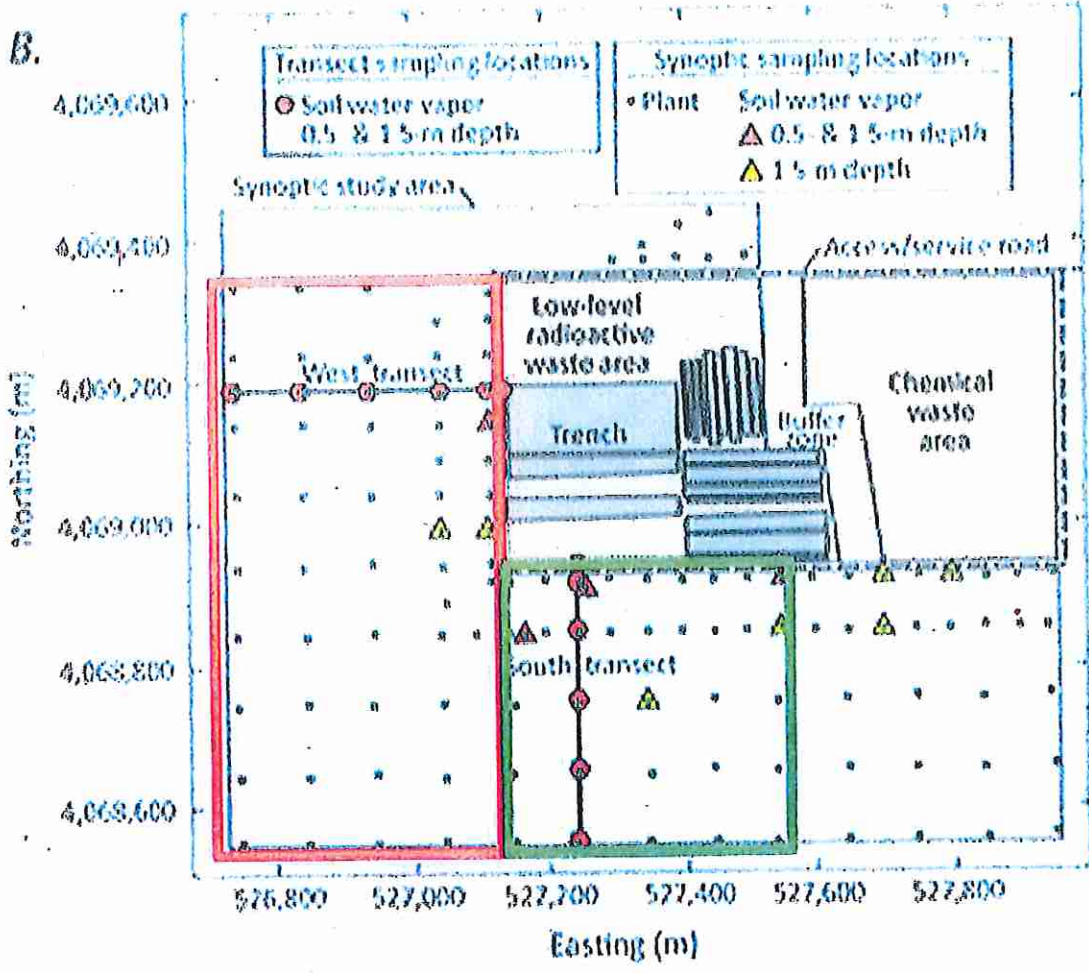


Betty Site Background Measurement
Location

Gate to Beatty Low Level Radioactive Waste Site

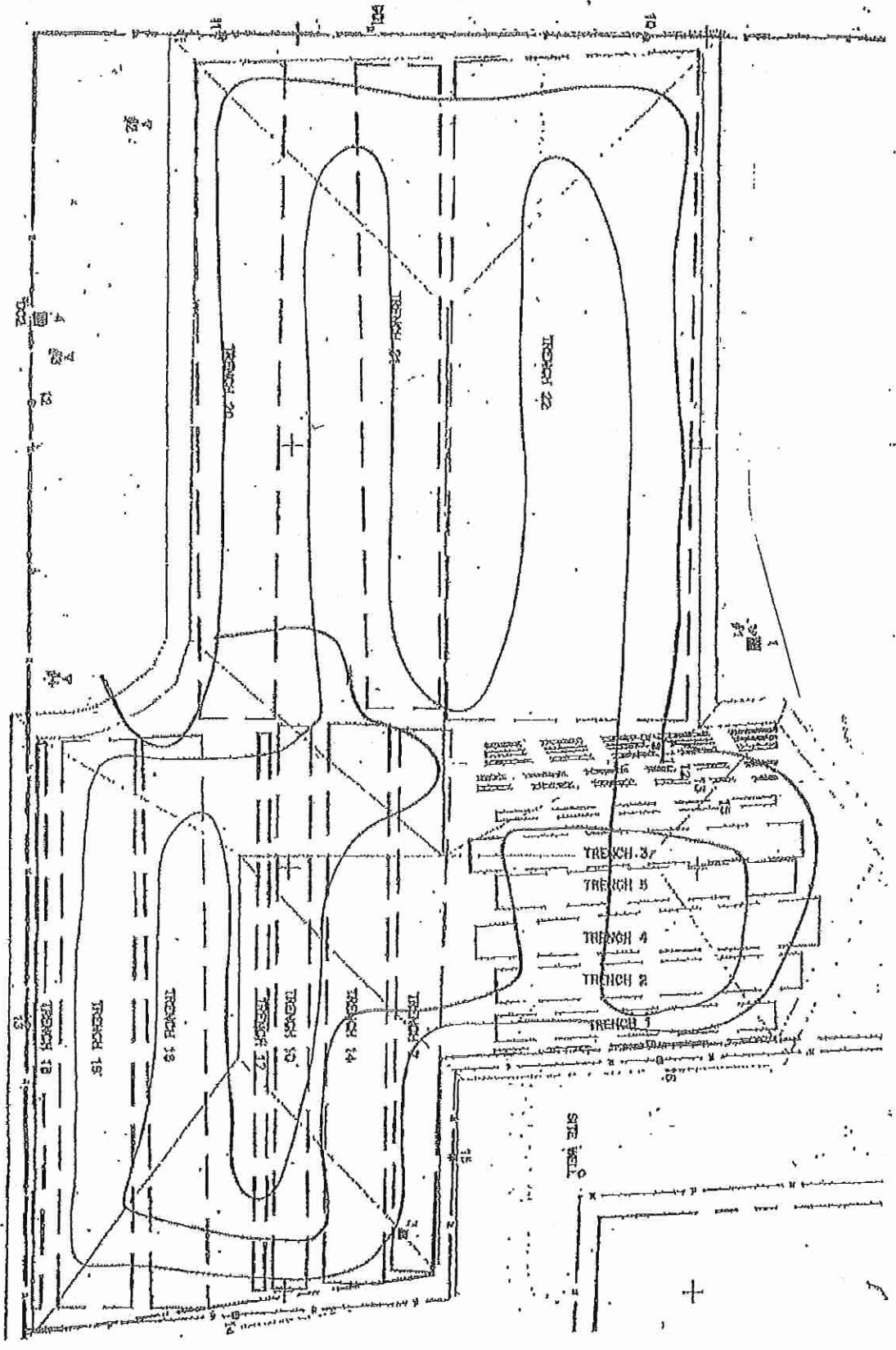


B.

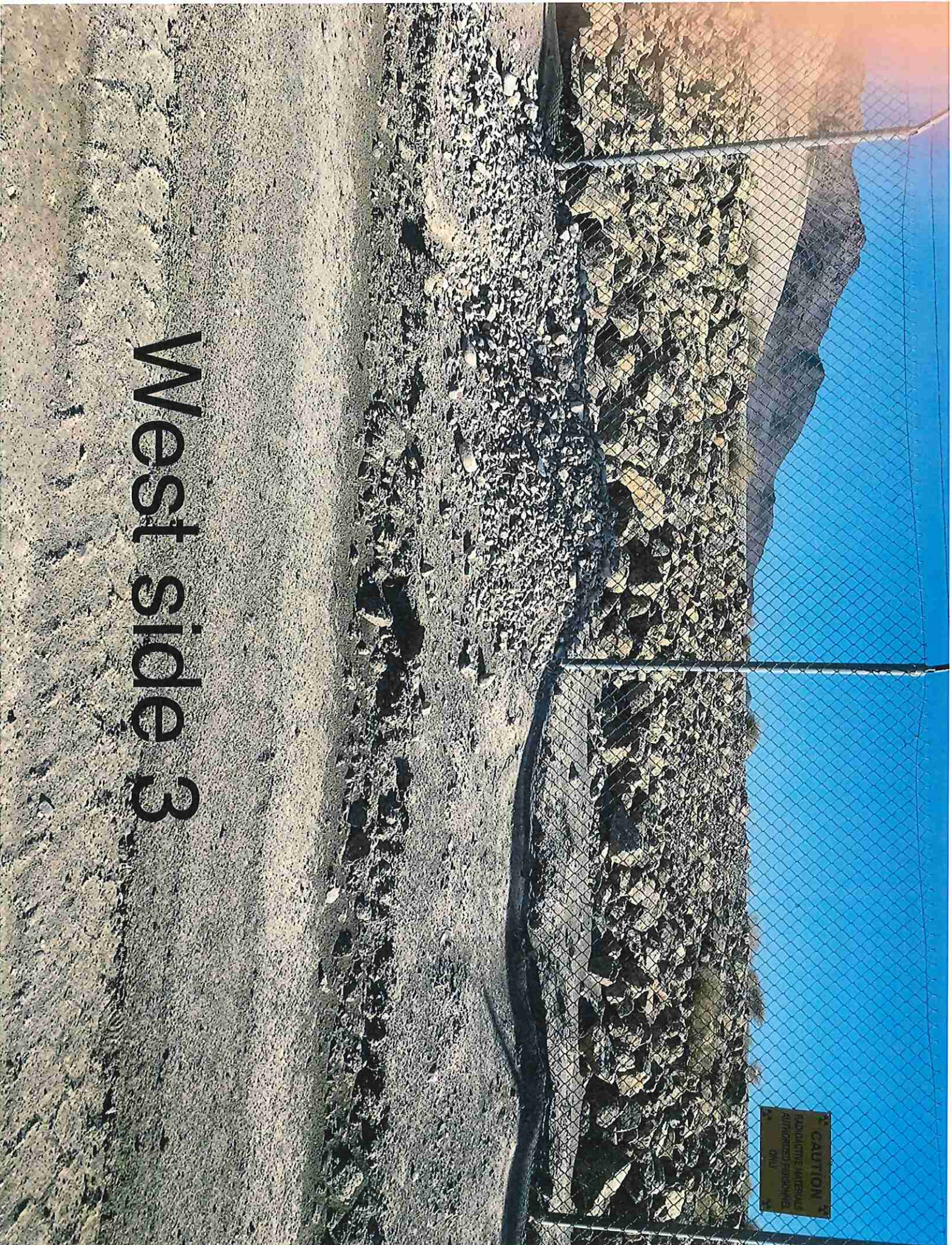


LEGEND
--- LIMITS OF COLLATERAL TRENCH

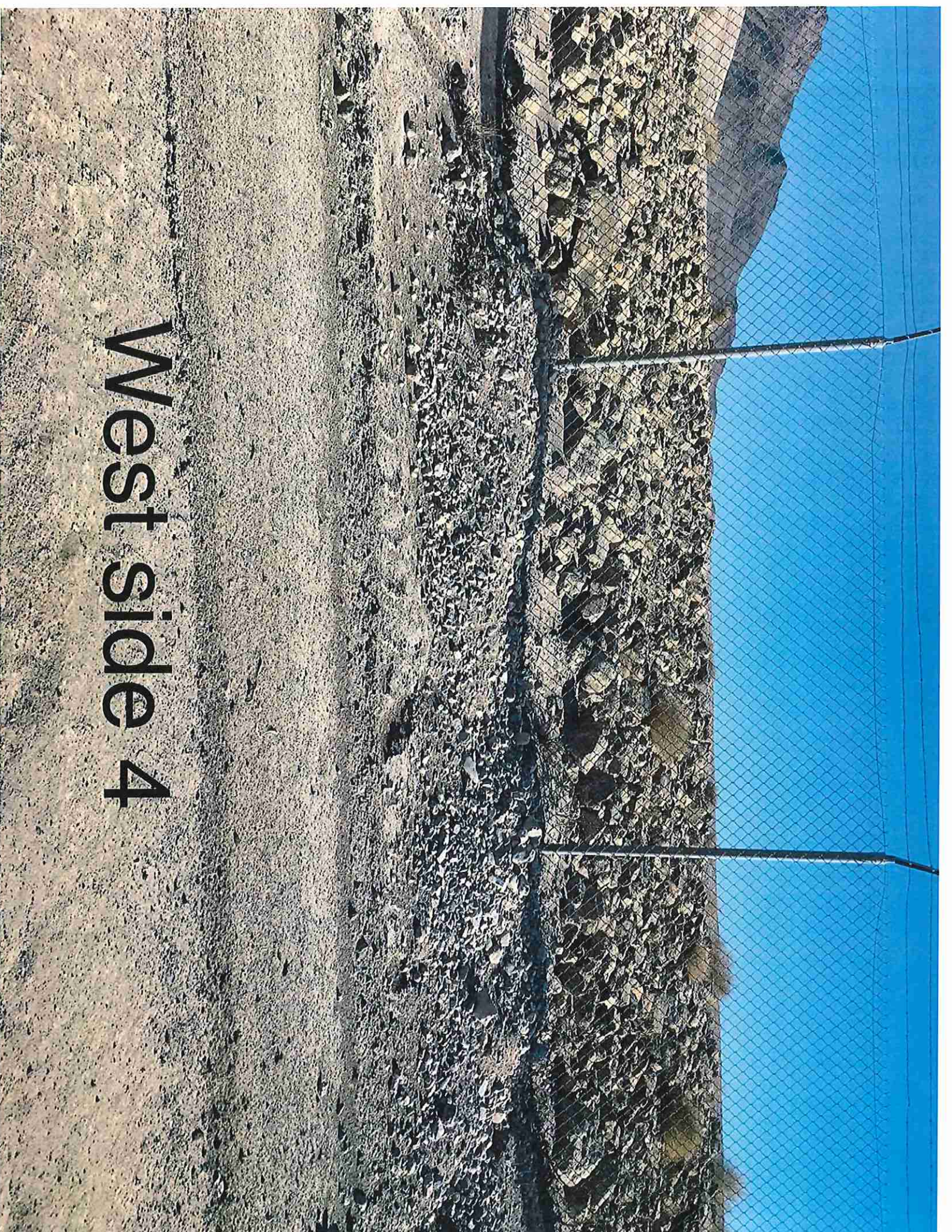
KEY



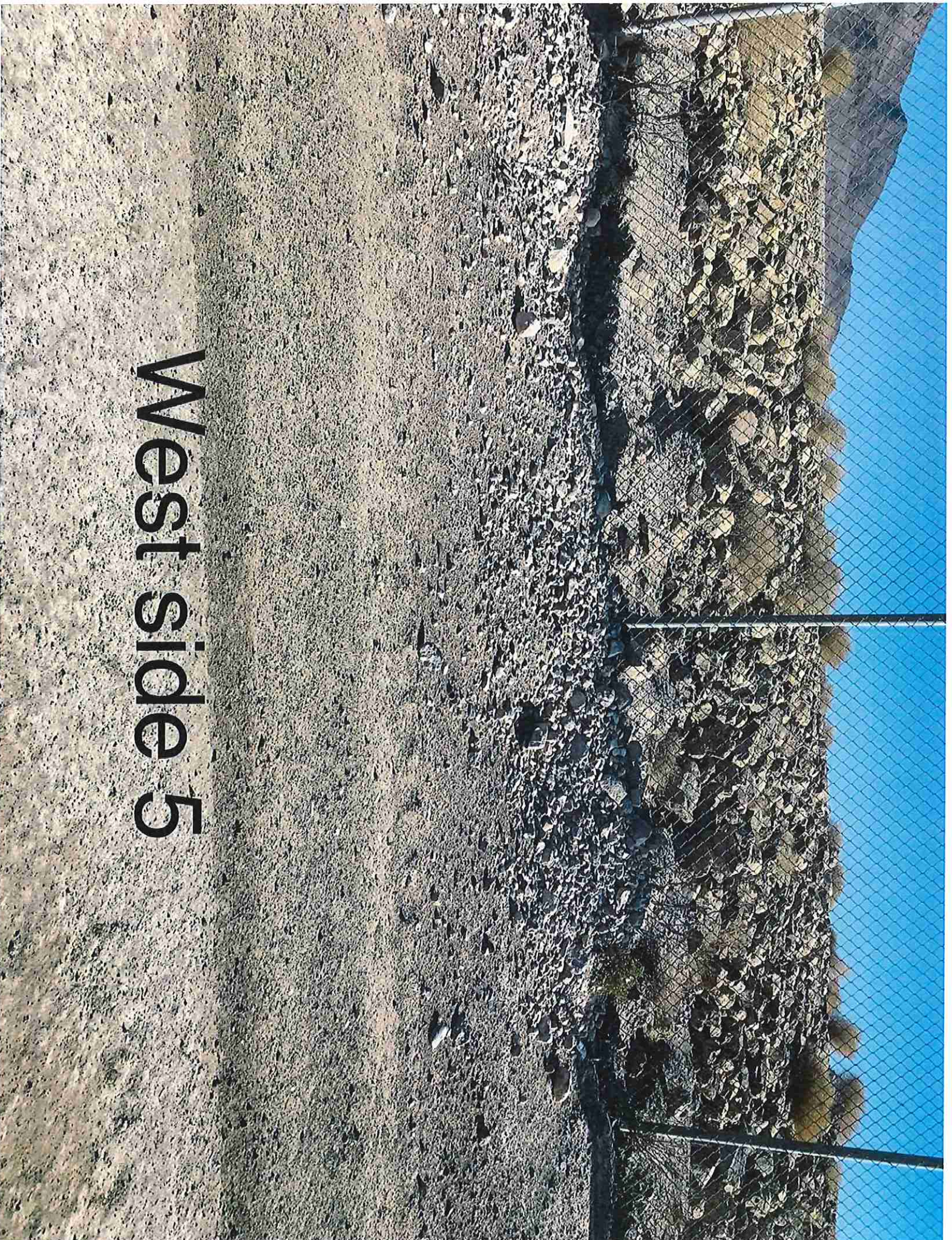
West side 3



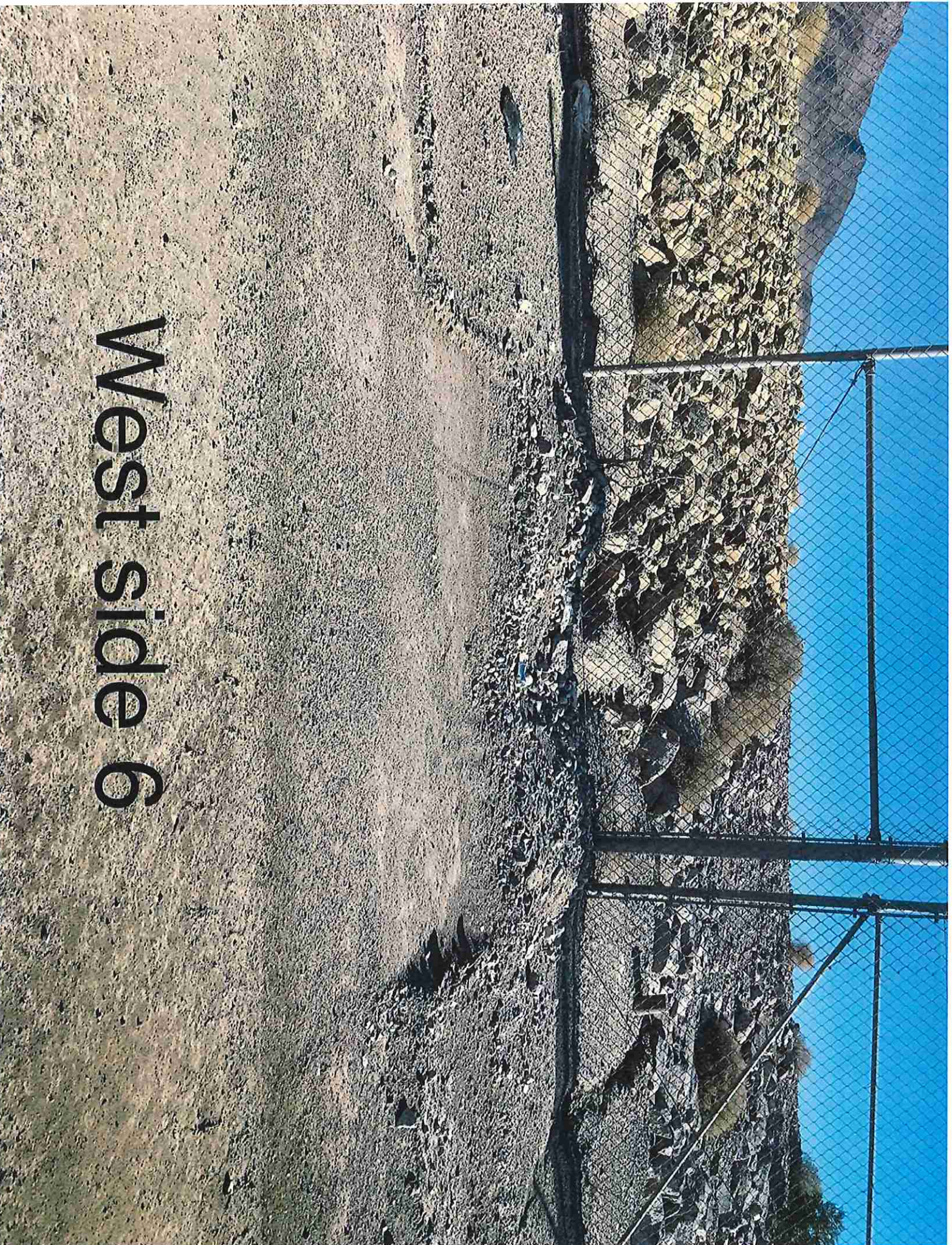
West side 4



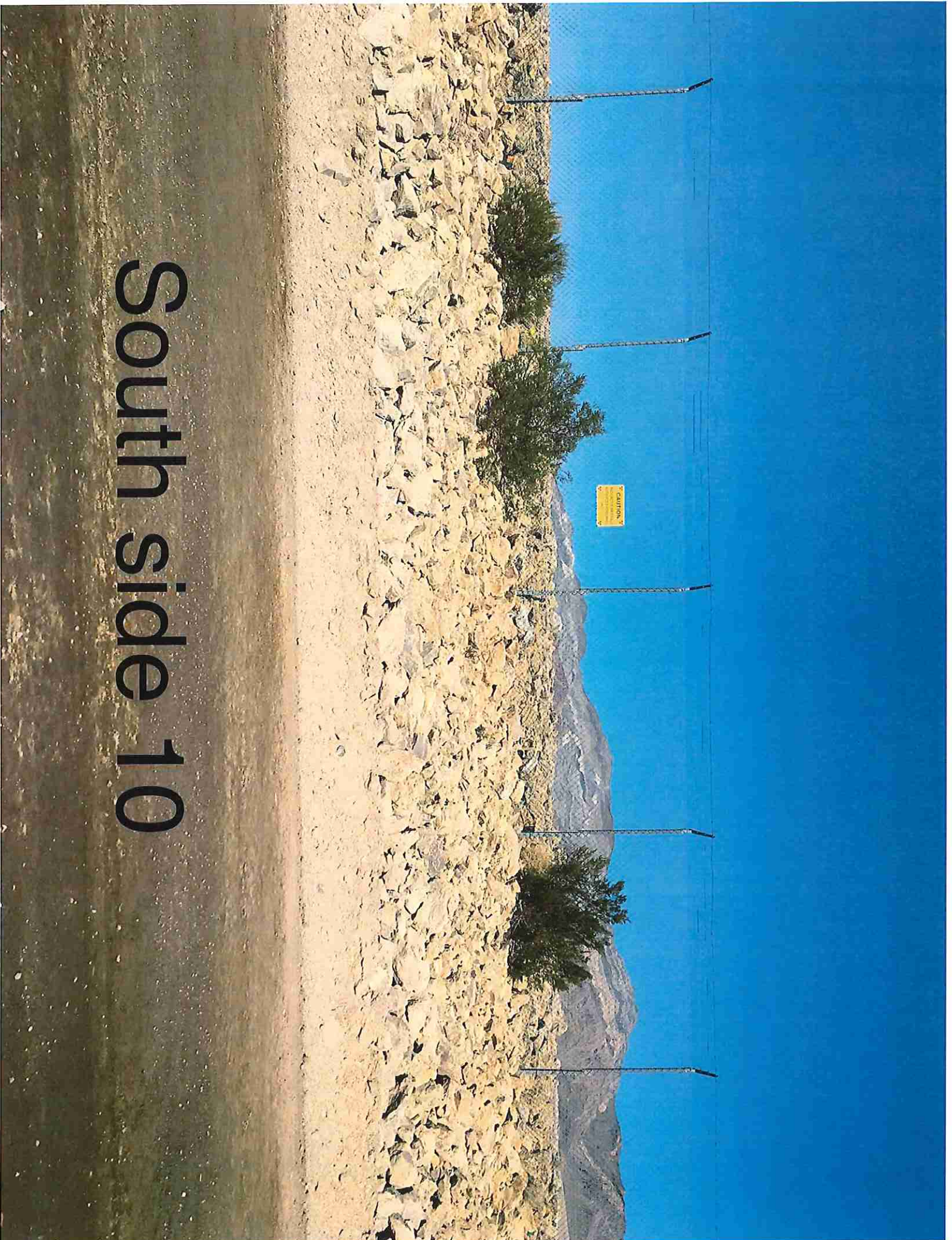
West side 5



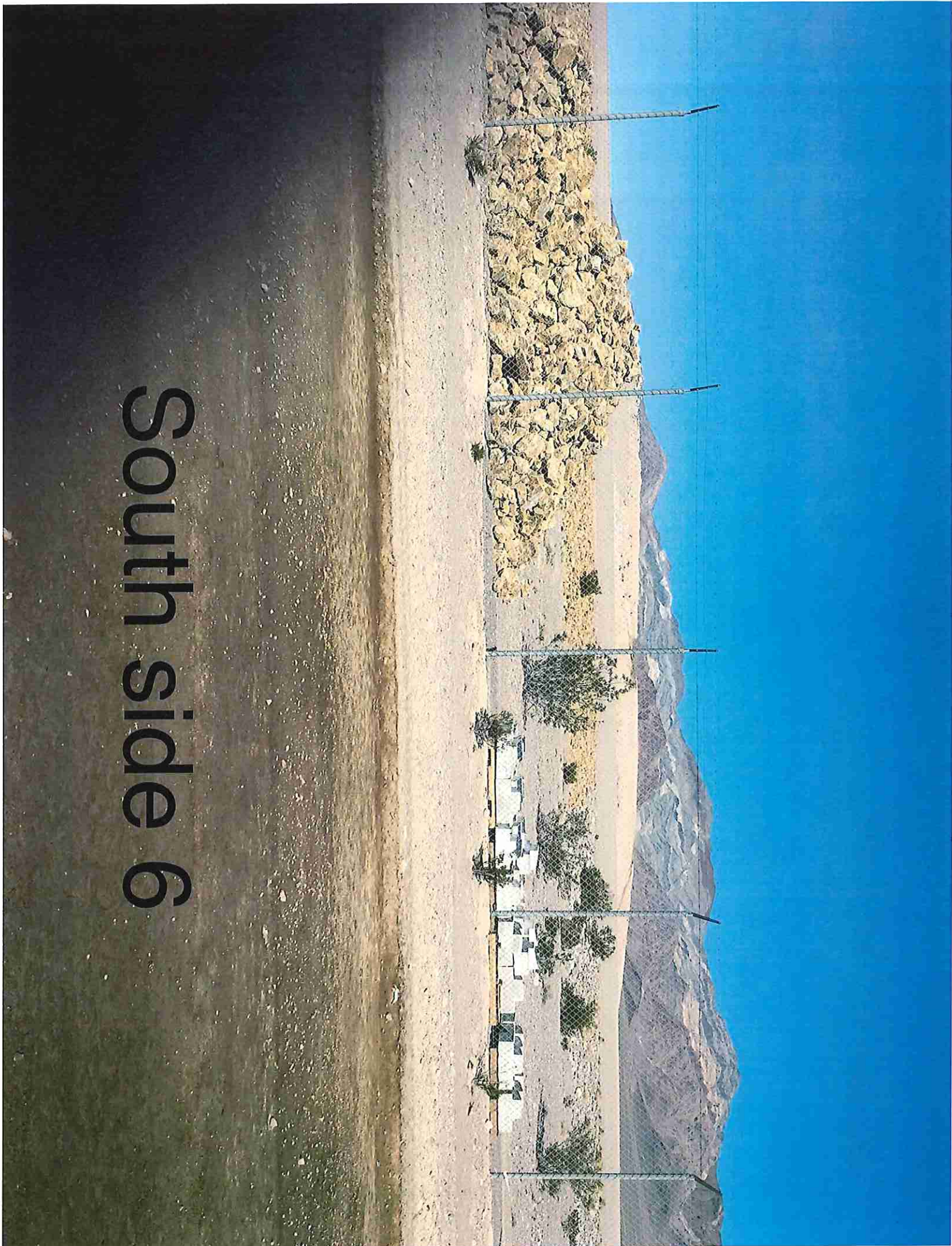
West side 6

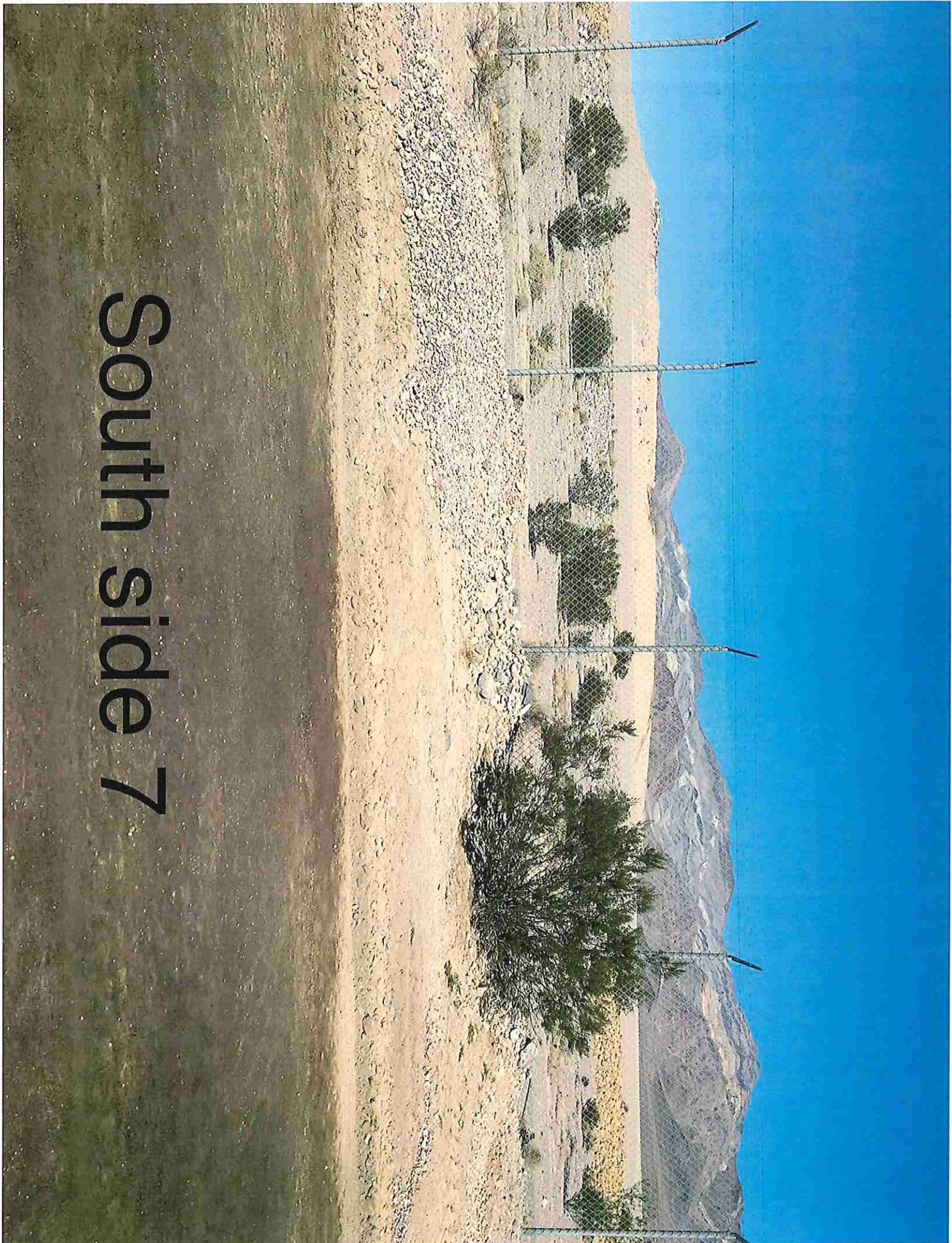


South side 10



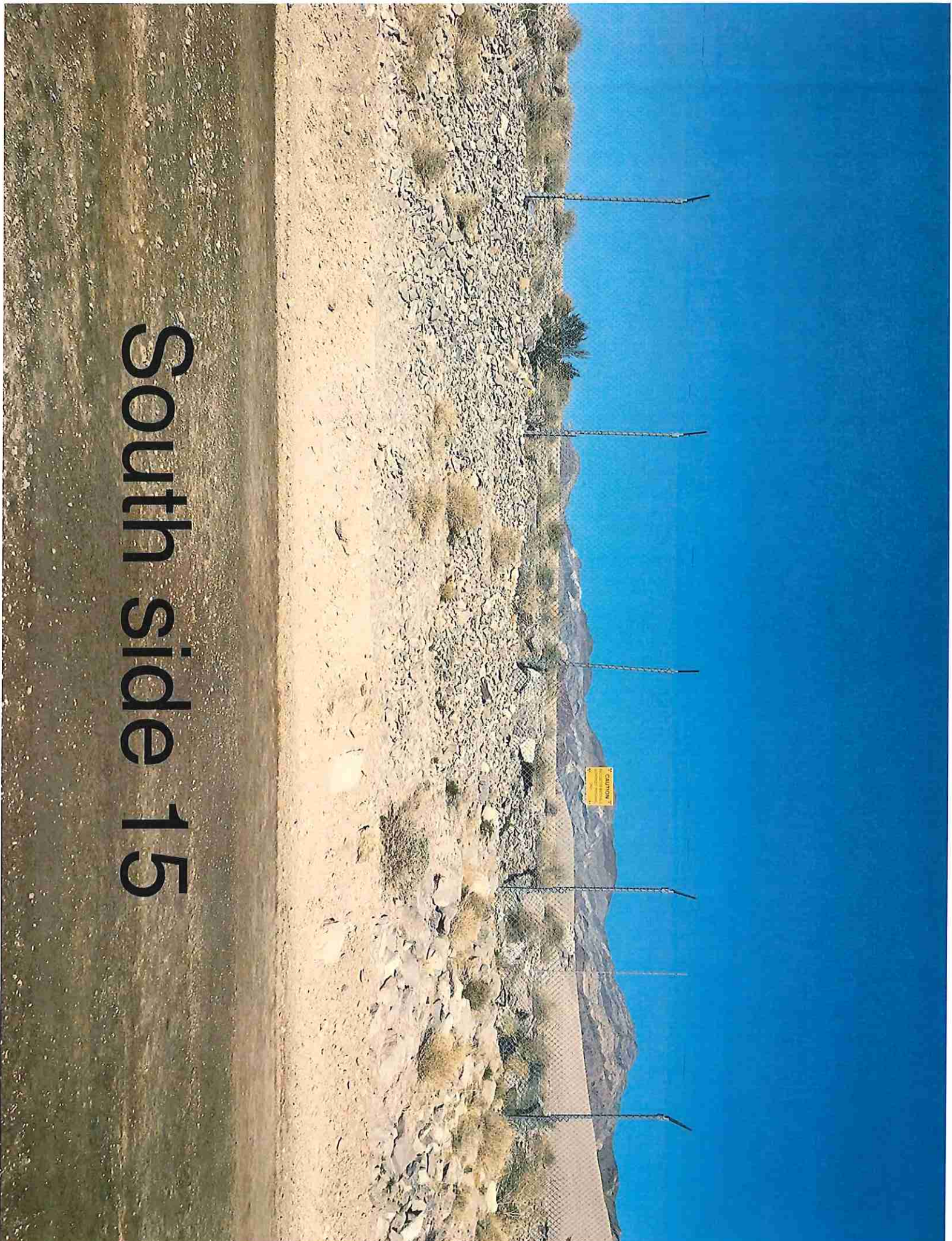
South side 6





South side 7

South side 15



South side 12

