

BRIAN SANDOVAL  
Governor

STATE OF NEVADA



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November 20, 2018

MEMORANDUM

To: Beatty File

From: John Follette, Radiation Control Specialist 

Subject: Beatty Inspection Summary November 19, 2018

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An inspection of the Beatty Low-Level Radioactive Waste landfill (closed) was conducted on November 19, 2018 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.

**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.

**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.

**Erosion, Fissures, Water Pooling, or Subsidence Concerns:**

There are erosion areas along the South fence. Pictures of the erosion were taken starting about 5 feet from the southeast corner heading west to the gate. The erosion seems to be limited to the area that includes the rock that wraps the site and the berm to the road around the site. No erosion was identified above the rocks or on the cap.

- The erosion areas have been repaired. See attached pictures.

**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

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

Rain Since Last Inspection:

August - 0.0", September - 0.0", October - 0.35", and November - 0.0" as of November 18, 2018.

Erosion, Fissures, Water Pooling, or Subsidence Concerns: None

The erosion along the South fence that was identified during the August 17, 2018 inspection has been repaired. See attached picture.

### **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: 16-22 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.)

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## Station Summary

### Beatty 11SSE US Ecology Nevada Monthly Summary for

**August, 2018**

Day of Month	Day of Year	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip inches	
			Ave mph	V. Dir. Deg	Max mph	Mea n Deg. Fahrenheit	Max	Min	Mea n Percent	Ma x				Mi n
<a href="#">1</a>	213	593	9.3	238	34.2	94	107	78	26	46	15	52	66	0.00
<a href="#">2</a>	214	640	9.2	167	31.8	94	107	79	23	36	13	49	65	0.00
<a href="#">3</a>	215	659	8.7	152	22.5	94	107	81	23	40	10	49	65	0.00
<a href="#">4</a>	216	687	6.6	215	25.7	94	108	79	10	21	4	26	57	0.00
<a href="#">5</a>	217	626	8.2	274	26.1	91	104	77	9	12	5	23	55	0.00
<a href="#">6</a>	218	702	5.6	236	20.9	90	106	71	8	17	3	18	54	0.00
<a href="#">7</a>	219	669	6.0	255	24.0	91	108	71	9	15	4	23	55	0.00
<a href="#">8</a>	220	660	7.8	193	25.0	93	109	74	13	25	5	33	59	0.00
<a href="#">9</a>	221	615	6.2	261	23.8	93	108	74	15	30	7	37	60	0.00
<a href="#">10</a>	222	603	11.0	139	27.1	95	107	84	21	37	10	46	64	0.00
<a href="#">11</a>	223	619	10.1	152	37.8	93	106	77	18	30	11	42	61	0.00
<a href="#">12</a>	224	590	8.3	166	34.4	90	103	77	24	36	15	48	63	0.00
<a href="#">13</a>	225	621	8.2	257	31.8	91	105	74	21	34	12	44	62	0.00
<a href="#">14</a>	226	637	6.7	223	25.4	91	104	74	20	37	11	43	61	0.00
<a href="#">15</a>	227	624	10.5	164	29.5	91	104	76	21	30	10	44	62	0.00
<a href="#">16</a>	228	609	9.5	156	34.0	89	103	76	28	45	16	51	64	0.00
<a href="#">17</a>	229	616	5.9	194	20.6	90	104	74	29	52	14	52	65	0.00
<a href="#">18</a>	230	617	4.7	228	23.0	94	106	78	21	37	12	47	64	0.00
<a href="#">19</a>	231	628	6.6	194	24.1	94	108	76	16	29	9	39	61	0.00
<a href="#">20</a>	232	628	11.9	148	28.8	95	108	80	12	20	5	33	59	0.00
<a href="#">21</a>	233	535	9.8	150	25.5	90	104	81	17	28	8	37	59	0.00
<a href="#">22</a>	234				24.2		101	74		22	8			
<a href="#">23</a>	235	621	10.1	148	24.5	89	102	74	14	23	9	34	57	0.00
<a href="#">24</a>	236	617	9.4	146	20.2	87	99	68	13	25	7	28	55	0.00
<a href="#">25</a>	237	576	9.0	167	27.1	86	100	64	12	22	6	25	54	0.00
<a href="#">26</a>	238	619	7.6	210	21.8	84	100	65	11	19	5	22	53	0.00
<a href="#">27</a>	239	618	7.6	143	21.1	84	98	64	12	25	7	25	53	0.00



<u>28</u>	240	613	6.2	187	18.7	81	96	62	15	25	8	28	53	0.00
<u>29</u>	241	567	9.3	186	26.0	83	98	64	15	21	9	30	54	0.00
<u>30</u>	242	598	8.8	146	22.5	86	99	76	13	24	5	26	55	0.00
<u>31</u>	243	618	7.1	247	20.2	82	98	62	8	13	5	14	50	0.00

MONTHLY STATISTICS

	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip inches	
		Ave .	V. Dir. mph	Max .	Mea n	Max Min	Mea n	Ma x	Mi n				Percent
Total	18625											0.00	
Ave.	621	8.2	179	25.9	89.9	103. 8	73. 7	17	28	9	36	59	
Max.	702	11.9		37.8	95	109	84	29	52	16	52	66	0.00
Min.	535	4.7		18.7	81	96	62	8	12	3	14	50	0.00

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

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

*August 2018*

## Station Summary

### Beatty 11SSE US Ecology Nevada Monthly Summary for

**September, 2018**

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			
<u>1</u>	244	608	8.5	313	31.6	86	101	72	9	14	5	19	53	0.00
<u>2</u>	245	592	5.5	190	20.0	85	101	64	11	19	7	23	53	0.00
<u>3</u>	246	564	11.0	105	41.4	85	98	69	23	33	14	42	59	0.00
<u>4</u>	247	538	6.4	58	27.4	83	97	67	28	54	14	45	60	0.00
<u>5</u>	248	545	5.5	211	20.0	83	97	68	24	38	14	41	58	0.00
<u>6</u>	249	577	5.5	264	21.0	85	99	68	21	38	12	39	58	0.00
<u>7</u>	250	575	4.4	257	21.8	88	102	69	17	29	10	36	58	0.00
<u>8</u>	251	582	6.3	197	22.8	89	105	69	15	28	7	32	57	0.00
<u>9</u>	252	578	5.7	163	19.0	88	102	71	12	18	6	27	55	0.00
<u>10</u>	253	582	7.8	186	20.7	82	99	66	11	21	4	19	51	0.00
<u>11</u>	254	577	7.6	165	21.6	81	98	62	9	15	5	17	50	0.00
<u>12</u>	255	567	10.4	148	22.2	81	97	62	11	18	6	21	51	0.00
<u>13</u>	256	573	8.5	172	26.1	79	94	58	11	20	5	18	50	0.00
<u>14</u>	257	558	9.8	152	26.2	82	96	63	11	20	7	20	51	0.00
<u>15</u>	258				30.4		95	63		18	7			
<u>16</u>	259				8.8		82	70		13	9			
<u>17</u>	260	568	7.7	229	22.7	78	95	58	9	20	2	9	48	0.00
<u>18</u>	261	559	6.2	276	16.2	76	96	55	7	12	5	8	47	0.00
<u>19</u>	262	553	6.7	261	27.3	77	94	58	8	12	5	10	47	0.00
<u>20</u>	263	547	7.9	229	29.1	79	95	64	7	11	4	8	48	0.00
<u>21</u>	264	524	5.5	260	19.6	78	96	60	12	20	7	21	50	0.00
<u>22</u>	265	519	7.4	223	25.4	79	95	59	16	25	9	28	52	0.00
<u>23</u>	266	508	6.2	245	29.5	81	96	63	20	33	10	34	55	0.00
<u>24</u>	267	448	6.2	276	25.4	79	93	63	14	25	8	25	51	0.00
<u>25</u>	268	515	6.4	305	22.0	80	95	65	10	18	6	17	50	0.00
<u>26</u>	269	521	6.9	286	27.0	80	98	63	8	14	4	12	49	0.00
<u>27</u>	270	521	5.2	257	20.2	80	99	62	7	12	4	8	48	0.00
<u>28</u>	271	476	7.0	195	22.4	80	97	61	12	21	7	22	51	0.00

29 272      474 13.6    166 33.2    81 93 71    17 32 6      28    53    0.00  
30 273      490 12.0    155 28.5    78 92 67    21 49 6      31    53    0.00

MONTHLY STATISTICS

	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip inches
		Ave .	V. Dir. mph	Max .	Mean	Max	Min	Mea n	Ma x			
Total	15238											0.00
Ave.	544	7.4	212	24.3	81.5	96.6	64.3	14	23	7	24	52
Max.	608	13.6		41.4	89	105	72	28	54	14	45	60
Min.	448	4.4		8.8	76	82	55	7	11	2	8	47

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

° 1 ly = 1 cal/cm<sup>2</sup> = 4.1855 J/cm<sup>2</sup> = 3.6855 BTU/ft<sup>2</sup> = .01163 KW-hr/m<sup>2</sup>

*Sept. 2018*

## Station Summary

### Beatty 11SSE US Ecology Nevada Monthly Summary for

**October, 2018**

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
<a href="#">1</a>	274	429	14.6	140	27.1	78	91	70	43	57	25	53	62	0.00
<a href="#">2</a>	275	351	9.9	133	22.2	76	86	69	51	74	35	56	63	0.00
<a href="#">3</a>	276	352	11.5	136	32.8	72	84	61	44	76	23	48	57	0.32
<a href="#">4</a>	277	430	8.1	131	18.8	67	79	57	50	79	30	47	55	0.00
<a href="#">5</a>	278	464	10.7	326	26.8	68	78	60	35	56	17	38	51	0.00
<a href="#">6</a>	279	289	13.9	340	37.6	65	74	59	36	66	17	36	49	0.03
<a href="#">7</a>	280	514	23.2	332	46.1	62	69	55	34	50	22	33	47	0.00
<a href="#">8</a>	281	463	14.3	332	33.1	64	76	55	25	39	11	25	45	0.00
<a href="#">9</a>	282	469	8.0	277	24.5	67	78	56	20	29	13	25	46	0.00
<a href="#">10</a>	283	455	7.6	144	21.1	66	76	53	26	38	18	30	47	0.00
<a href="#">11</a>	284	450	5.7	189	17.8	65	76	50	31	50	18	33	48	0.00
<a href="#">12</a>	285	446	4.7	295	13.7	67	81	54	29	48	16	32	49	0.00
<a href="#">13</a>	286	458	9.4	326	30.8	69	82	54	19	37	9	23	47	0.00
<a href="#">14</a>	287	444	17.4	349	36.7	62	69	52	13	21	7	9	41	0.00
<a href="#">15</a>	288	463	15.3	331	37.7	58	71	47	9	15	3	-3	37	0.00
<a href="#">16</a>	289	452	8.9	357	26.8	62	76	51	13	19	7	10	41	0.00
<a href="#">17</a>	290	438	5.1	223	13.7	61	77	46	18	28	12	17	42	0.00
<a href="#">18</a>	291	433	5.8	267	21.7	61	79	45	22	38	11	21	43	0.00
<a href="#">19</a>	292	432	8.0	57	24.7	67	80	48	19	32	9	21	45	0.00
<a href="#">20</a>	293	416	8.1	319	26.1	70	82	60	20	34	14	27	48	0.00
<a href="#">21</a>	294	353	7.3	190	22.5	66	78	55	45	75	29	43	53	0.00
<a href="#">22</a>	295	406	4.4	238	15.2	65	81	52	43	68	20	40	51	0.00
<a href="#">23</a>	296	401	4.4	292	11.0	66	82	51	34	57	13	34	49	0.00
<a href="#">24</a>	297	399	4.2	276	12.6	67	83	52	25	41	12	28	47	0.00
<a href="#">25</a>	298	398	10.1	323	30.6	68	83	53	20	35	11	24	47	0.00
<a href="#">26</a>	299	393	4.5	227	14.6	68	86	53	19	28	10	22	46	0.00
<a href="#">27</a>	300	409	5.1	273	13.2	67	84	52	19	29	11	22	46	0.00
<a href="#">28</a>	301	390	6.1	176	17.3	68	85	50	19	31	11	23	46	0.00

<a href="#">29</a>	302	371	9.5	289	37.4	67	82	49	21	35	12	24	46	0.00
<a href="#">30</a>	303	392	23.3	328	41.6	60	67	50	18	24	12	16	41	0.00
<a href="#">31</a>	304	371	13.5	318	29.1	57	68	44	17	26	8	11	39	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	12931												0.35
Ave.	417	9.8	319	25.3	66.0	78.7	53.6	27	43	15	28	48	
Max.	514	23.3		46.1	78	91	70	51	79	35	56	63	0.32
Min.	289	4.2		11.0	57	67	44	9	15	3	-3	37	0.00

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

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

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### MONTHLY STATISTICS

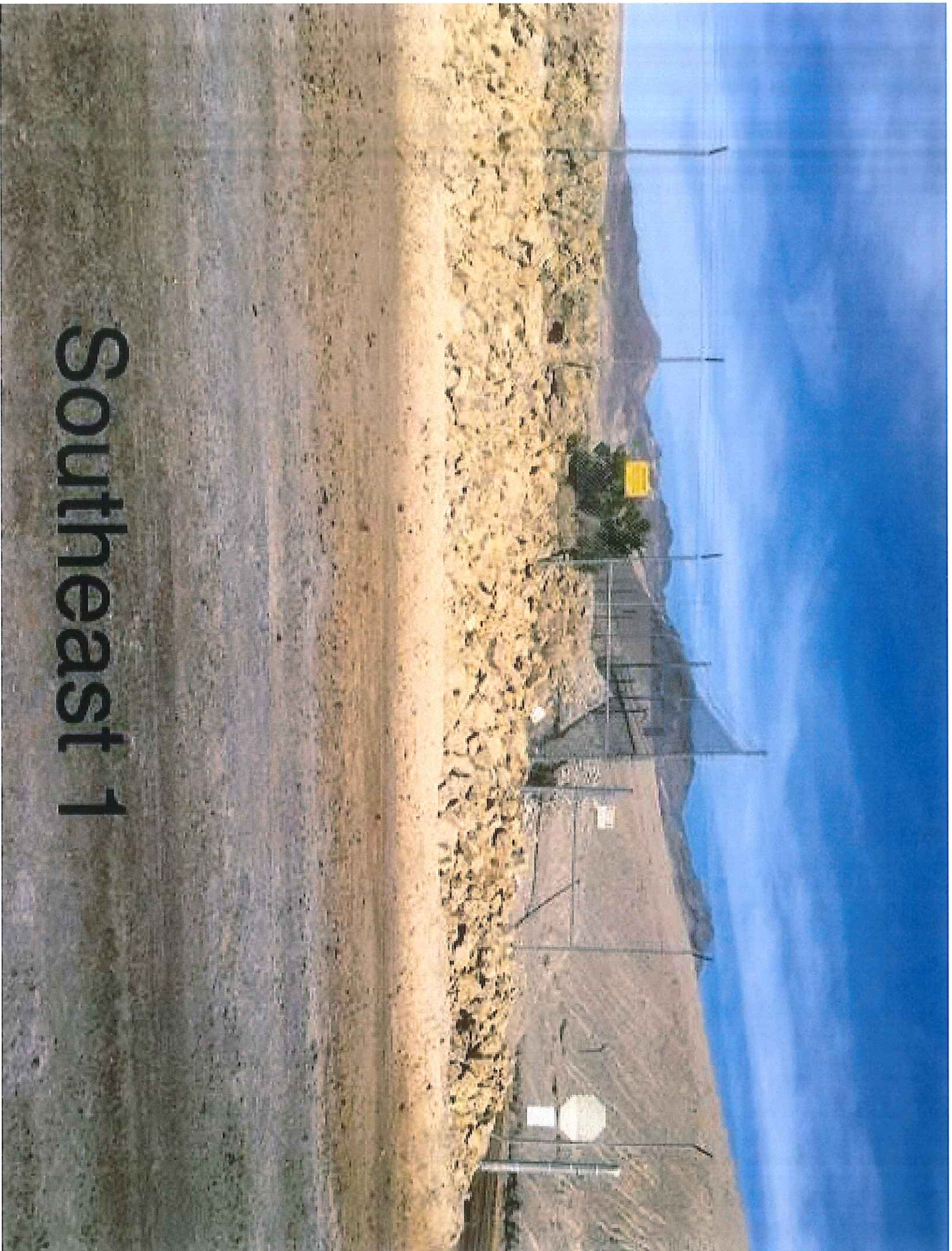
	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip inches	
		Ave . mph	V. Dir. Deg	Max . mph	Mean	Max	Min	Mea n	Ma x				Mi n
Total	5854											0.00	
Ave.	344	8.7	312	23.2	56.8	69.5	43.9	15	24	9	6	38	
Max.	371	20.2		41.3	69	83	62	25	44	25	29	48	0.00
Min.	300	3.9		10.4	47	44	32	6	9	3	-9	32	0.00

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

° 1 ly = 1 cal/cm<sup>2</sup> = 4.1855 J/cm<sup>2</sup> = 3.6855 BTU/ft<sup>2</sup> = .01163 KW-hr/m<sup>2</sup>

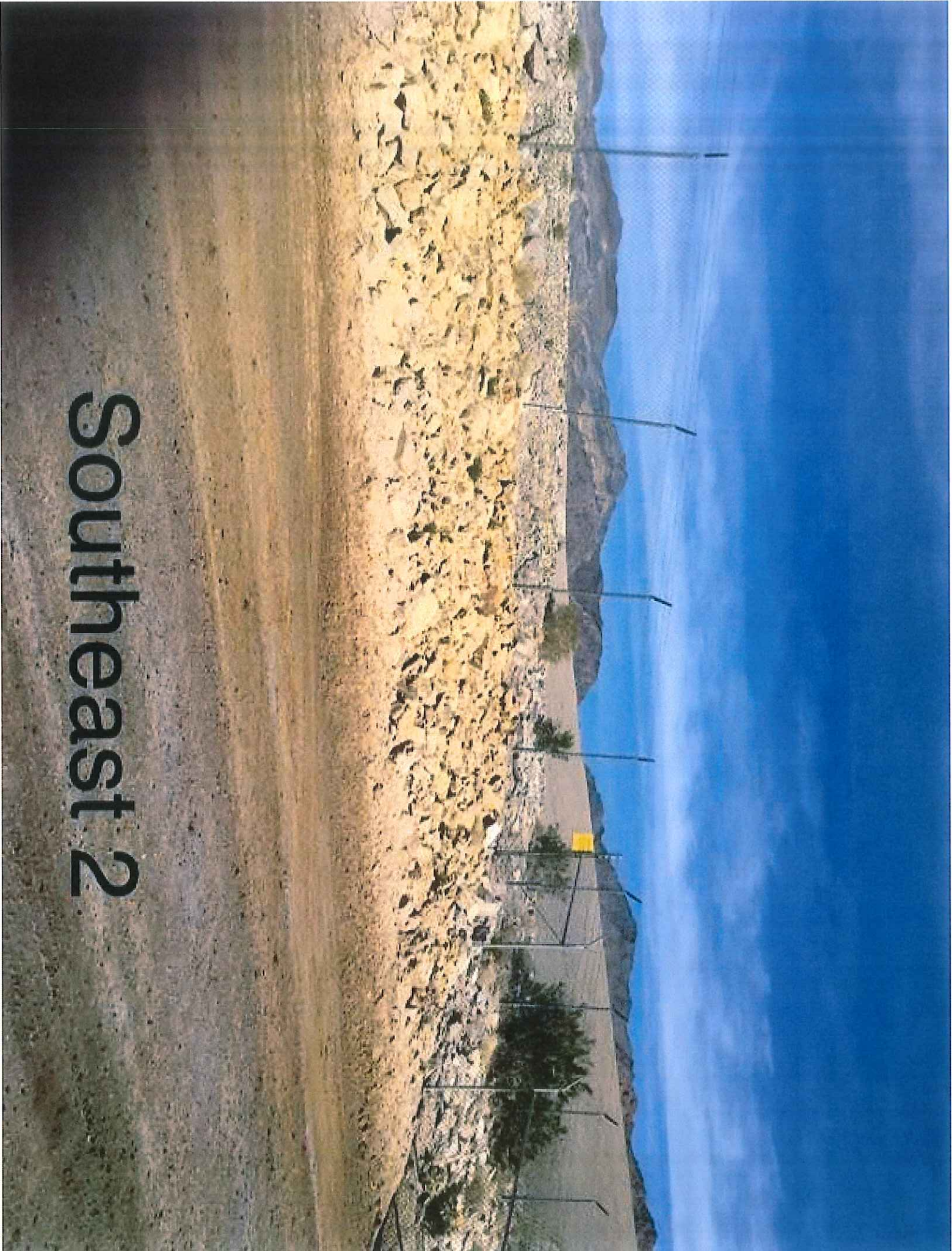
November 2018





# Southeast 1

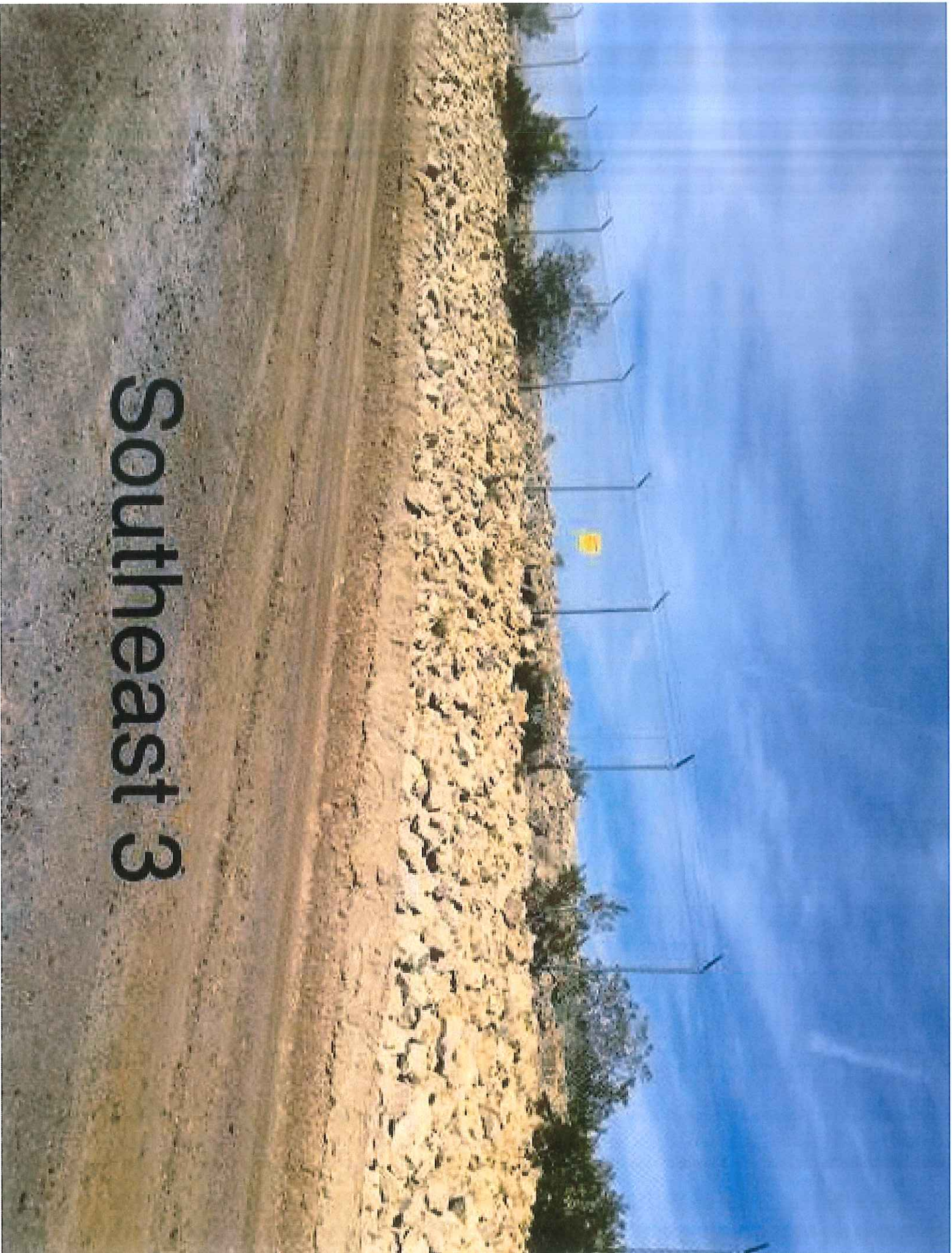




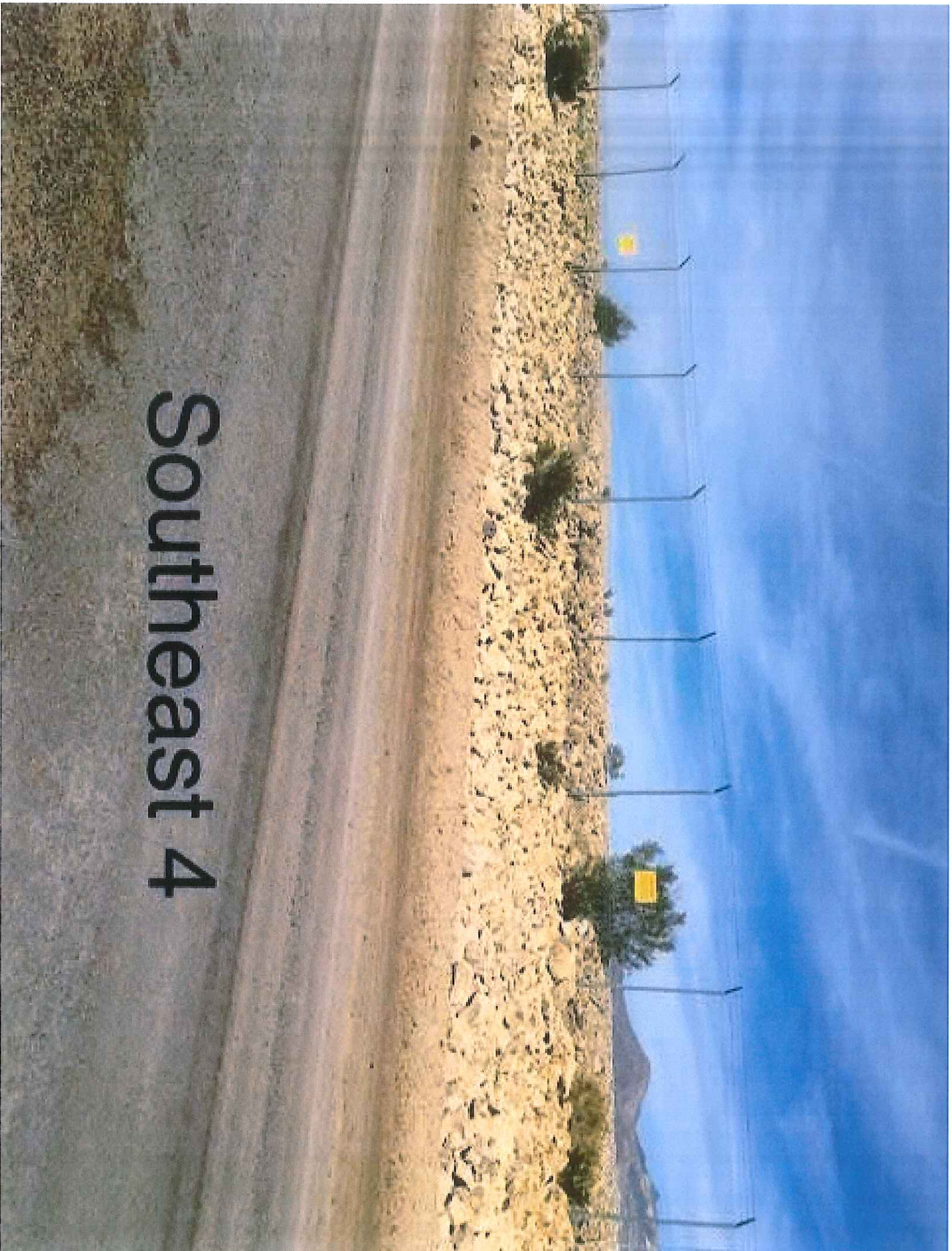
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# Southeast 3



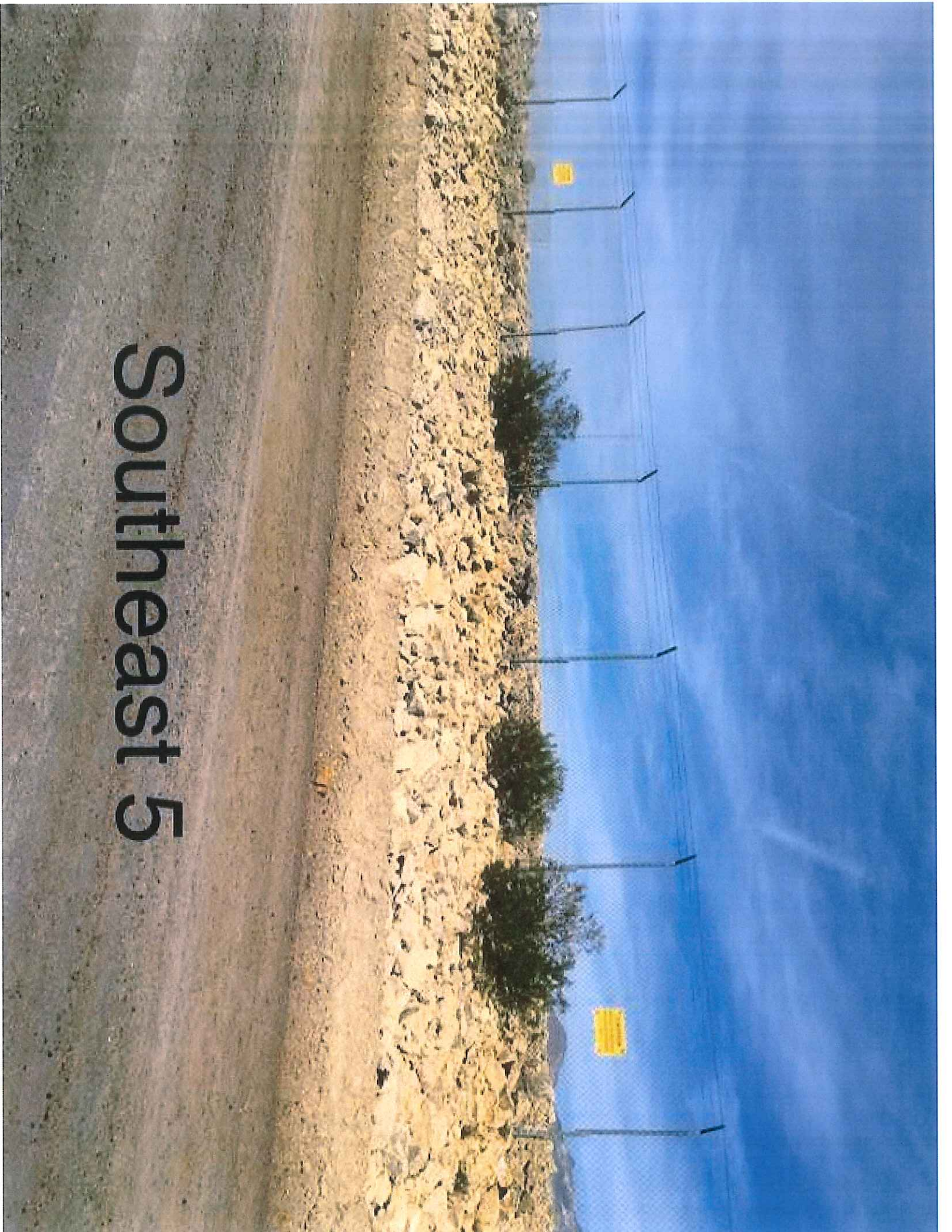




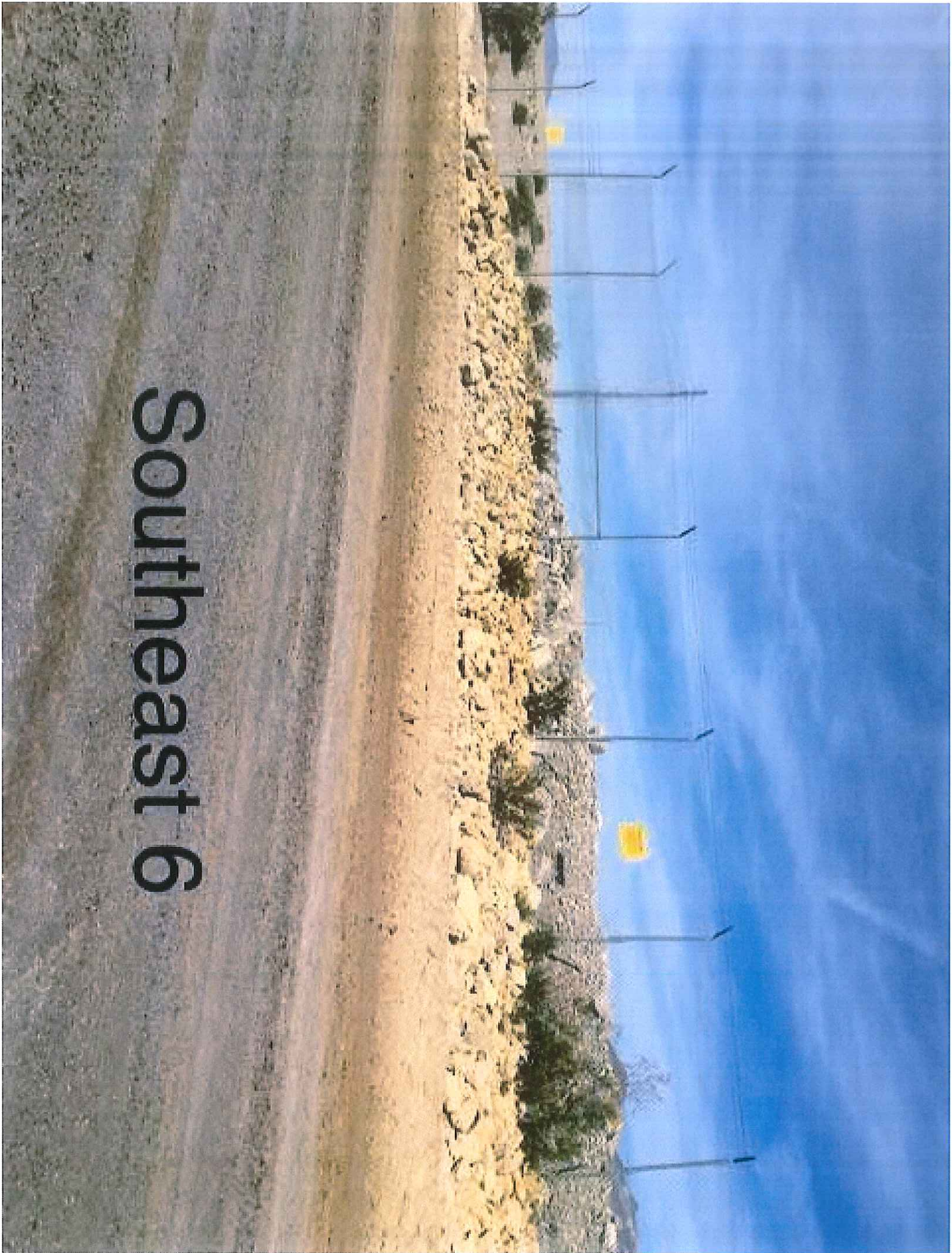
# Southeast 4



# Southeast 5







# Southeast 6