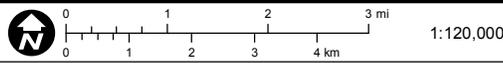
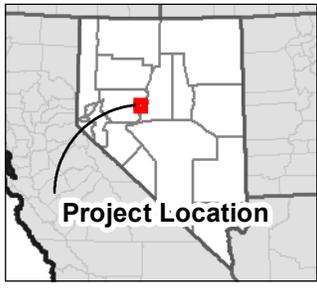


**Legend**

- ★ Facility Location
- Key Observation Point
- Transmission Line



1:120,000

USGS Topo Not To Scale

**Visual Resource Location Map**

Tungsten Mountain Project  
Ormat Technologies, Inc.  
Churchill County, Nevada

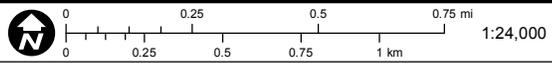
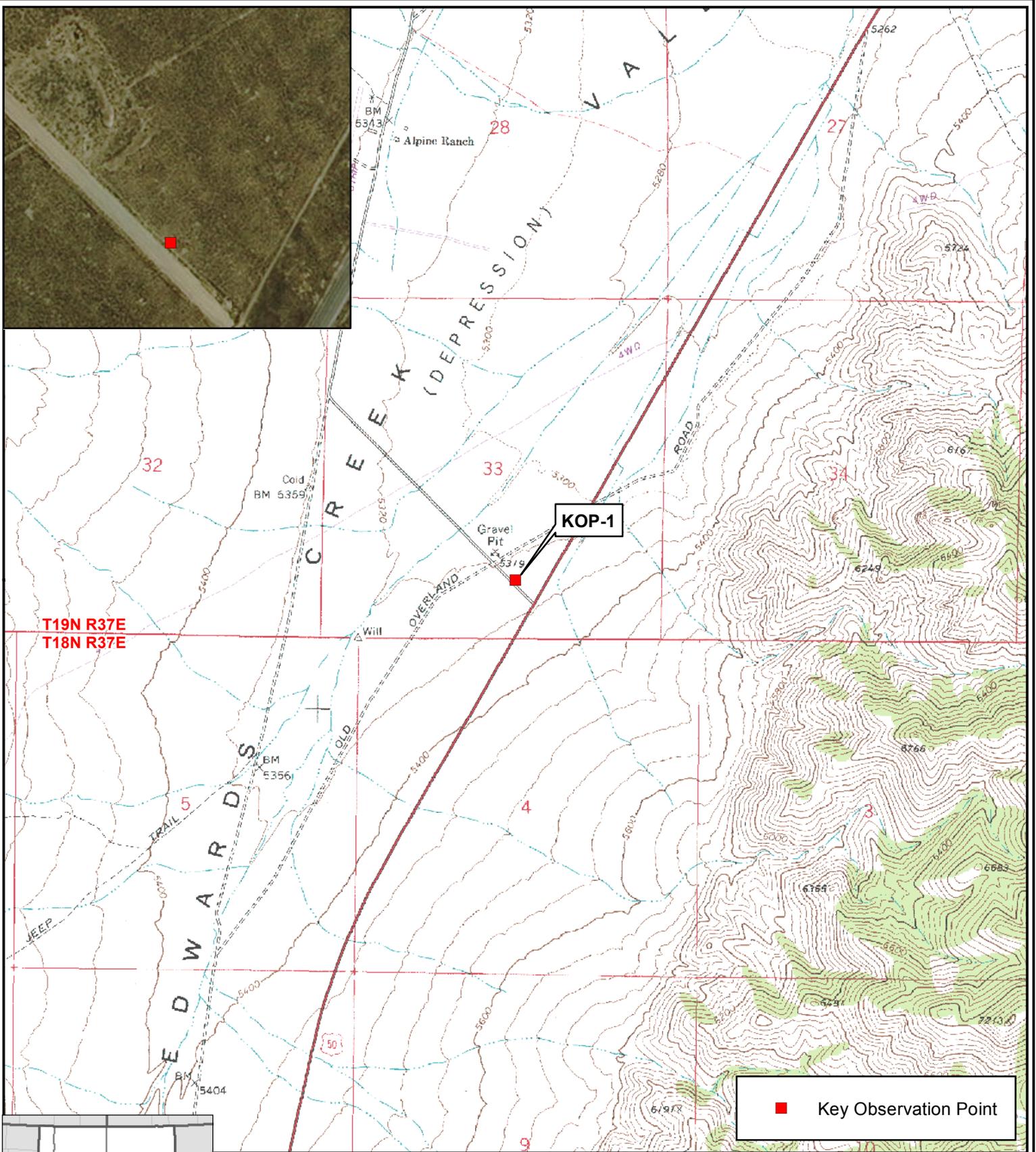
USGS Topo 1:100,000 series:  
Edwards Creek Valley, Nevada  
Smith Creek Valley, Nevada  
T18-21N, R37-39E

Map Prepared By Cardno  
9/8/2015

5496 Reno Corporate Drive ph. (775) 828-4362  
Reno, Nevada 89511 fax (775) 828-4367

[www.cardno.com](http://www.cardno.com)

Map Projection: NAD 1983 UTM Zone 11N

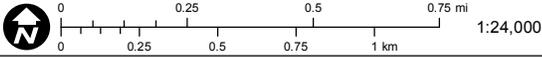
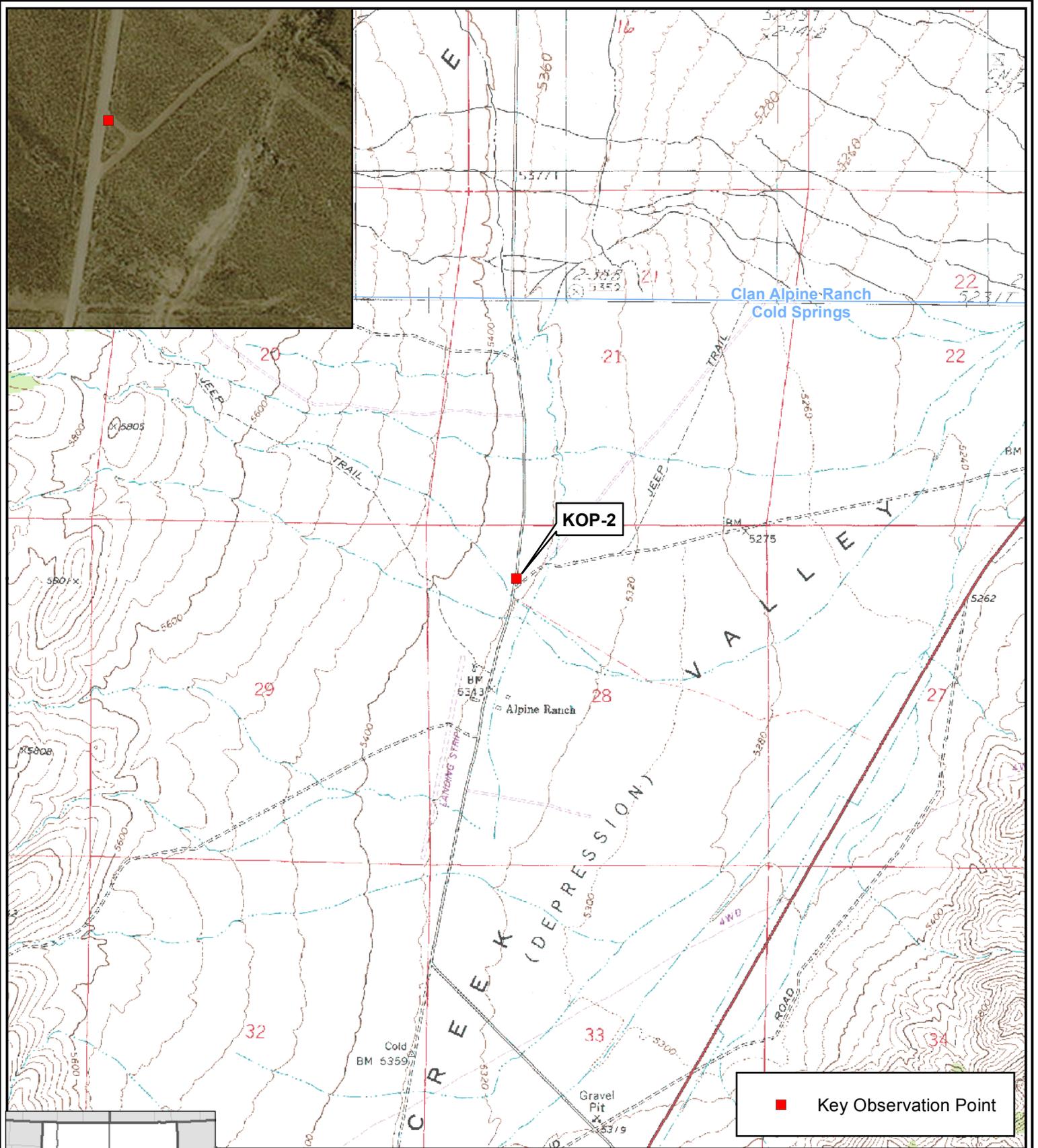


**Key Observation Point 1 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

USGS 7.5' Quad:  
 Cold Springs, Nev. 1969  
 T19N, R37E, Sec. 33

Map Prepared By Cardno  
 9/3/2015

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<a href="http://www.cardno.com">www.cardno.com</a>	
Map Projection: NAD 1983 UTM Zone 11N	



**Key Observation Point 2 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

USGS 7.5' Quads:  
 Clan Alpine Ranch, Nevada 1990  
 Cold Springs, Nev. 1969  
 T19N, R37E, Sec. 28

Map Prepared By Cardno  
 9/3/2015



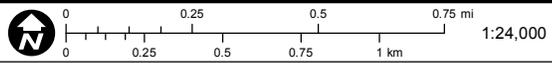
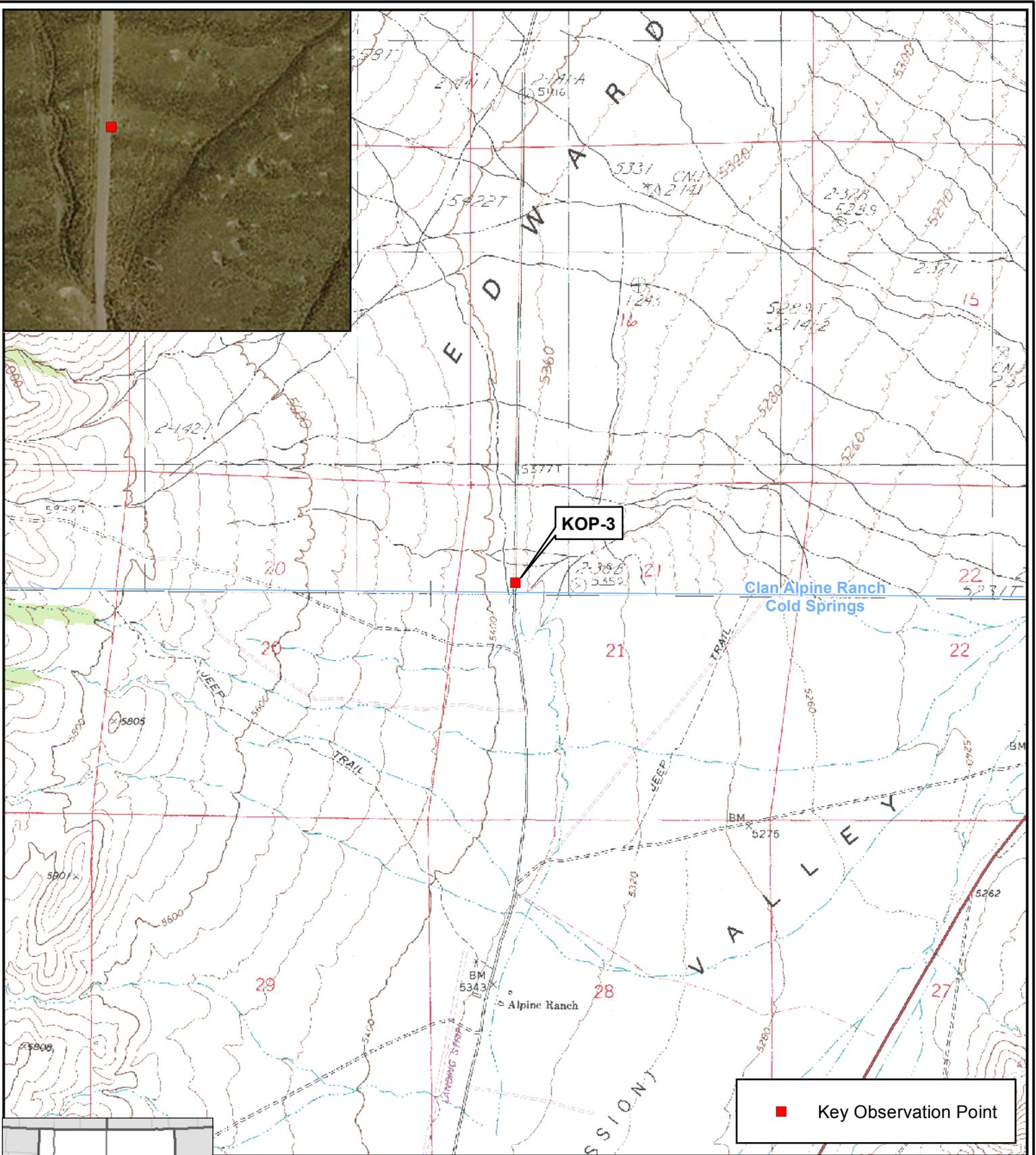
5496 Reno Corporate Drive ph. (775) 828-4362  
 Reno, Nevada 89511 fax (775) 828-4367

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Map Projection: NAD 1983 UTM Zone 11N



**Project Location**



**Key Observation Point 3 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

USGS 7.5' Quads:  
 Clan Alpine Ranch, Nevada 1990  
 Cold Springs, Nev. 1969  
 T19N, R37E, Sec. 21

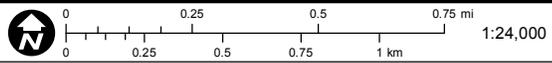
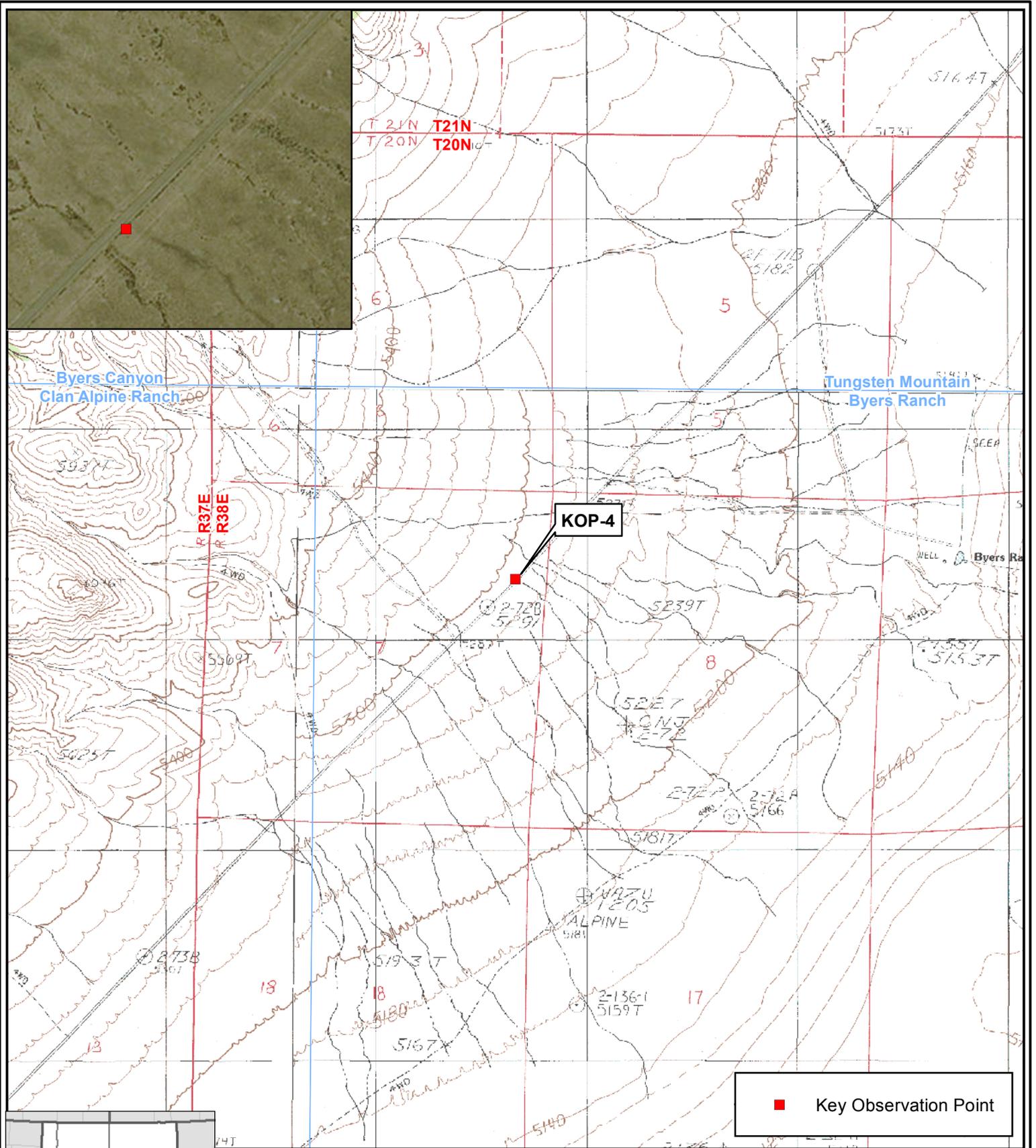


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Map Prepared By Cardno  
 9/3/2015

Map Projection: NAD 1983 UTM Zone 11N



**Key Observation Point 4 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

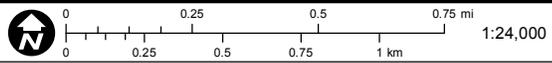
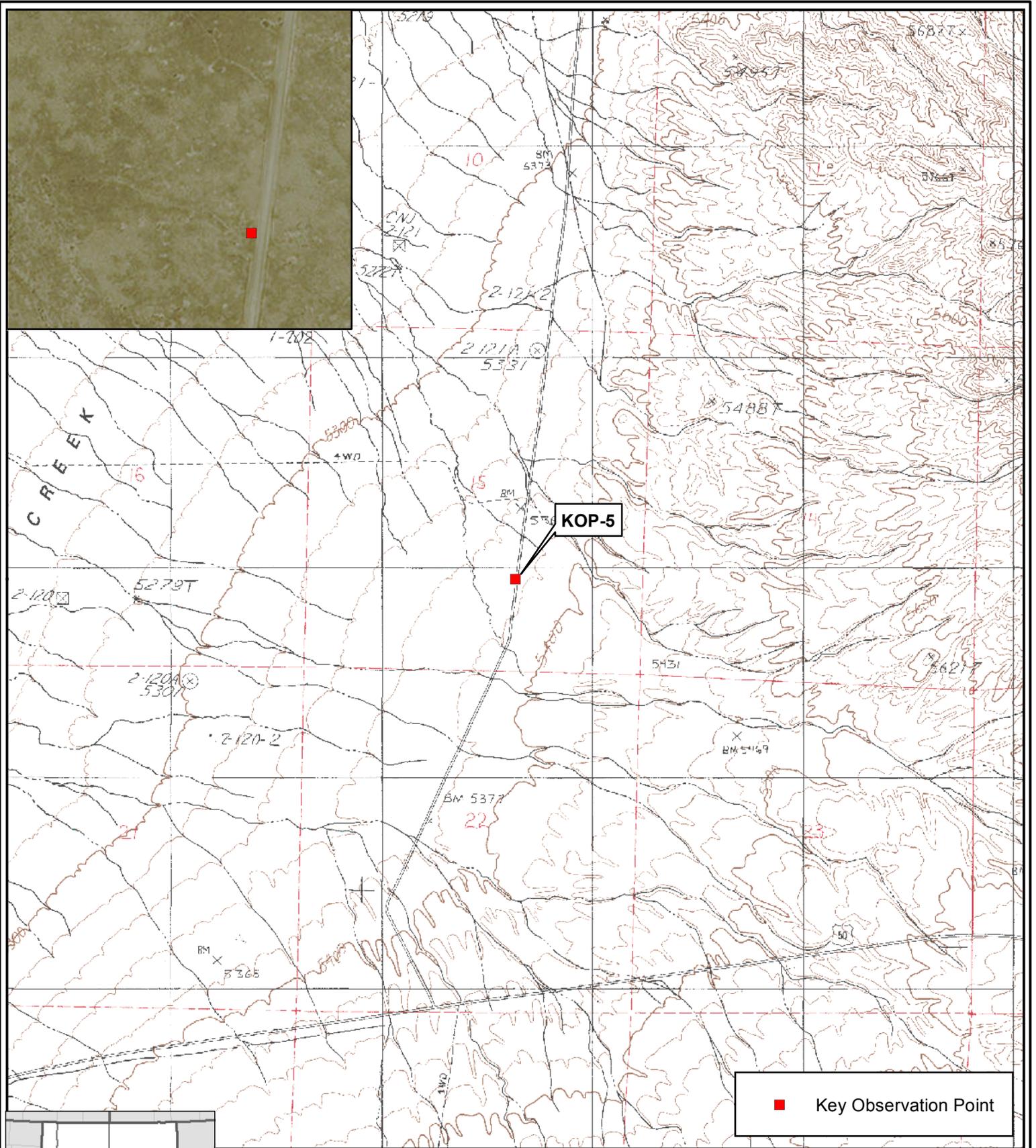
USGS 7.5' Quads:  
 Byers Canyon, Tungsten Mtn., Byers Ranch  
 and Clan Alpine Ranch, Nevada 1990  
 T20N, R38E, Sec. 7

Map Prepared By Cardno  
 9/3/2015

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 Reno, Nevada 89511 fax (775) 828-4367

[www.cardno.com](http://www.cardno.com)

Map Projection: NAD 1983 UTM Zone 11N

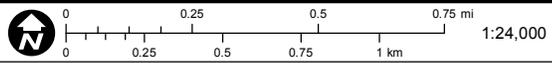
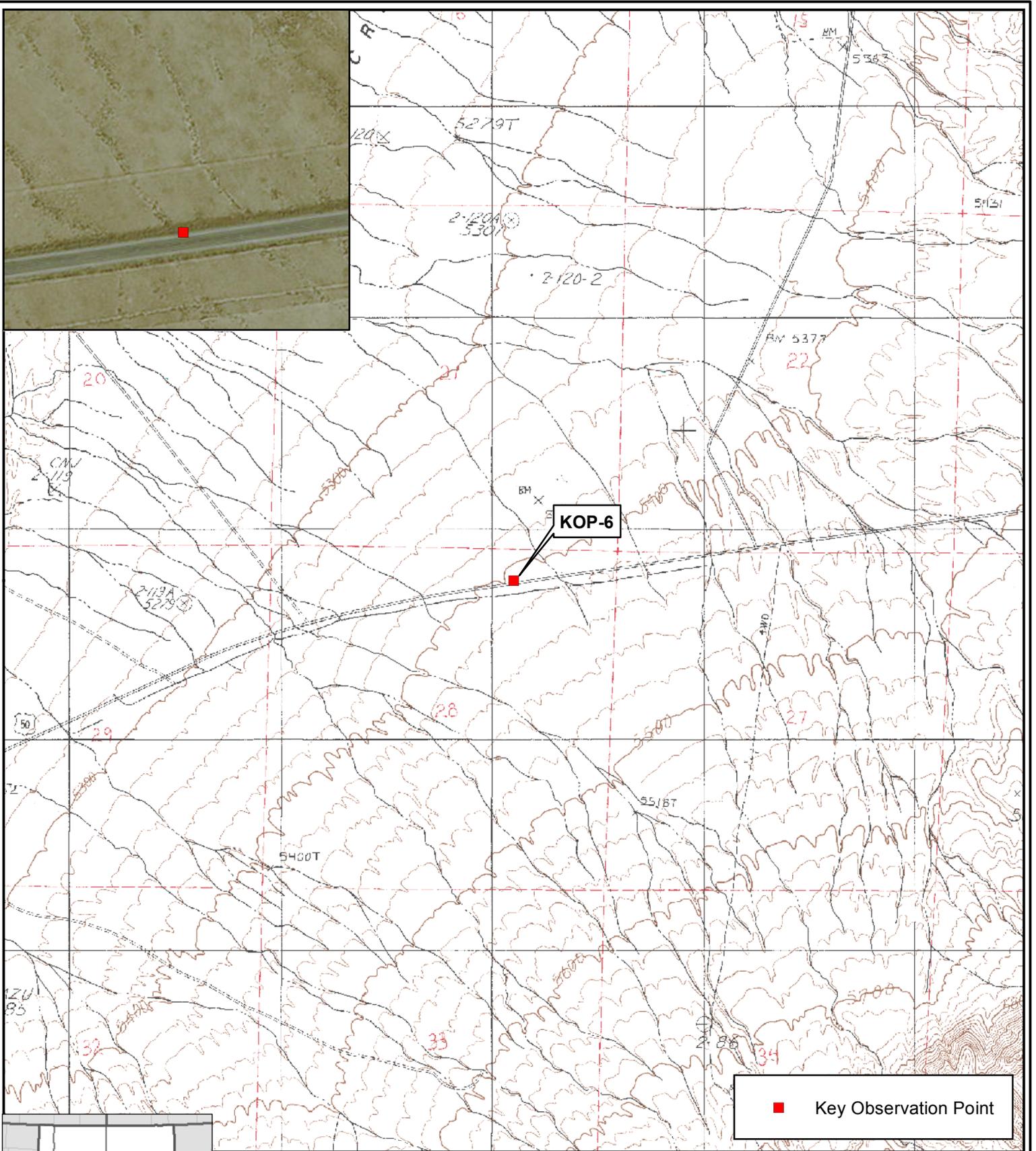


**Key Observation Point 5 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

USGS 7.5' Quad:  
 New Pass, Nevada 1990  
 T20N, R39E, Sec. 15

Map Prepared By Cardno  
 9/3/2015

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<a href="http://www.cardno.com">www.cardno.com</a>	
Map Projection: NAD 1983 UTM Zone 11N	



**Key Observation Point 6 Location Map**

Tungsten Mountain Project  
Ormat Technologies, Inc.  
Churchill County, Nevada

USGS 7.5' Quad:  
New Pass, Nevada 1990  
T20N, R39E, Sec. 28

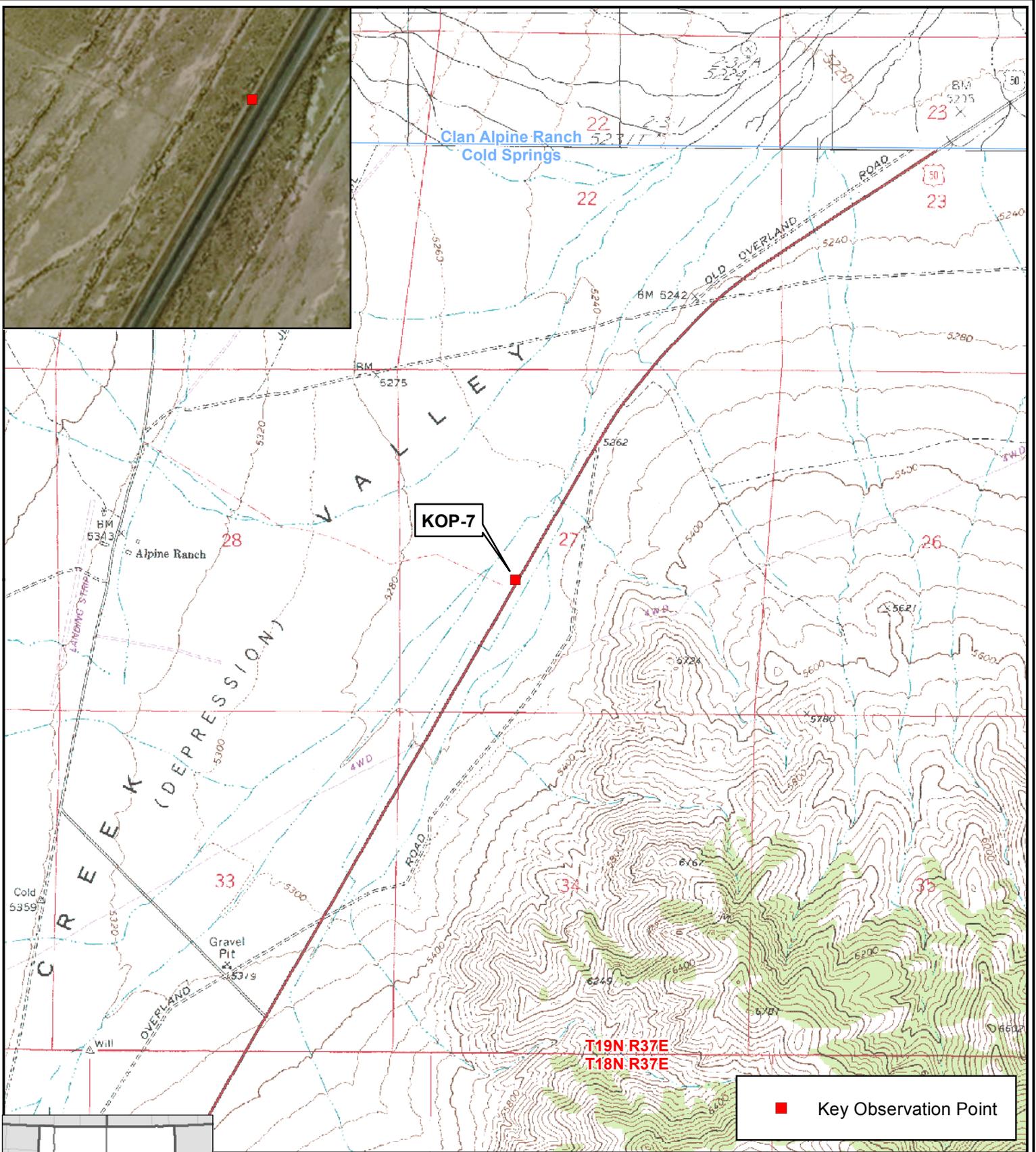
Map Prepared By Cardno  
9/3/2015



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Reno, Nevada 89511 fax (775) 828-4367

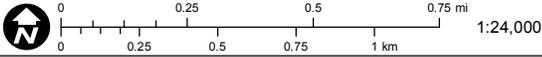
[www.cardno.com](http://www.cardno.com)

Map Projection: NAD 1983 UTM Zone 11N



**KOP-7**

■ Key Observation Point



**Key Observation Point 7 Location Map**  
 Tungsten Mountain Project  
 Ormat Technologies, Inc.  
 Churchill County, Nevada

USGS 7.5' Quads:  
 Clan Alpine Ranch, Nevada 1990  
 Cold Springs, Nev. 1969  
 T19N, R37E, Sec. 27



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 Reno, Nevada 89511 fax (775) 828-4367

[www.cardno.com](http://www.cardno.com)

Map Prepared By Cardno  
 9/3/2015

Map Projection: NAD 1983 UTM Zone 11N



**Project Location**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

**SECTION A. PROJECT INFORMATION**

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>19N</u> Range <u>37E</u> Section <u>33</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 1 Alpine Road		
3. VRM Class Unclassified		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans to yellows from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows and sporadic grays, and greens	Dark brown utility poles.
TEXTURE	Fore/midground smooth and uniform, non-contrasting. Background contrasting, discontinuous, undulating	Stippled, scattered and continuous, uniform	Smooth and ordered

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, bold, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns or tans
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Power Line Poles uniform, continuous,matte

**SECTION D. CONTRAST RATING**     SHORT TERM     LONG TERM

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
				X		X					X			
			X			X						X		
ELEMENTS	Form			X		X				X			3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line			X		X				X				
	Color		X			X					X			
	Texture			X		X					X			
Evaluator's Names											Date			
Harold Brewer											9/2/15			
Tyrell Milliron											9/2/15			

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**SECTION D. (Continued)**

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Comments from item 2.

KOP 1 is located approximately 0.5 miles south of the project site and provides the first view of the new transmission line for motorized travelers heading north from Cold Springs on Hwy 50. The observation angle is slightly elevated above the transmission line area allowing for a view of the E-W trending power poles. From the KOP 1 location the viewer would see a mix of existing and new power line poles and the natural landscape of the open valley floor. Similar disturbances preexist on the landscape, so changes to the landscape would be weak. Changes to the landscape form and line would be weak since little surface disturbance is required for project development. Alterations to the vegetation would also be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the distribution lines and poles. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

None. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 1 shows the location of the proposed transmission line connection with the existing transmission line below the red arrow. This is the view for travelers heading north on Alpine Road or Highway 50 to the right of the photo. The new transmission line will be in a north direction from the existing line, running to Alpine Road and on to the power plant at the toe of the range in the background. From KOP 1 the viewshed can be divided into two distinct boundaries; the fore/mid ground and the background. The foreground and midground consists of open, relatively smooth, flat, slightly concave valley floor sloping south. Vegetation is composed primarily of indistinct sage brush scrub which is low, uniform, and continuous with predominate colors of yellow, grays, light tans or browns and occasional green. The background consists of rugged terrain comprised of small ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns and grays. From this observation point, the casual observer will be exposed to the first view of the project since they will be slightly elevated above the site as they head north on Hwy 50 or Alpine Road. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be broken and discontinuous, thereby reducing contrasting impacts to the landscape lines and form since power lines will not protrude above the skyline. The project will be extending existing visual disturbances further to the north and east from this viewpoint. However, non-natural features to line and form already exist from the utility lines and poles.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1909
<b>Location ID:</b> KOP 1	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 355° N	<b>Waypoint ID:</b>
<b>UTM East:</b> 429158	<b>UTM North:</b> 4368570

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

**SECTION A. PROJECT INFORMATION**

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>19N</u> Range <u>37E</u> Section <u>28</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 2 Alpine Road		
3. VRM Class Unclassified		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans to browns from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows, sporadic grays, and greens	Dark brown utility poles.
TEXTURE	Fore/midground smooth and uniform, non-contrasting. Background contrasting, discontinuous, undulating	Stippled, scattered and continuous, uniform	Smooth and ordered

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, bold, blocky, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns or tans
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Power Line Poles uniform, continuous,matte

**SECTION D. CONTRAST RATING**     SHORT TERM     LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names	Date
	Form		X				X				X			Harold Brewer	9/2/15
	Line			X			X				X			Tyrell Milliron	9/2/15
Color		X				X					X				
Texture			X			X					X				

Comments from item 2.

KOP 2 is located approximately 2 miles along Alpine Road W, north of Hwy 50 and provides the first view of the new transmission line (Option #1) for motorized travelers heading north along Alpine Road where the Transmission line starts to parallel Alpine Road. The observation angle is level with the transmission line area allowing for a view of the N-S trending power poles. From this location the viewer would see a mix of existing and new power line poles and the natural landscape of the open valley floor. Similar disturbances preexist on the landscape, so changes to the landscape would be weak. Changes to the landscape form and line would be weak since little surface disturbance is required for project development. Alterations to the vegetation would also be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the distribution lines and poles. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

None. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 2 shows the location of the proposed transmission line where it connects and begins to run parallel to Alpine Road (Option #1). The transmission line begins below the red arrow and continues towards the viewer. This is the view to travelers heading north on Alpine Road from Highway 50 which runs against the toe of the slope in the background. From KOP 2 the viewshed can be divided into two distinct boundaries; the fore/mid ground and the background. The foreground and midground consists of open, relatively smooth, flat, slightly concave valley floor sloping south. Vegetation is composed primarily of indistinct sage brush scrub which is low, uniform, and continuous with predominate colors of yellow, grays, light tans or browns and green. The background consists of rugged terrain comprised of small ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns and grays. From this observation point, the casual observer will be get their first exposure to the transmission line up close. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be broken and discontinuous, thereby reducing contrasting impacts to the landscape lines and form since distant power lines will not protrude above the skyline. The project will be extending existing visual disturbances closer to Alpine Road at this viewpoint. However, non-natural features to line and form already exist from the utility lines, poles and dirt roads with exposed natural sediment.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1910
<b>Location ID:</b> KOP 2	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 132° SE	<b>Waypoint ID:</b>
<b>UTM East:</b> 428681	<b>UTM North:</b> 4371264

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

**SECTION A. PROJECT INFORMATION**

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>19N</u> Range <u>37E</u> Section <u>21</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 3 Alpine Road		
3. VRM Class Unclassified		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately uneven, and random in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans to yellows from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows and sporadic grays, and greens	Dark brown utility poles.
TEXTURE	Fore/midground, and background contrasting, discontinuous, undulating.	Stippled, scattered and continuous, uniform	Smooth and ordered

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, bold, blocky, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns or tans
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Power Line Poles uniform, continuous,matte

**SECTION D. CONTRAST RATING**     SHORT TERM     LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names	Date
	Form	X					X				X			Harold Brewer	9/2/15
	Line	X		X			X				X			Tyrell Milliron	9/2/15
Color		X				X					X				
Texture			X			X					X				

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SECTION D. (Continued)

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Comments from item 2.

KOP 3 is located approximately 2.9 miles along Alpine Road W, north of Hwy 50 and provides the first view of the new transmission line (Option #2) for motorized travelers heading north along Alpine Road where the transmission line starts to parallel Alpine Road. The observation angle is level with the transmission line area allowing for a view of the N-S trending power poles. From the KOP 2 location the viewer would see a mix of existing and new power line poles and the natural landscape of the open valley floor. Similar disturbances preexist on the landscape, so changes to the landscape would be weak. Changes to the landscape form and line would be weak since little surface disturbance is required for project development. Alterations to the vegetation would also be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the distribution lines and poles. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

None. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 3 shows the location of the proposed transmission line where it connects and begins to run parallel to Alpine Road (Option #2). The transmission line begins below the red arrow on the back side of the rise and continues towards the viewer. This is the view to travelers heading north on Alpine Road from Highway 50 which runs against the toe of the slope in the background. From KOP 3 the viewshed can be divided into three distinct boundaries; the foreground, midground and the background. The foreground consists of open, relatively smooth, slightly rising valley floor sloping north. Vegetation is composed primarily of indistinct sage brush scrub which is low, uneven, and sparse with predominate colors of yellow, grays, light tans or browns and green. The midground consists of a small ridge perpendicular to the view offering the viewer an inferior view of the transmission poles. The background consists of rugged terrain comprised of small ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns and grays. From this observation point, the casual observer will be get their first exposure to the transmission line up close. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be broken and discontinuous, thereby reducing contrasting impacts to the landscape lines and form of the near transmission lines. The distant transmission lines will be hidden by the low rise in the midground. The project will be introducing new visual disturbances closer to Alpine Road at this viewpoint. However, non-natural features to line and form already exist from the utility lines, poles and dirt roads with exposed natural sediment in the nearby area.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1913
<b>Location ID:</b> KOP 3	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 132° SE	<b>Waypoint ID:</b>
<b>UTM East:</b> 428666	<b>UTM North:</b> 4372639

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

**SECTION A. PROJECT INFORMATION**

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>20N</u> Range <u>38E</u> Section <u>7</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 4 Alpine Road		
3. VRM Class Unclassified		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and dropping off but smooth in the mid-ground. Contrasting, rugged, coarse and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans to yellows from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows and sporadic grays, and greens	Mixed light grays gravel surface, tans from native surface road. Dark brown utility poles.
TEXTURE	Fore/midground smooth and uniform, non-contrasting. Background contrasting, discontinuous, undulating	Stippled, scattered and continuous, uniform	Smooth and ordered

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area.	Removed in project area, no changes undisturbed areas.	Prominent, bold, blocky, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns, and tans
TEXTURE	Smooth, uniform, matte.	Removed in project area, no changes in undisturbed areas.	Power Line Poles and generation station uniform, continuous, and matte. PV modules flat, smooth, uniform, continuous, and glossy.

**SECTION D. CONTRAST RATING**    SHORT TERM    LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
				X		X						X		
			X			X						X		
	X				X						X			
	Evaluator's Names												Date	
	Harold Brewer												9/2/15	
	Tyrell Milliron												9/2/15	

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SECTION D. (Continued)

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Comments from item 2.

KOP 4 is located approximately 4.5 miles southwest of the main project site and provides the first view of the generation plant for motorized travelers heading north along Alpine Road. The observation angle is level with the transmission line area allowing for a view of the N-S trending power poles and the generation plant to the north east. From the KOP 4 location the viewer would see a mix of new power line poles along the right (south) side of the road and the natural landscape of the open valley floor. There are no similar preexisting disturbances on the landscape, so changes to the landscape would be strong. Changes to the landscape form and line would be weak since little surface disturbance is required for project development in the vicinity of KOP 4. Changes to the landscape form and line nearer to the generation plant would be also be weak due to the distance and they are below the skyline. Alterations to the vegetation would be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the distribution lines and poles. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

Project mitigation measures addressing paint colors for structures, site lighting, reclamation of disturbed areas, and reflectivity of distribution poles will be addressed in the EA. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 4 shows the location of the proposed transmission line (right arrow) as it parallels Alpine Road and the first view of the power generation plant (left arrow). This is the view to travelers heading northeast on Alpine Road north of Clan Alpine. The new transmission line be on the south side of Alpine Road until it nears the power plant (right arrow). The power plant will be constructed at the toe of the range in the midground. From KOP 1 the viewshed can be divided into three distinct boundaries; the foreground, midground and the background. The foreground consists of open, relatively smooth, flat, slightly concave valley floor sloping southwest. Vegetation is composed primarily of indistinct sage brush scrub which is low and even but discontinuous, with predominate colors of yellow, grays, light tans or browns and occassional green. The midground and background consist of rugged terrain comprised of small ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns and grays. From this observation point, the casual observer will be exposed to the first superior view of the power generation site since they will be slightly elevated above the site as they head northeast on Alpine Road. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be broken and discontiguous, thereby reducing contrasting impacts to the landscape lines and form since the power facility will not protrude above the skyline. The project will be extending existing visual disturbances further to the north and east from this viewpoint. However, non-natural features to line and form already exist from the exposed natural soil of the roadway which will run parallel to the proposed transmission line.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1914
<b>Location ID:</b> KOP 4	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 29° NE	<b>Waypoint ID:</b>
<b>UTM East:</b> 436578	<b>UTM North:</b> 4385488

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

SECTION A. PROJECT INFORMATION

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>20N</u> Range <u>39E</u> Section <u>15</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 5 Antelope Road		
3. VRM Class Unclassified		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans from alluvial topsoils, light tans to light grays on the dry lake bed, dark browns and grays from exposed rock in background range.	Monotonous, dull yellows, sporadic grays, and greens	Dark brown utility poles.
TEXTURE	Fore smooth and uniform, midground smooth contrasting dry lake. Background contrasting, discontinuous, undulating	Stippled, scattered, uneven, matte	Bold and blocky.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, bold, blocky, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns, and tans
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Generation plant bold, blocky, and matte. PV modules flat, smooth, uniform, continuous, and glossy.

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.	DEGREE OF CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
				X		X						X		
			X			X						X		
ELEMENTS	Form			X		X						X		3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	Line			X		X						X		
	Color		X			X						X		
	Texture		X			X						X		
Evaluator's Names											Date			
Harold Brewer											9/2/15			
Tyrell Milliron											9/2/15			

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SECTION D. (Continued)

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Comments from item 2.

KOP 5 is located approximately 7.8 miles southeast of the main project site and provides the first view of the generation plant for motorized travelers heading northwest along Antelope Road. The observation angle is level with the project area allowing for a view of the the generation plant to the northwest. From this location the viewer would see the generation plant and the PV modules along the left (west) side of the road and the natural landscape of the open valley floor. There are no similar preexisting disturbances on the landscape, so changes to the landscape would be strong. Changes to the landscape form and line would be weak since little surface disturbance is required for project development in the vicinity of KOP 5. Changes to the landscape form and line nearer to the generation plant would be also be weak due to the distance, and they are below the skyline. Alterations to the vegetation would be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the generation plant and PV modules. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

Project mitigation measures addressing paint colors for structures, site lighting, reclamation of disturbed areas, and reflectivity of distribution poles will be addressed in the EA. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 5 shows the location of the proposed generation plant below the red arrow. Travelers heading north on Antelope Road (Road to Antelope) from Highway 50 will get their first view of the project area on the toe of the distant mountains. From KOP 5 the viewshed can be divided into three distinct boundaries; the foreground, midground and the background. The foreground consists of open, relatively smooth, flat, slightly concave alluvial fan sloping north to the dry lake bed. Vegetation is composed primarily of indistinct salt desert scrub and grasses which are low, uniform, and continuous with predominate colors of yellow, and light tans or browns and occasional dark green. The midground consists of a smooth flat continuous dry lake bed surface with little to no vegetation cover. The predominant color is light tan. The background consists of rugged terrain comprised of tall ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns, grays and blues. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be above the tallest of the structures, thereby reducing contrasting impacts to the landscape lines and form since facilities will not protrude above the skyline. The project will be extending existing visual disturbances further to the south from this viewpoint. Specifically, the geothermal structures, PV modules, and distribution line will be in contrast to the existing landscape form and lines since they will be introducing additional elements into the landscape. However, non-natural features to line and form already exist from the utility lines, poles and existing structures in the vicinity of the proposed generation plant.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1917
<b>Location ID:</b> KOP 5	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 301° NW	<b>Waypoint ID:</b>
<b>UTM East:</b> 450552	<b>UTM North:</b> 4383145

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

SECTION A. PROJECT INFORMATION

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>20N</u> Range <u>39E</u> Section <u>28</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 6 Highway 50		
3. VRM Class Unclassified		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Weak, contrasting linear feature from utility poles a
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Weak, vertical and repetitive from utility poles.
COLOR	Predominately light tans to yellows from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows, sporadic grays, and greens	Browns utility poles.
TEXTURE	Fore/midground smooth and uniform, non-contrasting. Background contrasting, discontinuous, undulating	Stippled, scattered, continuous, and uniform.	Bold and blocky.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, bold, blocky, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Greens, grays, browns, and tans
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Generation plant bold, blocky, and matte. PV modules flat, smooth, uniform, continuous, and glossy.

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.	DEGREE OF CONSTRAT	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
				X		X						X		
			X			X						X		
ELEMENTS	Form			X		X						X		3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	Line			X		X						X		
	Color		X			X						X		
	Texture		X			X						X		
Evaluator's Names												Date		
Harold Brewer												9/2/15		
Tyrell Milliron												9/2/15		

Comments from item 2.

KOP 6 is located approximately 8.1 miles southeast of the main project site and provides the first view of the generation plant for vehicles traveling west on Hwy 50. The observation angle is level with the project area allowing for a view of the the generation plant to the northwest. From this location the viewer would see the generation plant and the PV modules along the right (northwest) side of the road and the natural landscape of the open valley floor. There are no similar preexisting disturbances on the landscape, so changes to the landscape would be strong. Changes to the landscape form and line would be weak since little surface disturbance is required for project development in the vicinity of KOP 6. Changes to the landscape form and line nearer to the generation plant would be also be weak due to the distance, and they are below the skyline. Alterations to the vegetation would be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. The greatest impacts to the viewshed will come from the generation plant and PV modules. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

Project mitigation measures addressing paint colors for structures, site lighting, reclamation of disturbed areas, and reflectivity of distribution poles will be addressed in the EA. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 6 shows the location of the proposed generation plant below red arrow. Travelers heading west on Highway 50 from Austin will get their first view of the project area on the toe of the distant mountains. From KOP 6 the viewshed can be divided into three distinct boundaries; the foreground, midground and the background. The foreground consists of open, relatively smooth, flat, slightly concave alluvial fan sloping north to the dry lake bed. Vegetation is composed primarily of indistinct salt desert scrub and grasses which are low, uneven, and transitional with predominate colors of yellow, and light tans or browns and occasional dark green. The midground consists of a smooth flat continuous dry lake bed surface with little to no vegetation cover. The predominant color is light tan. The background consists of rugged terrain comprised of tall ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns, grays and blues. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be above the tallest of the structures, thereby reducing contrasting impacts to the landscape lines and form since facilities will not protrude above the skyline. The project will be extending existing visual disturbances further to the south from this viewpoint. However, non-natural features to line and form already exist from the existing fenceline.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1919
<b>Location ID:</b> KOP 6	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 316° NW	<b>Waypoint ID:</b>
<b>UTM East:</b> 449019	<b>UTM North:</b> 4380953

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date	9/2/15
District	Carson City
Resource Area	Stillwater Field Office
Activity (program)	Visual Resources

**SECTION A. PROJECT INFORMATION**

1. Project Name Ormat Tungsten Mountain	4. Location Township <u>19N</u> Range <u>37E</u> Section <u>27</u>	5. Location Sketch  See attached map
2. Key Observation Point KOP 7 Highway 50		
3. VRM Class Unclassified		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground, contrasting, rugged, course and discontinuous in background	Indistinct, simple, smooth, low, rounded shrubs and forbes	Prominent, contrasting linear feature from utility poles and barbed wire fence
LINE	Horizontal, linear unbroken line at valley floor/toe of slope, irregular, continuous horizon line along ridge top. Diagonal/angular lines background.	Continuous, repetitive, simple in fore and mid ground, indistinct in background	Prominent, vertical and repetitive from utility poles
COLOR	Predominately light tans to yellows from alluvial topsoils to dark browns and grays from exposed rock in background range	Monotonous, dull yellows and sporadic grays, and greens	Dark brown utility poles.
TEXTURE	Fore/midground smooth and uniform, non-contrasting. Background contrasting, discontinuous, undulating	Stippled, scattered and continuous, uniform	Smooth and ordered

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Predominately smooth, uniform in fore and mid-ground. Distinct, narrow, contrasting, symmetrical in project area	Removed in project area, no changes undisturbed areas.	Prominent, symmetrical and linear
LINE	Contoured, straight, simple for construction area, no changes for undisturbed areas.	Removed in project area, no changes in undisturbed areas.	Geometric, parallel, hard, angular
COLOR	In construction area, exposed mineral soils tan to brown, whites to grays. No change to undisturbed areas	Removed in project area, no changes in undisturbed areas.	Browns
TEXTURE	Smooth, uniform, matte	Removed in project area, no changes in undisturbed areas.	Power Line Poles and fence uniform, continuous,matte

**SECTION D. CONTRAST RATING**     SHORT TERM     LONG TERM

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
			X				X				X			
			X				X				X			
ELEMENTS	Form		X				X				X			3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line		X				X				X			
	Color		X				X				X			
	Texture		X				X				X			
Evaluator's Names												Date		
Harold Brewer												9/2/15		
Tyrell Milliron												9/2/15		

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SECTION D. (Continued)

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Comments from item 2.

KOP 7 is located approximately 8.1 miles southeast of the main project site and provides the first view of the new transmission line where it connects with the existing power line for vehicles traveling west on Hwy 50. The observation angle is level with the project area allowing for a view of the the transmission lines to the northwest. From this location the viewer would see the generation plant and the PV modules along the right (southwest) side of the road and the natural landscape of the open valley floor. There are similar preexisting disturbances on the landscape, so changes to the landscape would be weak. Changes to the landscape form and line would be weak due to existing similar disturbances and since little surface disturbance is required for project development in the vicinity of KOP 7. Changes to the landscape form and line nearer to the generation plant would be also be weak as they are below the skyline. Alterations to the vegetation would be strong within the project area since it will be removed, but the predominant vegetation is low growing sage brush scrub so visual impacts would be low since vegetation outside of the project area will not be disturbed. These objects would provide a weak contrast to natural line and form of the landscape. Although the project will introduce a moderate or weak contrast to the form, line, color and texture of the land from this location, the change is considered acceptable for this area with the proposed interim VRM Class III designation.

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Additional Mitigating Measures (See item 3)

None. Please refer to Environmental Consequences section for specific mitigation recommendations.



KOP 7 shows the location of the proposed transmission line connection with the existing transmission line below the red arrow. This is the view to travelers heading southwest on Highway 50 to the left of the photo. The new transmission line will run in a north direction from the existing line, running to Alpine Road to the right of this photo. From KOP 7 the viewshed can be divided into two distinct boundaries; the fore/mid ground and the background. The foreground and midground consists of open, relatively smooth, flat, slightly concave valley floor sloping south. Vegetation is composed primarily of indistinct sage brush scrub which is low, uniform, and continuous with predominate colors of yellow, grays, light tans or browns and occasional green. The background consists of rugged terrain comprised of small ridges and canyons and pyramidal, angular shapes that provide dark and light contrasts from shadows. Predominant colors are dark browns and grays. From this observation point, the casual observer will be exposed to the closest view of the project from Highway 50 and slightly elevated as the highway runs along the toe of a slope. The predominant vegetation is under three feet in height and will not provide screening of the project. The horizon line will be broken and discontinuous, thereby reducing contrasting impacts to the landscape lines and form since power lines will not protrude above the skyline. The project will be extending existing visual disturbances further to the north and east from this viewpoint. However, non-natural features to line and form already exist from the utility lines, poles, fences and exposed natural soil from a dirt two-track road on the northwest side of the highway.

<b>Project:</b> Ormat Tungsten Mountain	<b>Date:</b> 9/2/15
<b>Evaluators:</b> Harold Brewer and Tyrell Milliron	<b>Photo ID:</b> 1921
<b>Location ID:</b> KOP 7	<b>Lens Focal Length:</b> 50 mm
<b>Azimuth:</b> 212° SW	<b>Waypoint ID:</b>
<b>UTM East:</b> 430423	<b>UTM North:</b> 4370520