



#5997
Interwest Mining Company
Huntington Office
P. O. Box 310
15 North Main Street
Huntington, UT 84528

October 17, 2019

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DIV OF OIL, GAS & MINING

Utah Coal Program
Utah Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Subj: Clean Copy Submittal to the Amendment to the Cottonwood Mine Reclamation Plan to Allow Emery County Road Department to Install a Truck Turn Around within the Disturbed Area of the TMA Area, Cottonwood/Wilberg Mine, C/015/0019, Emery County, Utah, Task ID 5997

PacifiCorp, by and through its wholly-owned subsidiary, Interwest Mining Company, as mine manager, hereby submits the clean copies to the above noted Task (ID #5997). The Division conditionally approved this amendment to the Cottonwood MRP on October 9, 2019. Two "Clean Copies" are included herewith along with the original C2 for insertion instructions into the Cottonwood MRP volume. Please stamp "INCORPORATED" and return one copy for PacifiCorp's permit. If there are any questions or concerns regarding this submittal, please contact Dennis Oakley at 435-687-4825.

Sincerely,

Kenneth S. Fleck

Manager of Geology and Environmental Affairs.

Enclosures

PacifiCorp

Cottonwood/Wilberg Mine

C/015/0019

Volume 2, Part 4, pages 26 thru 29

Replace these pages

Due to the natural dip of the strata, the Trail Mountain Access (TMA) portal in Cottonwood Canyon (final reclamation in November 2014) is the lowest within the existing Cottonwood/Wilberg mine permit area. Groundwater intercepted during the development of the TMA development entries flows to the TMA portal. To prepare for the permanent discharge, PacifiCorp installed a series of three sediment traps located 100 feet apart within the mine to settle out particles prior to discharge. Refer to the as-built drawing of the system in Appendix I. A solid block seal (built to MSHA requirements) was constructed 25 feet in by the portal entrance. A French drain system was installed with 6" perforated PVC pipe behind the seal. A secondary decant pipe was installed at the bottom of the seal along with a backup decant line installed 2 feet from the roof. Each line was fitted with a shut-off valve. Durable drain rock of 2-4 inch sizing was placed over the perforated drain line. Pea sized gravel was placed over the drain rock as a filtering system. The thickness of the filtering system is approximately 4 feet thick.

Mine water is discharged through the seal into a 6 inch buried PVC that parallels the Emery County Road 506 for approximately 200 feet below the portal. The pipe drops into a 36 inch bypass culvert which discharges into the Cottonwood Canyon Creek. Since 2001 the discharge of mine water has averaged approximately 21 gpm. This discharge is considered permanent for post-mining land use. PacifiCorp currently possesses a UPDES permit (#UT0022896-001) for this site and monitors the quality and quantity on a monthly basis at the inlet of the 36" bypass culvert. At reclamation, Emery County Road Department requested that the 6 inch buried PVC line be left in place to keep ice from potentially building up in a road ditch in the winter and pushing ice onto the road. In a letter dated February 2015, Emery County Road Department committed to maintaining the line within their right of way. See Appendix I to review the letter from Emery County and the updated design drawing from 2001.

In 2019, Emery County requested that an area in the TMA disturbed area be used as a snow plow turn-around. As the County is responsible for plowing the Cottonwood Canyon road, there is no safe place for their plows to turn around. PacifiCorp has given the County an easement to utilize this area. The approved easement is found in Appendix I. Also included in Appendix I is the plan for this area. The area will be graveled and include a culvert as a permanent reclamation feature.

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Cottonwood/Wilberg Mines

Disposal Areas

Old Waste Rock Site: Located 1.5 miles south of the Cottonwood/Wilberg Mine, this 48.62 acre site was originally designed as an open storage and truck loadout for the Cottonwood/Wilberg Mine. The Right-of-Way grant (UTU-37642) was issued by the Bureau of Land Management in 1977 but subsequent developments, specifically construction of a concrete storage silo for coal storage at the mine, changed the function of this site. A modification was submitted to use this site for storage of waste rock produced by underground development mining in the Cottonwood/Wilberg Mine.

The Right-of-Way UTU-37642 has also been modified to accommodate coal bed methane degasification activities conducted by Texaco Inc. Listed below is a list the acreage descriptions of the Right-of-Way including original grant, modifications and disturbance associated with the facility:

BLM Right-of-Way UTU-37642	
Original Grant (1997)	48.62 acres
1997 Relinquishment (Texaco Well 35-14)	1.08 acres
<u>1999 Relinquishment (Texaco Well 34-80)</u>	<u>12.98 acres</u>
TOTAL RIGHT-OF-WAY UTU-37642	34.56 acres
Reclaimed Area (Phase III Released July 2009)	13.81 acres
2015 Relinquishment	32.7 acres
ROW and Disturbed Area Remaining	1.86 acres

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Approximately 13.81 acres of the old waste rock site has been reclaimed. Material to cover the waste rock was taken from the perimeter berms. Phase 1 bond release was approved on July 22, 1999. Phase III bond release was approved July 22, 2009. In October 2015, the BLM approved relinquishment of 32.7 acres bringing the total right of way held by PacifiCorp to 1.86 acres.

The remaining 1.86 acres has been retained as a soil and rock storage area. This soil, which is native topsoil and subsoil from the Cottonwood Fan Portal area, will be used for topsoil for the Cottonwood/Wilberg mine site (refer to R645-301-200: Soils). Boulders will be used for riprap construction of the reconstructed channel, if needed. The soil quantity is approximately 120 cubic

yards.

Once this material is removed from the site, the area will be roughened and reseeded as outlined in R645-301-300: Biology.

Note: Reclamation of the rock and soil storage area was completed in March 2018.

542.730: Disposal of Coal Mine Waste

Coal mine wastes that are uncovered during earthmoving activities shall be segregated and buried in fill areas and covered to ensure that the fill area is suitable for reclamation and revegetation compatible with the natural surroundings and the approved post-mining land use. All coal mine wastes will be covered with at least four feet of suitable fill.

542.740: Noncoal Mine Wastes

During the demolition of the mine site, all recoverable noncoal waste materials were collected and disposed of. Any noncoal waste recovered during earthwork activities will be collected and disposed off-site in an approved landfill.

Note: All non-coal mine wastes were hauled to the Emery County Landfill and disposed.

550: Reclamation Design Criteria

Reclamation design criteria have been discussed in the previous section of 542. Any additional criteria will be discussed in the following sections.

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552: Permanent Features

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Small depressions, in the form of pocks (refer to R645-301-700: Hydrology for a complete discussion for sediment control measures) shall be constructed on all areas of the Cottonwood/Wilberg mine site reclaimed area. These pocks will retain moisture, minimize erosion, create and enhance wildlife habitat, and assist revegetation. The area for which these pocks will be developed is shown on the RUSLE map (Plate 4E) in the Maps Section.

Other features such as boulders and clusters of boulders will be randomly placed throughout the

reclaimed surfaces to create habitat for small mammals, birds, and raptors. Boulders will be gathered on-site for this purpose during backfilling and grading activities.

553.100: Approximate Original Contour

The strategy of the reclamation plan is to design the final reclamation contours to achieve approximate original contour (AOC) criteria. Rock outcrops will be exposed to blend in with the natural topography of the area.

Fill slopes will be constructed to no greater than a 2 horizontal to 1 vertical gradient. Cut slopes will be created with that same criteria.

553.120: Highwall Elimination

Final reclamation of highwalls at the Cottonwood/Wilberg mines is accomplished in three phases; demolition, earthwork, and revegetation. These phases follow strict requirements set forth by the Utah Coal Rules R645-301-100 through 800. Highwalls at the Cottonwood/Wilberg mines were inventoried by Office of Surface Mining and the Division of Oil, Gas and Mining in 1997. Eighteen (18) areas of concern were identified and are listed in Appendix B. Eight (8) of the areas considered highwalls were constructed prior to the ruling (May 3, 1978) of the Surface Mining Control and Reclamation Act (SMCRA). Seven (7) portal highwalls were constructed after that date. Three (3) of the areas of concern have no associated highwalls. Sites constructed prior to May 3, 1978 need only to eliminate highwalls to the extent practicable using all reasonably available spoil. All post-SMCRA sites are required to completely eliminate highwalls. Appendix B exhibits the extent of backfill that will be used to eliminate as practicable or eliminate completely these highwalls. This is shown in a photo essay for each of these portals. All highwalls at the Cottonwood/Wilberg mines will be eliminated concurrently with final reclamation activities. A detailed cost estimation for all reclamation activities is located in Appendix H.

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Volume 2, Part 4, Appendix I

Add site plan, hydrological calculations and data, Attachment A, Attachment B, Public Road Easement Document

PacifiCorp

Cottonwood/Wilberg Mine

C/015/0019

Appendix I

**Plan for Truck Turnaround at the Trail Mountain Access
Reclamation Site**

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Site Plan:

Emery County proposes to construct a snow plow truck turn around within the disturbed area of the 1.86 acre site of the Trail Mountain Access area. The County claims that their trucks cannot safely turn around at the end of the county road #506. The county expressed their concerns with PacifiCorp about acquiring an easement within the company's reclamation site. PacifiCorp agreed with the county and issued them an easement to allow them to construct the turnaround.

Within the easement, approximately 0.04 acres will be impacted by the turnaround. A 70 foot 18" CMP will be installed which will keep the truck from impacting any drainage from above the site. Refer to the hydrological calculations for contributing runoff and culvert sizing.

A large boulder on the east side of the easement will be removed and disposed of. The surface of the turnaround will be covered with 6" of untreated base course. The base course will be graded to allow for runoff and compacted to the specifications of the Emery County Road Department. The turnaround and all its appurtenances will be a permanent feature of the reclamation site.

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NOAA Atlas 14, Volume 1, Version 5
Location name: Huntington, Utah, USA*
Latitude: 39.3184°, Longitude: -111.1869°
Elevation: 7737.39 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lilken Hiner, Kazungu Malaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yerchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (In Inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.140 (0.122-0.164)	0.179 (0.157-0.212)	0.247 (0.214-0.289)	0.304 (0.261-0.358)	0.393 (0.328-0.462)	0.470 (0.386-0.555)	0.559 (0.449-0.664)	0.663 (0.517-0.793)	0.826 (0.615-1.01)	0.976 (0.700-1.22)
10-min	0.212 (0.185-0.249)	0.273 (0.230-0.322)	0.376 (0.325-0.440)	0.463 (0.397-0.544)	0.598 (0.500-0.703)	0.716 (0.587-0.845)	0.852 (0.684-1.01)	1.01 (0.786-1.21)	1.26 (0.939-1.54)	1.49 (1.07-1.85)
15-min	0.263 (0.230-0.309)	0.339 (0.296-0.399)	0.467 (0.403-0.545)	0.574 (0.492-0.675)	0.741 (0.619-0.872)	0.887 (0.727-1.05)	1.06 (0.847-1.25)	1.25 (0.975-1.50)	1.56 (1.16-1.91)	1.84 (1.32-2.29)
30-min	0.354 (0.309-0.416)	0.457 (0.398-0.538)	0.628 (0.542-0.734)	0.773 (0.662-0.908)	0.998 (0.834-1.18)	1.19 (0.979-1.41)	1.42 (1.14-1.69)	1.68 (1.31-2.02)	2.10 (1.56-2.57)	2.48 (1.78-3.09)
60-min	0.438 (0.383-0.515)	0.565 (0.493-0.665)	0.777 (0.671-0.909)	0.957 (0.819-1.12)	1.24 (1.03-1.45)	1.48 (1.21-1.75)	1.76 (1.41-2.09)	2.08 (1.62-2.50)	2.60 (1.93-3.18)	3.07 (2.20-3.82)
2-hr	0.540 (0.474-0.624)	0.683 (0.600-0.791)	0.909 (0.794-1.05)	1.11 (0.960-1.28)	1.43 (1.21-1.65)	1.70 (1.41-1.99)	2.02 (1.64-2.38)	2.40 (1.89-2.84)	2.99 (2.25-3.61)	3.53 (2.56-4.35)
3-hr	0.612 (0.546-0.697)	0.769 (0.684-0.879)	0.988 (0.877-1.13)	1.19 (1.05-1.36)	1.50 (1.30-1.72)	1.76 (1.50-2.03)	2.08 (1.74-2.42)	2.45 (2.00-2.68)	3.05 (2.40-3.66)	3.60 (2.73-4.39)
6-hr	0.807 (0.726-0.903)	1.00 (0.906-1.12)	1.24 (1.11-1.39)	1.44 (1.29-1.62)	1.73 (1.53-1.95)	1.99 (1.74-2.25)	2.29 (1.97-2.61)	2.64 (2.23-3.04)	3.24 (2.67-3.80)	3.76 (3.05-4.51)
12-hr	1.02 (0.930-1.13)	1.26 (1.15-1.40)	1.54 (1.39-1.71)	1.78 (1.60-1.97)	2.10 (1.87-2.34)	2.36 (2.09-2.64)	2.63 (2.30-2.97)	2.97 (2.56-3.38)	3.57 (3.02-4.11)	4.13 (3.45-4.82)
24-hr	1.18 (1.07-1.31)	1.47 (1.33-1.63)	1.81 (1.64-2.02)	2.09 (1.86-2.32)	2.46 (2.21-2.74)	2.75 (2.45-3.07)	3.06 (2.70-3.41)	3.36 (2.94-3.77)	3.78 (3.26-4.26)	4.17 (3.50-4.87)
2-day	1.40 (1.27-1.55)	1.75 (1.59-1.93)	2.16 (1.96-2.39)	2.50 (2.26-2.77)	2.98 (2.67-3.29)	3.35 (2.99-3.71)	3.75 (3.31-4.17)	4.15 (3.63-4.64)	4.71 (4.05-5.31)	5.16 (4.37-5.86)
3-day	1.57 (1.43-1.75)	1.96 (1.78-2.19)	2.44 (2.20-2.71)	2.83 (2.55-3.14)	3.37 (3.01-3.75)	3.80 (3.37-4.23)	4.25 (3.74-4.74)	4.72 (4.10-5.29)	5.36 (4.59-6.06)	5.88 (4.96-6.69)
4-day	1.74 (1.58-1.95)	2.18 (1.97-2.44)	2.71 (2.45-3.03)	3.15 (2.83-3.52)	3.76 (3.35-4.20)	4.24 (3.75-4.75)	4.75 (4.17-5.32)	5.28 (4.58-5.94)	6.02 (5.13-6.81)	6.60 (5.55-7.53)
7-day	2.15 (1.94-2.40)	2.69 (2.43-3.01)	3.36 (3.02-3.75)	3.91 (3.50-4.37)	4.67 (4.15-5.22)	5.28 (4.65-5.92)	5.92 (5.17-6.65)	6.58 (5.68-7.43)	7.50 (6.36-8.54)	8.23 (6.89-9.45)
10-day	2.48 (2.25-2.76)	3.11 (2.81-3.46)	3.88 (3.50-4.31)	4.50 (4.04-5.00)	5.34 (4.76-5.95)	6.00 (5.31-6.70)	6.69 (5.87-7.49)	7.38 (6.42-8.31)	8.35 (7.14-9.46)	9.11 (7.70-10.4)
20-day	3.45 (3.11-3.83)	4.33 (3.91-4.81)	5.41 (4.88-6.01)	6.27 (5.63-6.96)	7.43 (6.62-8.24)	8.33 (7.36-9.26)	9.26 (8.12-10.3)	10.2 (8.86-11.4)	11.5 (9.83-12.9)	12.5 (10.6-14.2)
30-day	4.24 (3.82-4.69)	5.30 (4.79-5.88)	6.58 (5.93-7.30)	7.59 (6.81-8.40)	8.93 (7.97-9.90)	9.95 (8.84-11.0)	11.0 (9.70-12.2)	12.0 (10.5-13.5)	13.4 (11.6-15.1)	14.5 (12.4-16.5)
45-day	5.26 (4.77-5.83)	6.60 (5.99-7.31)	8.18 (7.40-9.06)	9.42 (8.48-10.4)	11.1 (9.90-12.3)	12.4 (11.0-13.7)	13.7 (12.0-15.2)	15.0 (13.1-16.8)	16.9 (14.5-19.0)	18.3 (15.5-20.8)
60-day	6.31 (5.71-6.97)	7.93 (7.18-8.76)	9.84 (8.89-10.9)	11.3 (10.2-12.5)	13.2 (11.9-14.7)	14.7 (13.1-16.4)	16.2 (14.3-18.1)	17.7 (15.5-19.9)	19.8 (17.0-22.3)	21.4 (18.2-24.3)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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NOAA Atlas 14, Volume 1, Version 5
 Location name: Huntington, Utah, USA*
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NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aeriels](#)

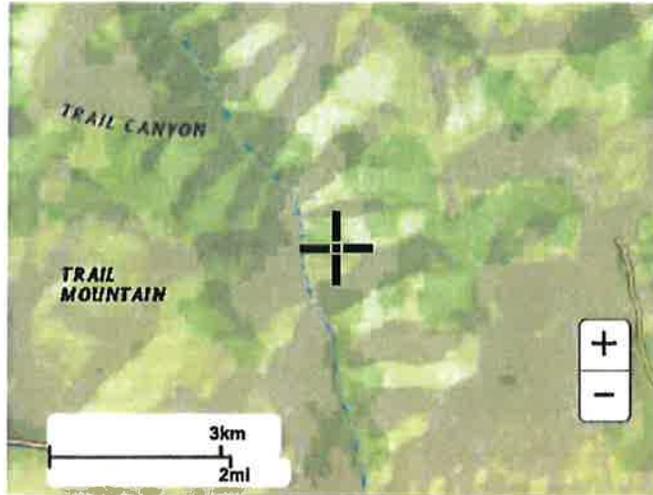
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.68 (1.46-1.97)	2.15 (1.88-2.54)	2.96 (2.57-3.47)	3.65 (3.13-4.30)	4.72 (3.94-5.54)	5.64 (4.63-6.66)	6.71 (5.39-7.97)	7.96 (6.20-9.52)	9.91 (7.38-12.1)	11.7 (8.40-14.6)
10-min	1.27 (1.11-1.49)	1.64 (1.43-1.93)	2.26 (1.95-2.64)	2.78 (2.38-3.26)	3.59 (3.00-4.22)	4.30 (3.52-5.07)	5.11 (4.10-6.07)	6.05 (4.72-7.24)	7.55 (5.62-9.22)	8.92 (6.39-11.1)
15-min	1.05 (0.920-1.24)	1.36 (1.18-1.80)	1.87 (1.61-2.18)	2.30 (1.97-2.70)	2.96 (2.48-3.49)	3.55 (2.91-4.19)	4.22 (3.39-5.02)	5.00 (3.90-5.99)	6.24 (4.64-7.82)	7.36 (5.28-9.18)
30-min	0.708 (0.618-0.832)	0.914 (0.796-1.08)	1.26 (1.08-1.47)	1.55 (1.32-1.82)	2.00 (1.67-2.35)	2.39 (1.96-2.82)	2.84 (2.28-3.38)	3.37 (2.63-4.03)	4.20 (3.13-5.13)	4.96 (3.56-6.18)
60-min	0.438 (0.383-0.515)	0.565 (0.493-0.665)	0.777 (0.671-0.909)	0.957 (0.819-1.12)	1.24 (1.03-1.45)	1.48 (1.21-1.75)	1.76 (1.41-2.09)	2.08 (1.62-2.50)	2.60 (1.93-3.18)	3.07 (2.20-3.82)
2-hr	0.270 (0.237-0.312)	0.342 (0.300-0.396)	0.454 (0.397-0.526)	0.556 (0.480-0.642)	0.712 (0.602-0.826)	0.850 (0.706-0.993)	1.01 (0.820-1.19)	1.20 (0.944-1.42)	1.49 (1.13-1.80)	1.76 (1.28-2.17)
3-hr	0.204 (0.182-0.232)	0.256 (0.228-0.293)	0.329 (0.292-0.377)	0.395 (0.348-0.454)	0.498 (0.432-0.572)	0.585 (0.498-0.677)	0.692 (0.578-0.805)	0.816 (0.666-0.959)	1.02 (0.799-1.22)	1.20 (0.910-1.46)
6-hr	0.135 (0.121-0.151)	0.167 (0.151-0.187)	0.207 (0.186-0.231)	0.241 (0.216-0.270)	0.289 (0.255-0.325)	0.331 (0.290-0.375)	0.382 (0.328-0.436)	0.440 (0.372-0.507)	0.540 (0.446-0.634)	0.631 (0.509-0.753)
12-hr	0.085 (0.077-0.094)	0.105 (0.098-0.116)	0.128 (0.118-0.142)	0.148 (0.133-0.164)	0.174 (0.158-0.194)	0.196 (0.173-0.219)	0.219 (0.191-0.246)	0.246 (0.213-0.280)	0.296 (0.251-0.341)	0.343 (0.286-0.400)
24-hr	0.049 (0.044-0.055)	0.061 (0.055-0.068)	0.075 (0.068-0.084)	0.087 (0.078-0.097)	0.103 (0.092-0.114)	0.115 (0.102-0.128)	0.127 (0.112-0.142)	0.140 (0.123-0.157)	0.157 (0.136-0.178)	0.174 (0.146-0.203)
2-day	0.029 (0.027-0.032)	0.036 (0.033-0.040)	0.045 (0.041-0.050)	0.052 (0.047-0.058)	0.062 (0.056-0.069)	0.070 (0.062-0.077)	0.078 (0.069-0.087)	0.086 (0.076-0.097)	0.098 (0.084-0.111)	0.107 (0.091-0.122)
3-day	0.022 (0.020-0.024)	0.027 (0.025-0.030)	0.034 (0.031-0.038)	0.039 (0.035-0.044)	0.047 (0.042-0.052)	0.053 (0.047-0.059)	0.059 (0.052-0.066)	0.065 (0.057-0.073)	0.075 (0.064-0.084)	0.082 (0.069-0.093)
4-day	0.018 (0.016-0.020)	0.023 (0.021-0.025)	0.028 (0.025-0.032)	0.033 (0.029-0.037)	0.039 (0.035-0.044)	0.044 (0.039-0.049)	0.050 (0.043-0.055)	0.055 (0.048-0.062)	0.063 (0.053-0.071)	0.069 (0.058-0.078)
7-day	0.013 (0.012-0.014)	0.016 (0.014-0.018)	0.020 (0.018-0.022)	0.023 (0.021-0.026)	0.028 (0.025-0.031)	0.031 (0.028-0.035)	0.035 (0.031-0.040)	0.039 (0.034-0.044)	0.045 (0.038-0.051)	0.049 (0.041-0.056)
10-day	0.010 (0.009-0.012)	0.013 (0.012-0.014)	0.016 (0.015-0.018)	0.019 (0.017-0.021)	0.022 (0.020-0.025)	0.025 (0.022-0.028)	0.028 (0.024-0.031)	0.031 (0.027-0.035)	0.035 (0.030-0.039)	0.038 (0.032-0.043)
20-day	0.007 (0.006-0.008)	0.009 (0.008-0.010)	0.011 (0.010-0.013)	0.013 (0.012-0.014)	0.015 (0.014-0.017)	0.017 (0.015-0.019)	0.019 (0.017-0.021)	0.021 (0.018-0.024)	0.024 (0.020-0.027)	0.026 (0.022-0.030)
30-day	0.006 (0.005-0.007)	0.007 (0.007-0.008)	0.009 (0.008-0.010)	0.011 (0.009-0.012)	0.012 (0.011-0.014)	0.014 (0.012-0.015)	0.015 (0.013-0.017)	0.017 (0.015-0.019)	0.019 (0.016-0.021)	0.020 (0.017-0.023)
45-day	0.005 (0.004-0.005)	0.006 (0.006-0.007)	0.008 (0.007-0.008)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.010-0.013)	0.013 (0.011-0.014)	0.014 (0.012-0.016)	0.016 (0.013-0.018)	0.017 (0.014-0.019)
60-day	0.004 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.010-0.013)	0.012 (0.011-0.014)	0.014 (0.012-0.015)	0.015 (0.013-0.017)

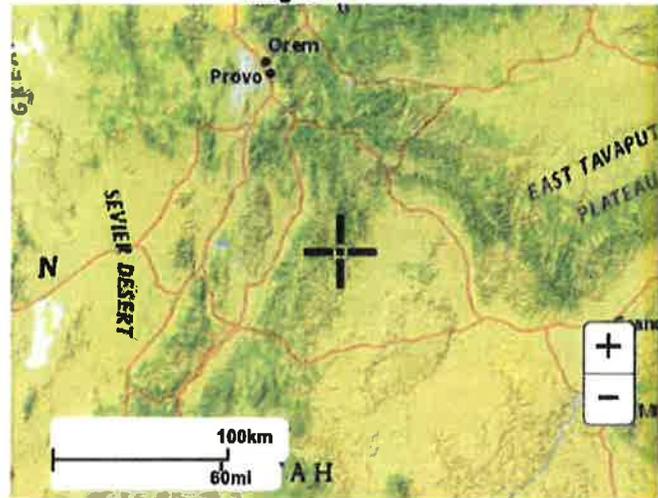
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

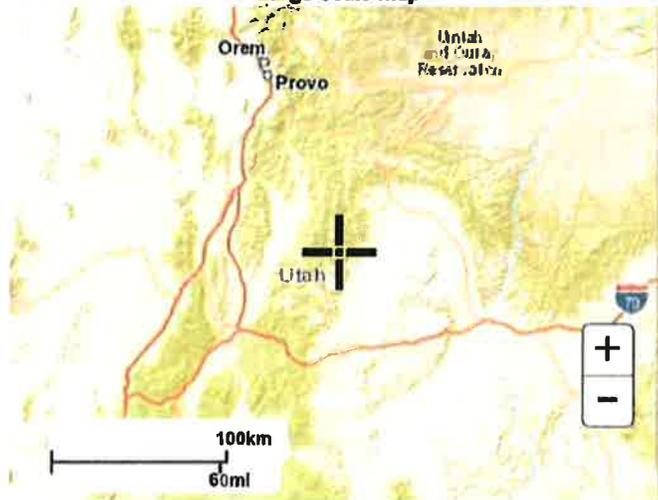
Div. of Oil, Gas & Mining



Large scale terrain



Large scale map



Large scale aerial

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Rational Method for Calculating Runoff for Area above Snow Plow Turnaround

$$Q = CiA$$

where,

Q = peak flow rate (cfs)
 C = dimensionless coefficient
 i = rainfall intensity (iph)
 A = drainage area (ac)

Solve for C; refer to chart

Solve for i; (refer to Attachment 1)
 from NOAA Atlas 14 Volume 1, Version 5
 Location Huntington Utah
 Lat. 39.3195 d, Long. -111.1828
 Elevation = 8509 ft

$$i = 0.382$$

Solve for A; (Refer to Attachment 2)

$$A = 5.24 \text{ acres}$$

therefore;

$$Q = CiA = 0.4 * 0.382 * 5.24 = 0.80 \text{ cfs}$$

Required Culvert Size for Runoff Volume

Based on Mannings Equation:

$$D = \left(\frac{2.16 Qn}{\sqrt{S}} \right)^{0.35}$$

where,

D = Required Diameter (ft)
 Q = Peak Discharge (cfs)
 n = Roughness Factor (0.25 for CMP)
 S = Slope (ft/ft)

therefore,

$$D = \left(\left(\frac{2.16 Qn}{\sqrt{S}} \right)^{0.35} \right) = \left(\left(\frac{2.16 * 0.80 * 0.025}{\sqrt{0.1}} \right)^{0.35} \right) = \left(\left(\frac{0.0432}{0.3162} \right)^{0.35} \right) = 0.498 \text{ ft}$$

Field size culvert calls for an 18" culvert. Therefore culvert sizing checks.

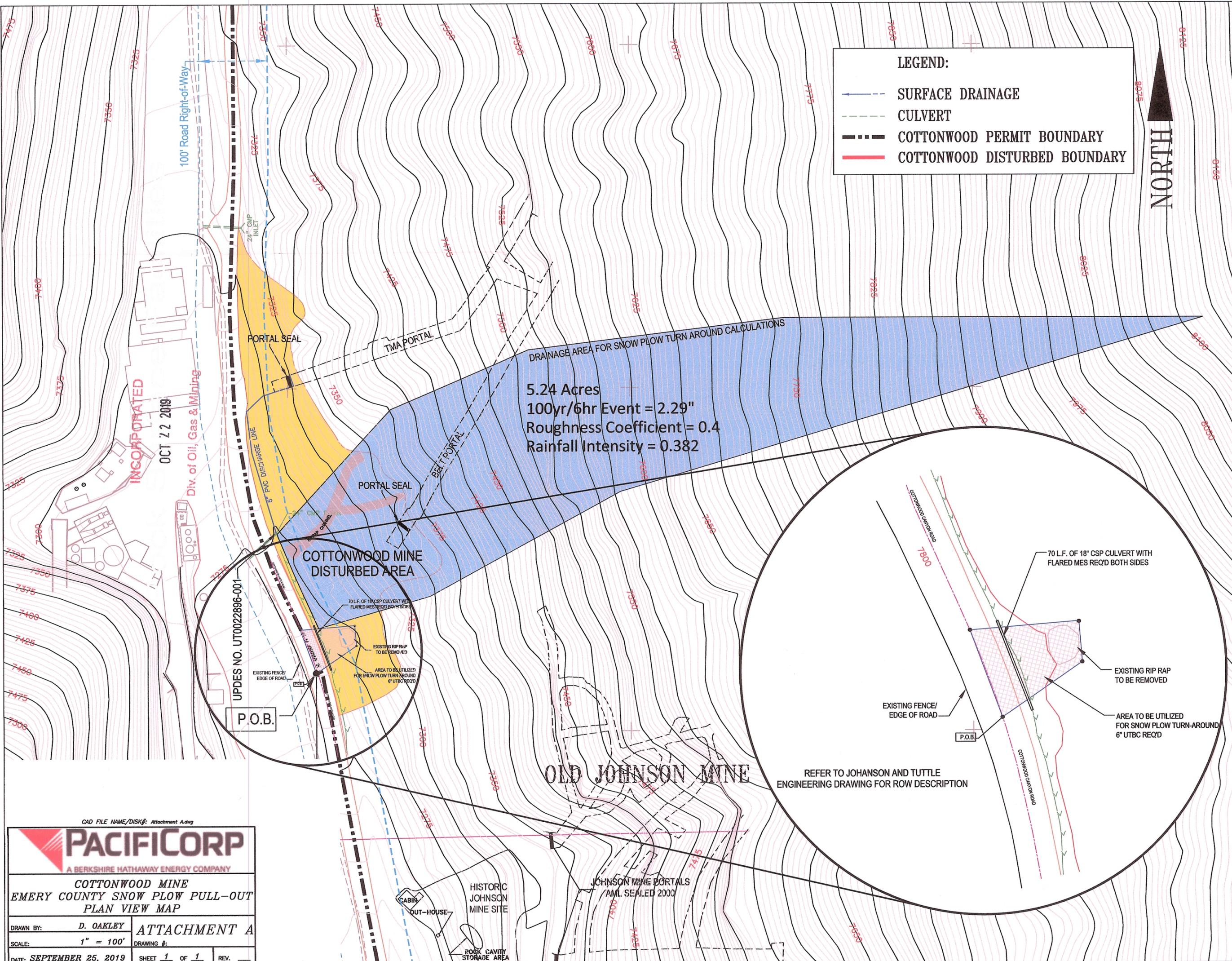
C Values - Rural Areas

Topography and Vegetation	Open sandy loam	Clay and silt loam	Tight clay
Woodland			
Flat (0-5% slope)	0.10	0.30	0.40
Rolling (5-10% slope)	0.25	0.35	0.50
Hilly (10-30% slope)	0.30	0.50	0.60
Pasture			
Flat	0.10	0.30	0.40
Rolling	0.16	0.36	0.55
Hilly	0.22	0.42	0.60
Cultivated			
Flat	0.30	0.50	0.60
Rolling	0.40	0.60	0.70
Hilly	0.52	0.72	0.82

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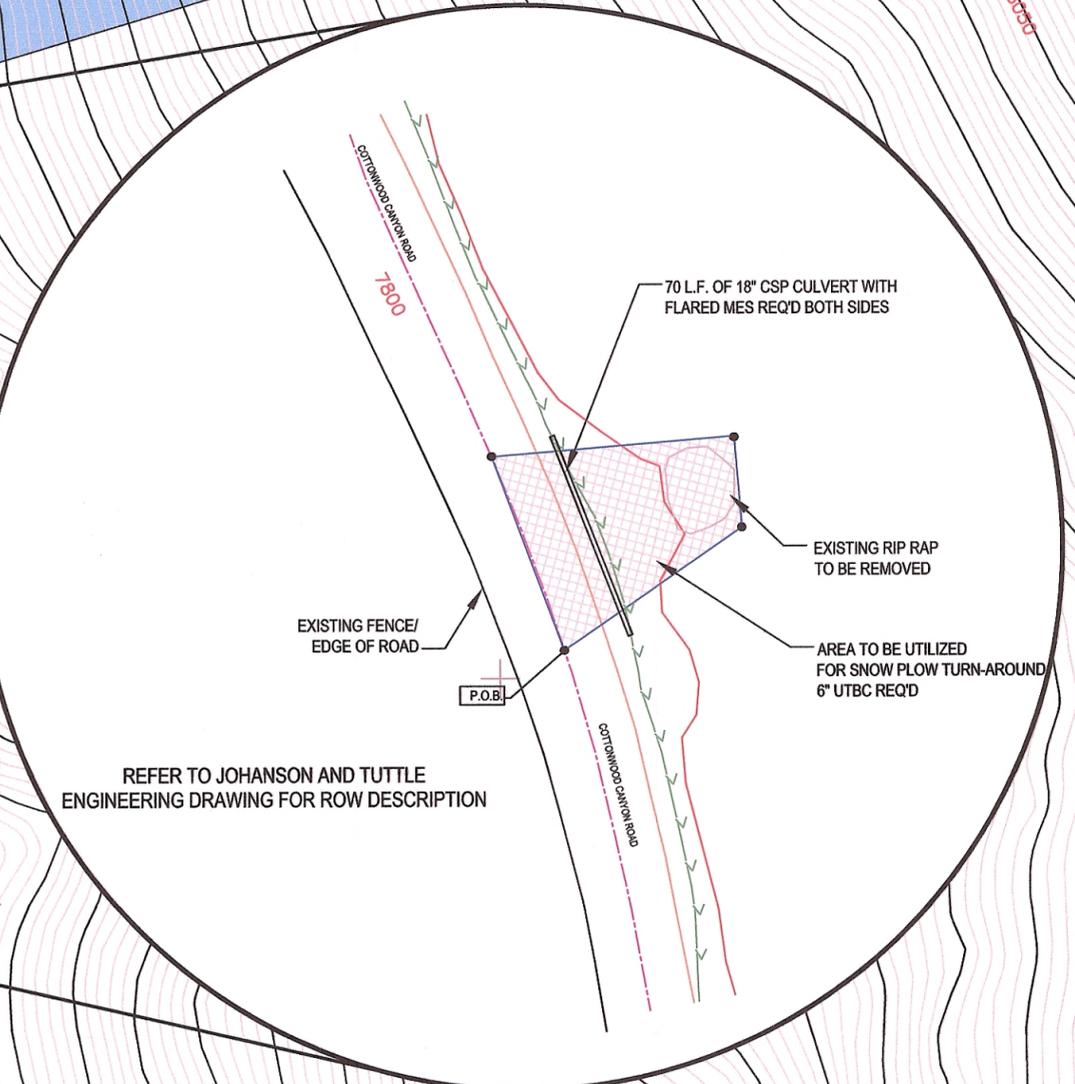
LEGEND:

- SURFACE DRAINAGE
- - - CULVERT
- · - · - COTTONWOOD PERMIT BOUNDARY
- COTTONWOOD DISTURBED BOUNDARY



DRAINAGE AREA FOR SNOW PLOW TURN AROUND CALCULATIONS

5.24 Acres
 100yr/6hr Event = 2.29"
 Roughness Coefficient = 0.4
 Rainfall Intensity = 0.382



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UPDES NO. UT0022896-001

P.O.B.

COTTONWOOD MINE DISTURBED AREA

OLD JOHNSON MINE

JOHNSON MINE PORTALS A.M.L. SEALED 2000

HISTORIC JOHNSON MINE SITE

CABIN
 OUT-HOUSE

ROCK CAVITY STORAGE AREA

CAD FILE NAME/DISK#: Attachment A.dwg

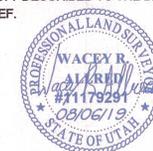
PACIFICORP
 A BERKSHIRE HATHAWAY ENERGY COMPANY

COTTONWOOD MINE
 EMERY COUNTY SNOW PLOW PULL-OUT
 PLAN VIEW MAP

DRAWN BY:	D. OAKLEY	ATTACHMENT A
SCALE:	1" = 100'	
DATE: SEPTEMBER 25, 2019	SHEET 1 OF 1	REV.

CERTIFICATE

I, WACEY R. ALLRED, A PROFESSIONAL LAND SURVEYOR HOLDING UTAH CERTIFICATE NO. 11179291, DO HEREBY CERTIFY THAT THE PLAT SHOWN HEREON HAS BEEN PREPARED FROM A FIELD SURVEY MADE UNDER MY DIRECTION AND CORRECTLY SHOWS THE DIMENSIONS AND MONUMENTS OF THE PROPERTY DESCRIBED TO THE BEST OF MY KNOWLEDGE AND BELIEF.



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PURPOSE OF SURVEY:

PacifiCorp is deeding a parcel of land to Emery County Road Department for the use of a snow plow turn around.

LOCATION OF SURVEY:

Located within the Southwest quarter of the Northeast quarter of Section 25, Township 17 South, Range 6 East, Salt Lake Base and Meridian.

PROPERTY DESCRIPTION:

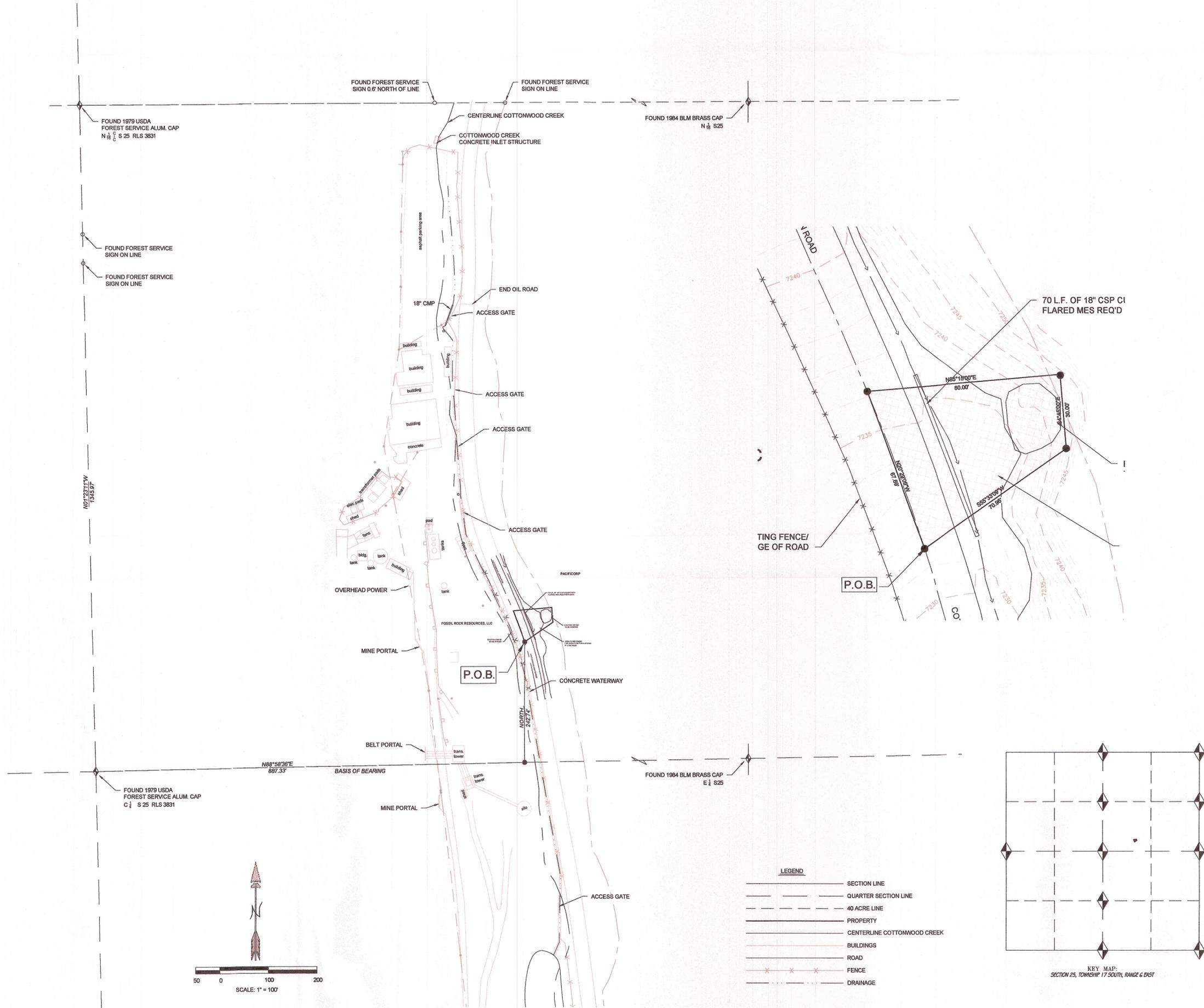
Beginning at a point which is located N 88°58'36" E, 887.33 feet along the Center Section Line and North, 242.74 feet from the Center of Section 25, Township 17 South, Range 6 East, SLB&M, said point being at the center of Cottonwood Canyon Road; thence N 20°29'09" W, 67.69 feet along said centerline; thence N 85°15'00" E, 80.00 feet; thence S 04°45'00" E, 30.00 feet; thence S 55°33'09" W, 70.98 feet more or less to the point of beginning. Containing 0.08 acres more or less.

BASIS OF BEARING:

N 88°58'36" E between the Center and the East Quarter Corner of Section 25, T 17 S, R 6 E, SLB&M.

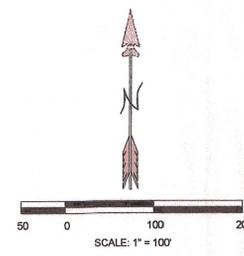
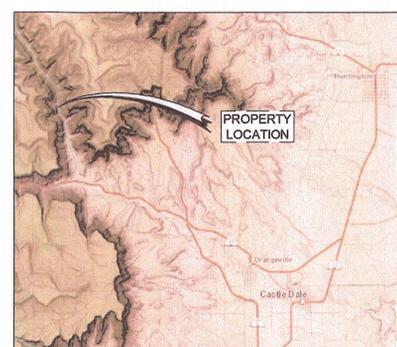
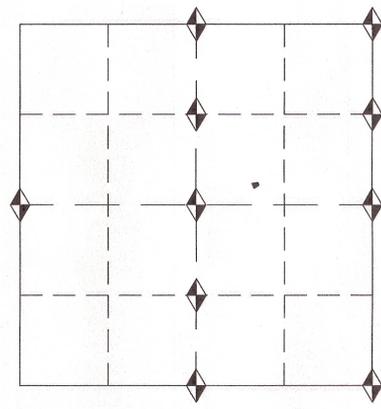
MONUMENTS FOUND:

◆ Denotes Section monument found.



LEGEND

—	SECTION LINE
- - -	QUARTER SECTION LINE
- · - · -	40 ACRE LINE
—	PROPERTY
—	CENTERLINE COTTONWOOD CREEK
—	BUILDINGS
—	ROAD
- x - x -	FENCE
- · - · -	DRAINAGE



CHECKED	08-19	WRA	08-19
DRAWN	08-19	WRA	08-19
SURVEYED	08-19	LO	08-19
R.O.W.			

PROJECT FILE: T:\Projects - Private Surveys\2019\Trail Mountain Mine

PROJECT No. _____

SHEET No. 1

WACEY R. ALLRED
PROFESSIONAL LAND SURVEYOR 11179291

PHANSEN & TUTTLE ENGINEERING INC.
P.O. Box 487, Castle Dale, UT 84613
(435) 381-2523 Fax (435) 381-2522 e-mail jtl@sew.net

PACIFICORP
TRAIL MOUNTAIN MINE

SECTION	25	SCALE	1" = 100'
TOWNSHIP	17 S.	DATE	08/06/19
RANGE	6 E.	RANGE	
BLOCK		SURVEY	
LOTS		DRAWN BY	
		N/LB	



1407 W. North Temple, Suite 110
Salt Lake City, UT 84116

October 15, 2019

Wayde Nielsen
Emery County Road Department
P.O. Box 889
Castle Dale, UT 84513

RE: *Public Roadway Easement – Granted by PacifiCorp to Emery County Road Department Dated 9/23/ 2019 – Recorded 9/30/2019, Entry No. 420877, Emery County, Utah*

Dear Mr. Nielson:

On behalf of PacifiCorp, and in response to your letter dated July 15, 2019, we hereby convey an easement granted by PacifiCorp to the Emery County Road Department dated September 23, 2019, to enable the Emery County Road Department to construct a turnaround on PacifiCorp fee land at a designated site alongside County Road 506 within Cottonwood Canyon. Enclosed is a copy of the official easement of which has been recorded with the Emery County Recorder's Office on September 30, 2019, Entry No. 420877.

Prior to commencing any work within this easement area, PacifiCorp will need to first amend and secure approval from the Utah Division of Oil, Gas & Mining (DOG M) for this activity to take place within the Cottonwood Mine permit boundary. Dennis Oakley from our Huntington office is coordinating this permitting action with DOGM. Please contact and coordinate all project activities with Dennis Oakley at 435-687-4825 or by (email) Dennis.Oakley@PacifiCorp.com.

Should you have any questions or concerns, please feel free to contact me at 801-220-4612 or by (email) Scott.Child@PacifiCorp.com.

Sincerely,

Scott M. Child
Manager, Lands & Regulatory Affairs
Interwest Mining Company

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OCT 22 2019

Enclosure

SMC\Interwest\EmeryCounty2019-01(PublicRoadEasement-GrantedbyPacifiCorptoEmeryCounty9-23-2019).docx Div. of Oil, Gas & Mining

cc: B. Morgan, C. Semborski, K. Fleck, D. Oakley, C. Herrera

WHEN RECORDED, RETURN TO:

Rocky Mountain Power
Attn: Lisa Louder/ Clint Herrera
1407 West North Temple, Suite 110
Salt Lake City, Utah 84116
Parcel No. UTEM-0524
File No. _____
Tax ID No. L3-0011-0002

Ent 420877 Page 1 of 10
Date: 30-SEP-2019 12:22:46PM
Fee: \$40.00 Check Filed By: CJ
CONNIE JENSEN, Recorder
EMERY COUNTY CORPORATION
For: ROCKY MOUNTAIN POWER

PUBLIC ROADWAY EASEMENT

ROCKY MOUNTAIN POWER, an unincorporated division of PacifiCorp, successor in interest to Utah Power & Light Company, whose principal office is located at 1407 West North Temple, Salt Lake City, Utah, 84116, ("GRANTOR"), hereby CONVEYS to Emery County Road Department, its successors-in-interest and assigns ("GRANTEE"), in consideration of the mutual promises and other good and valuable consideration, a perpetual easement and right of way for the installation, construction, operation, maintenance and repair of a public roadway turn around (referred hereafter as "Turn Around"), along with a perpetual easement and right of way for the associated public utilities, in on, and/or across the following described real property owned by Grantor located in Emery County, State of Utah, to-wit:

The Turn Around is located alongside Emery County Road No. 506 within the Southwest quarter of the Northeast quarter of Section 25, Township 17 South, Range 6 East, Salt Lake Base and Meridian.

L3-11-2
Beginning at a point which is located N 88°58'36" E, 887.33 feet along the Center Section Line and North, 242.74 feet from the Center of Section 25, Township 17 South, Range 6 East, SLB&M, said point being at the center of Cottonwood Canyon Road (Emery County Road No. 506); thence N 20°29'09" W, 67.69 feet along said centerline; thence N 85°15'00" E, 80.00 feet; thence S 04°45'00" E, 30.00 feet; thence S 55°33'09" W, 70.96 feet more or less to the point of beginning.
Containing 0.08 acres more or less.

This easement is granted subject to the following restrictive conditions:

- 1) Grantee, its successors and assigns, will not make or allow to be made any use of the easement herein granted that is inconsistent with, or interferes in any manner with Grantor's operation, maintenance or repair of Grantor's existing installations or additional construction and installations constructed after the granting of this easement, including electric transmission and distribution circuits that cross over or above the property as herein described.
- 2) Prior to making any improvements to the land or placing any structure within Grantor's Land, Grantee shall submit detailed plans and specifications to Grantor at least thirty (30) days in advance.

Plow Turn Around – Public Road Easement Page 1 of 4

REV 05-14-2019 DS

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Div. of Oil, Gas & Mining

Grantor reserves the right to deny or require modifications to such plans to ensure the improvements will not impair Grantor's facilities or uses of its property. All improvements shall be made in a good and workmanlike manner consistent with applicable building codes or other applicable governmental requirements.

- 3) Grantee, acknowledges that the location of the Turn Around as described above is situated within PacifiCorp's Cottonwood mine and reclamation permit no. C/015/0119, of which have been reclaimed in accordance with federal and state laws, and Grantee further acknowledges and agrees to support PacifiCorp's permitting efforts with the Utah Division of Oil, Gas & Mining to remove the described Turn Around area from the said permit, to secure all necessary approvals and bond release on this particular area of the Turn Around.
- 4) Grantee will install a drainage culvert of adequate size with flared ends at the toe of the slope to collect and pass precipitation storm events to bypass the reclaimed mine lands, perform regular maintenance to keep it clear of debris and free flowing. Grantee shall keep the culvert operational at all times. In the event, the culvert becomes plugged and causing it to runoff over the top of the inlet, Grantee shall immediately remove the material and debris from the culvert and repair any and all damage, gullies and rills caused by the uncontrolled storm water flows. Furthermore, the Grantee may utilize some of the existing larger rocks at the site to construct a protective barrier at the toe of the reclaimed slope to prevent encroachment onto the adjacent reclaimed mine lands. Grantee shall not regrade any of the reclaimed mine land slopes. The creation and construction of the Turn Around to meet the needs of the Grantee will be built by the Grantee at its sole expense and to the satisfaction of the Grantor.
- 5) In the event that curb and gutter is constructed on the easement herein granted by Grantee or made as a condition of development by Grantee, said curb and gutter will be high-back type and will contain a 30-foot curb cut on both sides of the roadway located at place designated by the Grantor, which curb cut will permit passage of Grantor's equipment used for repair and maintenance of Grantor's substation and electric transmission lines. Roadway construction will be sufficient to support Grantor's equipment in excess of 50 tons.
- 6) Grantee, its successors and assigns, will not use or permit to be used on said easement construction cranes or other equipment that violate OSHA and UTAH High Voltage Act Safety Clearance Standards. Grantee shall not store materials within the easement area. Grantee will not excavate within 50 feet of Grantor's transmission structures. The storage of flammable and hazardous materials or refueling of vehicle/equipment is prohibited within the easement area. At no time shall Grantee place any equipment or materials of any kind that exceeds twelve (12) feet in height, or that creates a material risk of endangering Grantor's facilities, or that may pose a risk to human safety or environmental harm. Grantee's use of the easement area shall comply with OSHA and UTAH High Voltage Act Safety Clearance Standards.
- 7) Grantee shall not place or allow to be placed any trees or other vegetation within the easement.
- 8) In the event Grantee ceases to use, for purposes of a roadway, the property herein described, this easement shall thereupon immediately terminate, with all rights and interest conveyed herein by Grantor to revert back to Grantor by instrument of disclaimer from Grantee, or its successors or

assigns.

- 9) Grantor shall have the right, at any time and from time to time, to cross and recross with equipment, personnel, overhead power lines or underground power lines and access roads, at any location or locations thereon, the lands included with the easement herein conveyed by Grantor to Grantee.
- 10) Release and Indemnification
 - a) Grantee, its successors and assigns, shall use the Easement Area at its own risk and agrees to indemnify, defend and hold harmless Grantor and Grantor's affiliated companies, officers, directors, shareholders, agents, employees, successors and assigns, (the "Indemnified Parties") for, from and against all liabilities, claims, damages, losses, suits, judgments, causes of action, liens, fines, penalties, costs, and expenses (including, but not limited to, court costs, attorney's fees, and costs of investigation), of any nature, kind of description of any person or entity, directly or indirectly arising out of, caused by, or resulting from (in whole or in part), (i) the breach by Grantee of any provision of this agreement, (ii) Grantee's use and occupation of the Easement Area, (iii) any act or occurrence on the Easement Area, or (iv) any act or omission of Grantee, any independent contractor retained by Grantee, anyone directly or indirectly employed by them, or anyone authorized by Grantee to control or exercise control over (hereinafter collectively referred to as "claims"), even if such claims arise from or are attributed to the concurrent negligence of any of the Indemnified Parties.
 - b) The Indemnified Parties shall never be liable in any manner to Grantee for any injury to or death of persons or for any loss of or damage to property of Grantor, its employees, agents, customers, invitees, or to others, even if such loss or damage is caused in part by the negligence of any Indemnified Party. All personal property and fixtures, if allowed by Grantor, located within the Easement Area shall be maintained and used at the risk of Grantee and the Indemnified parties shall not be liable for any damage thereto or theft thereof, even if due in whole or in part to the negligence of the Indemnified Parties.
- 11) To the fullest extent permitted by law, each of the parties hereto waives any right it may have to a trial by jury in respect of litigation directly or indirectly arising out of, under or in connection with this agreement. Each party further waives any right to consolidate any action in which a jury trial has been waived with any other action in which a jury trial cannot be or has not been waived.

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Div. of Oil, Gas & Mining

IN WITNESS WHEREOF, the Grantor has caused its corporate name to be hereunto affixed by its duly authorized officer this 23 day of September, 2019.

ROCKY MOUNTAIN POWER,
an unincorporated division of PacifiCorp

By: Dana M. Ralston
Its: Sr. Vice President of Thermal Generation & Mining

STATE OF UTAH)
):ss
COUNTY OF SALT LAKE)

On the 23 day of September, 2019, personally appeared before me Dana M. Ralston, who being duly sworn did say that he is the signer of the within instrument on behalf of Rocky Mountain Power, an unincorporated division of PacifiCorp and that the within and foregoing instrument was signed by authority of said corporation and said Sr. Vice President duly acknowledged to me that said corporation executed the same.

Notary Public

My Commission Expires:

Residing at: Grantville, UT



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OCT 22 2019
Div. of Oil, Gas & Mining



Property Transaction Approval Form

Project Name: Emery Co. Plow Turn Around

Responsible Manager: Roger Rigby

Approved In-Service Date: Click Date

SAP WBS Element:

Order Number:

Project Information:

Project Necessity: Emery County Road Department is requesting an easement to construct a turnaround for their plow equipment. This easement will be of public benefit to Emery County. See attached letter of request with a map from the Emery County Road Department dated July 15, 2019.

Property Owner: PacifiCorp

Location: Cottonwood Canyon Road (County Road 506), Emery County, UT
GPS: 39.3170207, -111.18923717

Purchase Price: \$0.00

Property Value Justification: Comparable property in the area is valued at \$0.32/sq. ft. However, we acquired this property as a no-fee transaction and are no longer using it for operations.

We are granting this easement with no-fee.

Risks: Due to the requirement for approval from within the company for future improvements, the risks are minimal. This request is consistent with others that have been granted in the past that do not interfere with PacifiCorp's current and or future use of the property for which it was purchased as Mining lands.

Alternatives Considered: There are no alternatives to consider, this location provides the county the best opportunity for a safe turn around in the canyon.

Internal/Yardi Parcel Number: UTEM-0524

FERC accounting and asset location code: FERC: 60010 Mining Lands, Asset Location Code: 903 , Utah

General Information:

This easement allows Emery County Road Department a safe place for their plow equipment to turn around. The easement is requiring that Emery County Road Department maintain the area and install a drainage culvert that will collect and pass precipitation storm events to bypass the reclaimed mine lands. As well as keep it clear and free of debris.

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NOV 22 2019

Div of Oil, Gas & Mining



Property Transaction Approval Form

Reviewers:

Property Agent: Clint Herrera	Date: 9/5/2019	P-Number: 43900
Transaction Manager: Roger Rigby	Date: 9/6/2019	P-Number: 07565
Rocky Mtn. Power Legal: Daniel Solander	Date: 9/11/2019	P-Number: 14818
System Planning: Scott Beyer/ Robyn Kara	Date: 9/5/2019	P-Number: 13194/ 23147
Area Transmission Planning: Jake Barker	Date: 9/5/2019	P-Number: 09525
Property Manager: Erik Carlson	Date: 9/5/2019	P-Number: 35510
Project Sponsor: Scott Child	Date: 9/5/2019	P-Number: 06514
Manager, Explor. & Geo.: Chuck Semborski	Date: 9/16/2019	P-Number: 10347
Director, Fuel Resources: Bret Morgan	Date: 9/13/2019	P-Number: 11268

Approvals:

Manager, Regulatory Projects: Danny Martinez	Date: N/A Under \$10k	P-Number: 41531
Legal Review: Daniel Solander	Date: N/A Under \$10k	P-Number: 14818
Manager, Regulatory Projects: Jennifer Angell	Date: N/A Under \$10k	P-Number: 73763
Legal Review: Bob Betcone	Date: N/A Under \$10k	P-Number: 41062
Managing Director T&D: Chris Spencer	Date: <i>CS 9/16/19</i>	P-Number: 14781
Thermal Generation/Mining, SVP : Dana Ralston	Date: <i>DR 9/24/19</i>	P-Number: 26849

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Dir. of Oil, Gas & Mining



Road Department

July 15, 2019



Scott Child
1407 W North Temple
Suite 110
Salt Lake City UT 84116

Dear Mr. Child,

I am writing to request that Emery County Road Department be allowed to construct a turn around in Cottonwood Canyon near the end of the old road. This will allow the County to do its regular maintenance and, more importantly, snow removal.

In the past, we utilized the old portal to back the snow plow in to turn around but since the reclamation has been done, we struggle to get our plow trucks turned around safely.

Sincerely,
[Signature]

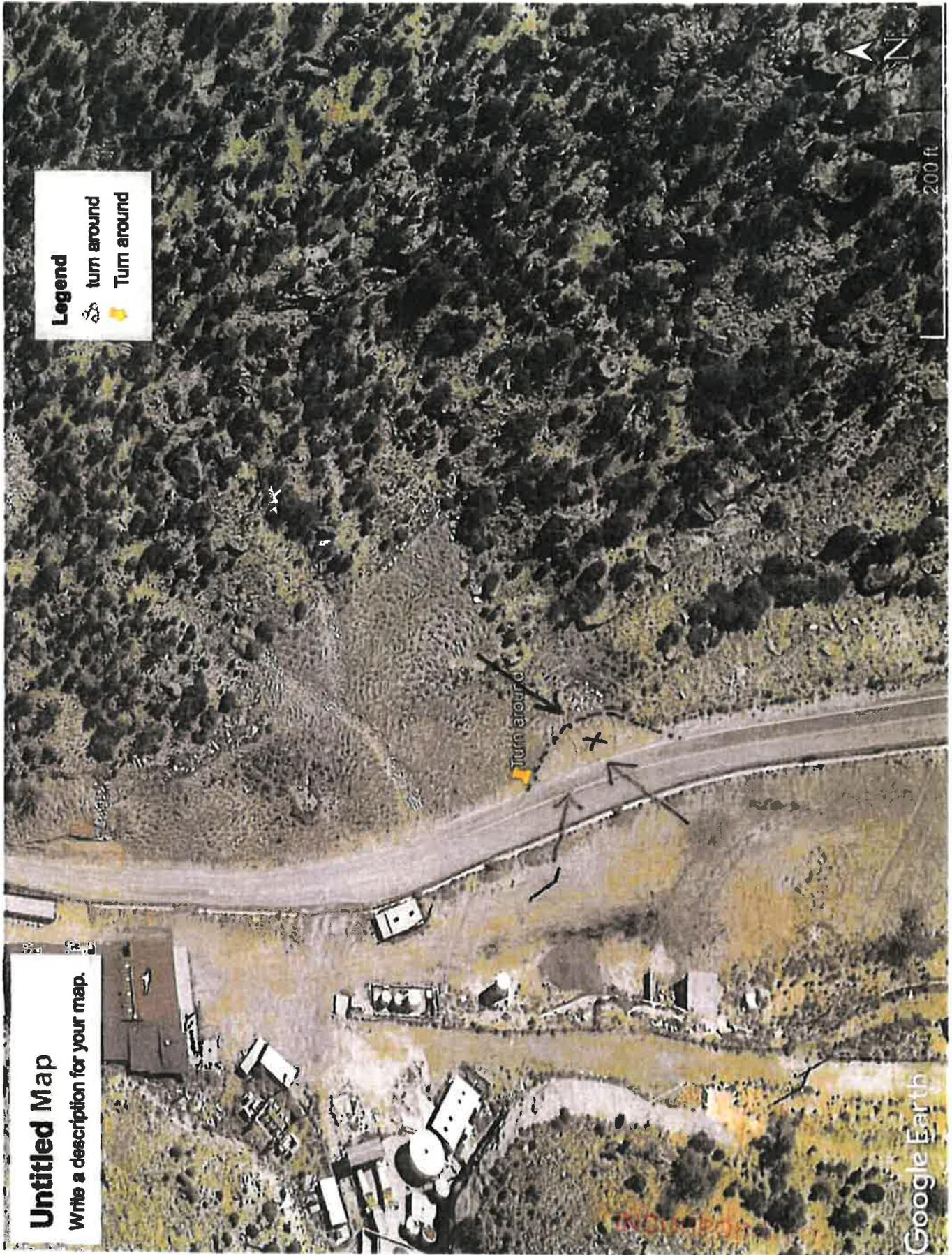
Wayde Nielsen

cc Dennis Oakley

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Legend
turn around
Turn around

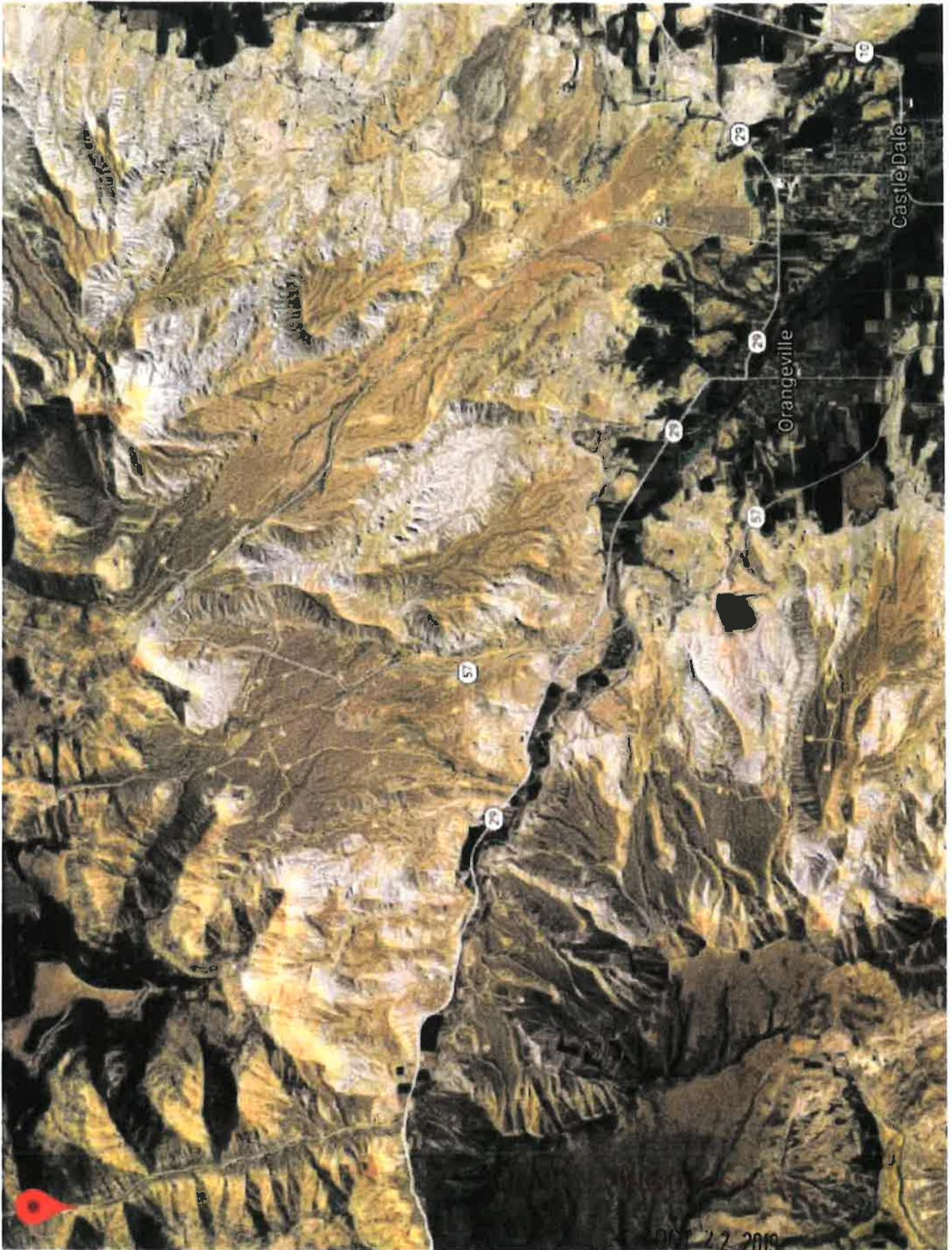
Untitled Map
Write a description for your map.

200 ft

Google Earth

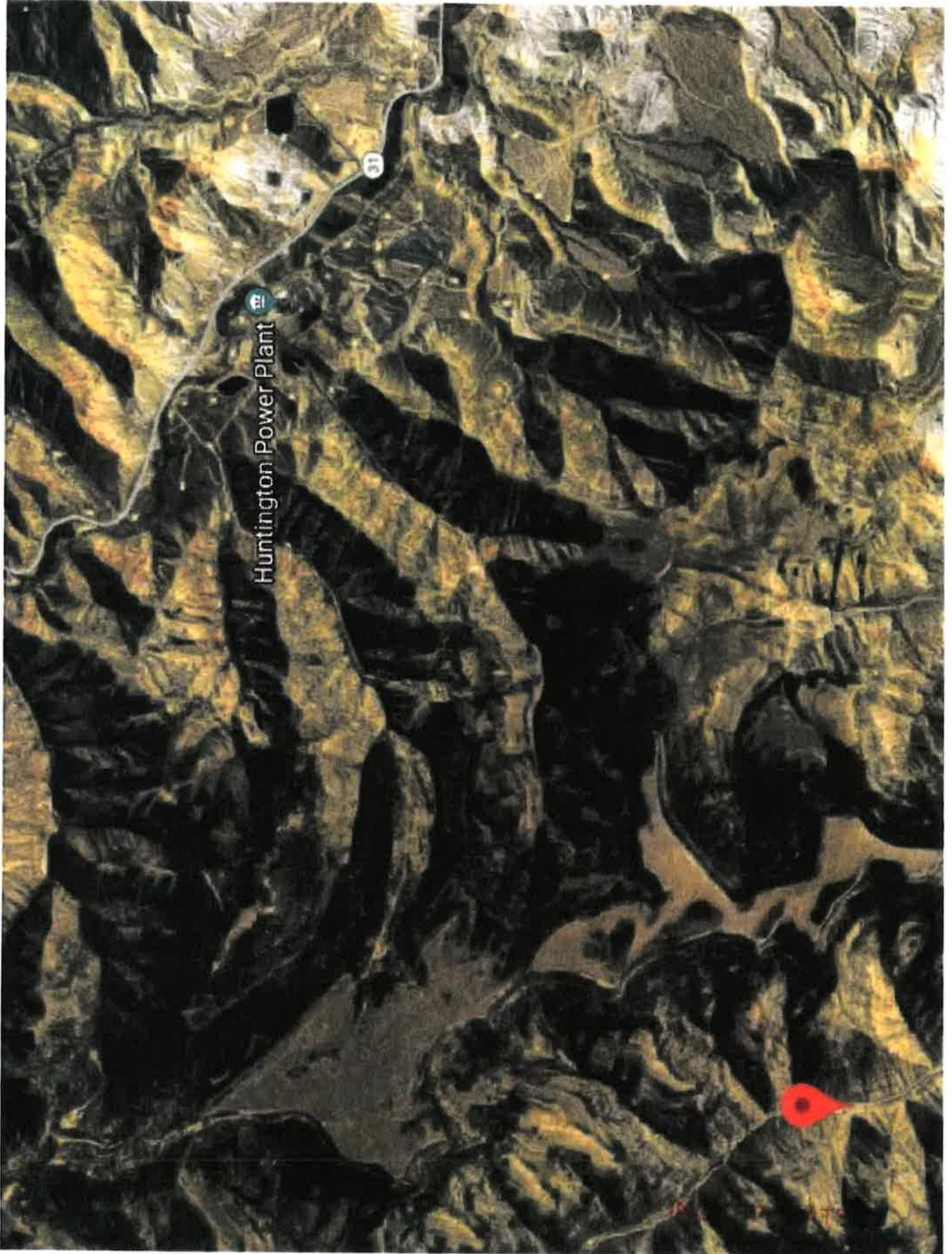
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OCT 22 2019

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