**APPENDIX I: Norwest Geotechnical Analysis**

**APPENDIX J: Draft Health Safety Security and Environment Management Policy**

**APPENDIX K: Water Management Strategy: Executive Summary**

**APPENDIX L: Cultural Resources Report: Executive Summary**

**APPENDIX M: Soil Sampling**

**APPENDIX N: Department of Environmental Quality Division of Water Quality Groundwater Permit**

**APPENDIX O: County Permits: Building Permit and Road Maintenance Agreement**

**APPENDIX P: Department of Wildlife Resources and DWR Conservation Data Center Letters and Emails**

**APPENDIX Q: Operations Practices**

**APPENDIX R: Letter Regarding Bentonite Amended Soil (BAS) Analysis**

**APPENDIX S: Early Production System (EPS) Capsule**

**APPENDIX T: Selected Oil and Gas Well Logs Near the Project Area**

**APPENDIX U: Additional Information about Area Cross Sections and Fence Diagrams**

**APPENDIX V: Summary of Compliance Monitoring Requirements**

**APPENDIX W: Exploration Permit Activity Locations**

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**Notice of Intention to Commence Large Mining Operations**

**Red Leaf Resources, Inc.**

**Southwest #1 Project, Uinta Basin**
**Introduction and Project Background**

Red Leaf Resources, Inc. ("RLR" or "Red Leaf") holds oil shale mineral leases on 16,838 acres on School and Institutional Trust Land properties in the Uinta Basin.

RLR has previously performed process testing under its Exploration Permit #E/047/0055. Exploration activities included a core drilling program for resource assessment. Total acreage of the exploration activity was 5.8 acres. This acreage incorporated 4.7 acres for excavation, process testing, and roads. An additional 1.1 acres was temporarily disturbed for purposes of drilling and resource evaluation during June 2010. All drill hole locations were reclaimed by August 2010.

RLR's Exploration permit was converted to a Small Mining Operation (SMO) in January 2011, with final approval for operations on January 27, 2011. The SMO activities encompass 4.97 acres for mining, process operations, and road access.

RLR filed for an exploration permit, Southwest #2, E/047/0062, on March 24, 2011 for purposes of conducting additional exploration activities. Activities associated with this exploration permit were incorporated into this LMO NOI in April 2014, and the exploration permit was terminated. For information purposes, the disturbed areas under E/047/0062 for Southwest #2 and related holes are outlined in Appendix W, Exploration Permit Activity Locations.

It is now RLR's intention to expand activities at the Southwest #1 small mine site and convert it to a Large Mining Operation (LMO) as identified in this NOI. The disturbed area under E/047/0062 will also be included under the planned Large Mine Operations.

The location of RLR's Southwest #1 project includes acreage held in its SITLA Mineral Leases (ML) 50150 and 43374. The acreage associated with this mine plan from ML 50150 includes

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# Appendix W

# Exploration Permit Activity Locations

Table W-1 and Figure W-1, attached to and made part of this appendix, outline the locations of holes associated with Red Leaf's former exploration permit, Southwest #2, E/047/0062.

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TABLE W-1

Exploration Permit Activity Locations

| Pre Drill Hole No.(1) | Hole Diameter (in) | Township | Range | Section | 1/4 Sect. | 1/4 Sect. | NAD 27 Northing | Easting | Access Rd Length (feet)(2) | Pad Area (acres) | Total Area (acres) | Target Depth (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UG-1 | 7-7/8 | 13S | 23E | 36 | SW | NW | 485123 | 2587847 | 0 | 0.0413 | 0.041 | 169 |
| DG-1 | 7-7/8 | 13S | 23E | 30 | NW | SW | 489165 | 2593007 | 270 | 0.0413 | 0.116 | 140 |
| DG-2 | 7-7/8 | 13S | 23E | 30 | NE | NW | 491551 | 2594634 | 25 | 0.0413 | 0.048 | 187 |
| DG-3 | 7-7/8 | 13S | 23E | 30 | NE | NE | 492043 | 2597272 | 425 | 0.0413 | 0.158 | 126 |
| DG-4 | 7-7/8 | 13S | 23E | 19 | NW | NW | 496046 | 2593977 | 75 | 0.0413 | 0.062 | 224 |
| DG-5 | 7-7/8 | 13S | 23E | 19 | SE | NE | 495735 | 2597591 | 0 | 0.0413 | 0.041 | 136 |
| H-1 | 5 | 13S | 23E | 30 | NW | SW | 489171 | 2593008 | 1000 | 0.0413 | 0.317 | 143 |
| H-2 | 5 | 13S | 23E | 30 | SW | NE | 489751 | 2595634 | 770 | 0.0413 | 0.253 | 99.5 |
| H-3 | 5 | 13S | 23E | 29 | NW | NW | 491346 | 2598138 | 305 | 0.0413 | 0.125 | 100.0 |
| WX-1 | 5 | 13S | 23E | 30 | NE | SW | 488410 | 2594507 | 800 | 0.0413 | 0.262 | 37.8 |
| WX-2 | 5 | 13S | 23E | 30 | NE | SW | 488459 | 2594505 | 25 | 0.0413 | 0.048 | 54.8 |
| WX-3 | 5 | 13S | 23E | 30 | NE | SW | 488598 | 2594461 | 25 | 0.0413 | 0.048 | 65.0 |
| WX-4 | 5 | 13S | 23E | 30 | NE | SW | 488338 | 2594741 | 25 | 0.0413 | 0.048 | 38.3 |
| WX-5 | 5 | 13S | 23E | 30 | NE | SW | 488416 | 2594727 | 25 | 0.0413 | 0.048 | 38.2 |
| WX-6 | 5 | 13S | 23E | 30 | NE | SW | 488453 | 2594721 | 25 | 0.0413 | 0.048 | 38.2 |
| WX-7 | 5 | 13S | 23E | 30 | NE | SW | 488280 | 2594752 | 25 | 0.0413 | 0.048 | 38.1 |
| WX-8 | 5 | 13S | 23E | 30 | NE | SW | 488201 | 2594761 | 25 | 0.0413 | 0.048 | 38.7 |
| RL-3A(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490653 | 2594075 | 10 | 0.0413 | 0.044 | 175 |
| RL-3B(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490632 | 2594110 | 10 | 0.0413 | 0.044 | 175 |
| RL-3C(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490607 | 2594145 | 10 | 0.0413 | 0.044 | 175 |
| RL-3D(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490645 | 2594174 | 10 | 0.0413 | 0.044 | 175 |
| RL-3E(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490670 | 2594144 | 10 | 0.0413 | 0.044 | 175 |
| RL-3F(1) | 7-7/8 | 13S | 23E | 30 | NE | SW | 490693 | 2594119 | 10 | 0.0413 | 0.044 | 175 |
| Water Well #2 | 8 | 13S | 23E | 30 | SE | SW | 486879 | 2595228 | 1660 | 0.65 | 1.107 | 1700 to 2500 |
| Explor Area | | 13S | 23E | 30 | SE | SW | 487365 | 2594496 | | | 5.7 | 200,000 yd3 * |
| | | | | | | | | Sub-Total | 5565 | 1.60 | 8.8 | |
| | | | | | | | | Total | 16431 | 4.48 | 14.7 | |

Notes:

1. Locations of holes shown on Figure W-1
2. Width of access roads - 12 ft.

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TABLE W-1 (cont'd)
Exploration Permit Activity Locations

| Pre Drill Hole No. | Hole Diameter (in) | Township | Range | Section | 1/4 Sect. | 1/4 Sect. | NAD 27 Northing | Easting | Access Rd Length (feet)(3) | Pad Area (acres)(3) | Total Area (acres)(3) | Target Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2) | | | | | | | | | | | | |
| B17 | 1 | 13S | 23E | 30 | NE | SW | 488234 | 2594319 | - | - | - | 15 |
| B18 | 1 | 13S | 23E | 30 | SW | SW | 487938 | 2594143 | - | - | - | 13 |
| B19 | 1 | 13S | 23E | 30 | SE | SW | 487719 | 2594390 | - | - | - | 8 |
| B20 | 1 | 13S | 23E | 30 | NE | SW | 488057 | 2594658 | - | - | - | 12.5 |
| B21 | 1 | 13S | 23E | 30 | SE | SW | 487923 | 2594858 | - | - | - | 14.5 |
| B22 | 1 | 13S | 23E | 30 | SE | SW | 487957 | 2595203 | - | - | - | 12.5 |
| B23 | 1 | 13S | 23E | 30 | SE | SW | 487742 | 2595399 | - | - | - | 14.5 |
| B24 | 1 | 13S | 23E | 30 | SE | SW | 487883 | 2595560 | - | - | - | 12 |
| (2) | | | | | | | | | | | | |
| B27 | 1 | 13S | 23E | 30 | NW | SE | 488388 | 2596357 | - | - | - | 3 |
| B28 | 1 | 13S | 23E | 30 | NW | SE | 488579 | 2596628 | - | - | - | 6.5 |
| B29 | 1 | 13S | 23E | 30 | NW | SE | 488888 | 2596785 | - | - | - | 4.5 |
| B30 | 1 | 13S | 23E | 30 | NE | SE | 488707 | 2596972 | - | - | - | 6 |
| B31 | 1 | 13S | 23E | 30 | NE | SE | 488818 | 2597222 | - | - | - | 9.5 |
| B32 | 1 | 13S | 23E | 30 | NE | SE | 488641 | 2597799 | - | - | - | 9 |
| B33 | 1 | 13S | 23E | 30 | NE | SE | 488437 | 2597549 | - | - | - | 7 |
| B34 | 1 | 13S | 23E | 30 | NE | SE | 488294 | 2597385 | - | - | - | 3 |
| B35 | 1 | 13S | 23E | 30 | NE | SE | 488263 | 2597590 | - | - | - | 7 |
| B36 | 1 | 13S | 23E | 30 | NE | SE | 488173 | 2597465 | - | - | - | 2 |
| B37 | 1 | 13S | 23E | 30 | NE | SE | 488076 | 2597406 | - | - | - | 9 |
| B38 | 1 | 13S | 23E | 30 | SE | SE | 487895 | 2597371 | - | - | - | 10 |
| B39 | 1 | 13S | 23E | 30 | SE | SE | 488233 | 2597565 | - | - | - | 4 |
| B40 | 1 | 13S | 23E | 30 | SE | SE | 488164 | 2597365 | - | - | - | 5.5 |
| B41 | 1 | 13S | 23E | 30 | SE | SE | 488134 | 2597462 | - | - | - | 8 |
| B42 | 1 | 13S | 23E | 30 | SE | SE | 488088 | 2597311 | - | - | - | 4.5 |
| B43 | 1 | 13S | 23E | 30 | SE | SE | 488040 | 2597413 | - | - | - | 9 |
| B44 | 1 | 13S | 23E | 30 | SE | SE | 487960 | 2597356 | - | - | - | 10.5 |

Notes:
1. Locations of holes shown on Figure W-1
2. Proposed holes B1 through B16, B25, and B26 were not drilled and are no longer intended to be drilled.
3. B-series holes were Geoprobe holes using light, off-road vehicles/equipment. No road was required.

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TABLE W-1 (cont'd)
Exploration Permit Activity Locations

| Pre Drill Hole No. | Hole Diameter (in) | Township | Range | Section | 1/4 Sect. | 1/4 Sect. | NAD 27 Northing | Easting | Access Rd Length (feet)(2) | Pad Area (acres)(3) | Total Area (acres) | Target Depth (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPS1 | 2.5 | 13S | 23E | 30 | SE | SE | 488065 | 2597312 | 550 | 0.115 | 0.267 | 75 |
| EPS2 | 2.5 | 13S | 23E | 30 | SE | SE | 488065 | 2597415 | 3 | 0.115 | 0.116 | 65 |
| EPS3 | 2.5 | 13S | 23E | 30 | SE | SE | 488065 | 2597566 | 51 | 0.115 | 0.129 | 75 |
| EPS4 | 2.5 | 13S | 23E | 30 | SE | SE | 488065 | 2597686 | 20 | 0.115 | 0.121 | 85 |
| EPS5 | 2.5 | 13S | 23E | 30 | NW | SE | 488590 | 2597342 | 755 | 0.115 | 0.323 | 65 |
| EPS6 | 2.5 | 13S | 23E | 30 | SE | NE | 488325 | 2597717 | 402 | 0.115 | 0.226 | 65 |
| EPS7 | 2.5 | 13S | 23E | 30 | NE | SW | 490020 | 2594627 | 61 | 0.115 | 0.132 | 25 |
| EPS8 | 2.5 | 13S | 23E | 30 | NE | SW | 489821 | 2596100 | 437 | 0.115 | 0.235 | 90 |
| EPS9 | 2.5 | 13S | 23E | 30 | NE | SW | 490426 | 2596658 | 48 | 0.115 | 0.128 | 90 |
| EPS10 | 2.5 | 13S | 23E | 30 | SE | NE | 489278 | 2596688 | 741 | 0.115 | 0.319 | 100 |
| EPS11 | 2.5 | 13S | 23E | 30 | SE | NE | 489883 | 2597245 | 1088 | 0.115 | 0.415 | 50 |
| EPS12 | 3 | 13S | 23E | 30 | NE | SW | 490187 | 2596436 | 400 | 0.115 | 0.225 | 90 |
| EPS13 | 3 | 13S | 23E | 30 | NE | SW | 489589 | 2596974 | 413 | 0.115 | 0.229 | 65 |
| EPS14 | 3 | 13S | 23E | 30 | NE | SE | 488712 | 2596711 | 340 | 0.115 | 0.209 | 50 |
| EPS15 | 3 | 13S | 23E | 30 | SE | NW | 489612 | 2597539 | 531 | 0.115 | 0.261 | 50 |
| EPS16 | 2.5 | 13S | 23E | 30 | SW | NE | 490530 | 2595506 | 466 | 0.115 | 0.243 | 135 |
| EPS17 | 2.5 | 13S | 23E | 30 | SW | NE | 490537 | 2596116 | 429 | 0.115 | 0.233 | 105 |
| EPS18 | 2.5 | 13S | 23E | 30 | SW | NE | 490088 | 2595410 | 369 | 0.115 | 0.217 | 112 |
| EPS19 | 2.5 | 13S | 23E | 30 | SW | NE | 490200 | 2596116 | 137 | 0.115 | 0.153 | 110 |
| EPS20 | 2.5 | 13S | 23E | 30 | SE | NE | 490530 | 2596897 | 447 | 0.115 | 0.238 | 65 |
| EPS21 | 2.5 | 13S | 23E | 30 | SW | NE | 489890 | 2596619 | 68 | 0.115 | 0.134 | 59 |
| EPS22 | 2.5 | 13S | 23E | 30 | NW | SE | 489330 | 2595923 | 633 | 0.115 | 0.289 | 86 |
| EPS23 | 2.5 | 13S | 23E | 30 | NE | SE | 489248 | 2597052 | 767 | 0.115 | 0.236 | 47 |
| EPS24 | 2.5 | 13S | 23E | 30 | NE | NW | 491315 | 2595069 | 1350 | 0.115 | 0.487 | 135 |
| EPS25 | 2.5 | 13S | 23E | 30 | SE | NW | 490330 | 2594511 | 360 | 0.115 | 0.214 | 142 |
| | | | | | | | | Sub-Total | 10866 | 2.88 | 5.9 | |

Notes:
1. Locations of holes shown on Figure W-1
2. Width of access roads - 12 ft.

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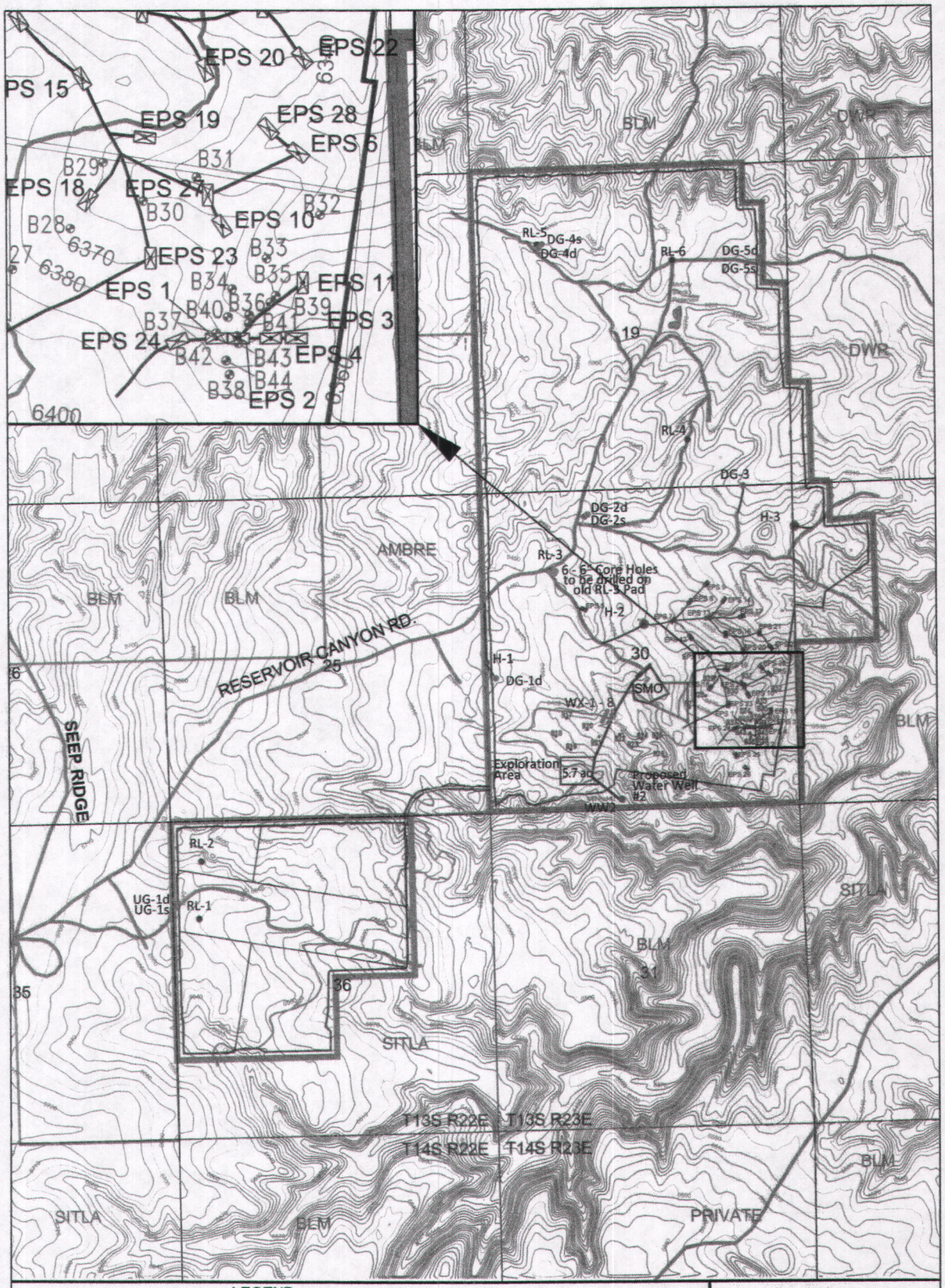


## LEGEND

- Existing Roads
- Topography Contour (10ft Intervals)
- RL Existing Drill Hole
- UG/DG Proposed Monitoring Well
- WX Proposed Weathering Holes
- H Proposed Horizon Holes
- WW Proposed Water Well
- C6 Proposed 6" Core Holes
- New Drill Roads
- Red Leaf Resources Mineral Lease Boundary/Proposed Permit Boundary
- Ambre Energy
- B34 Geoprobe Holes
- EPS10 EPS Holes and Drill Pads

Exploration areas include the 5.7 ac exploration parcel and road to SMO and to WW2

2000 1000 0 2000

NORTH

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FIGURE W - 1

ECOSHALE RED/egf

Red Leaf Resources
Exploration Permit
Activity Locations

DATE: 04/25/14

SCALE: NOTED

NORWEST CORPORATION