# Traffic Generation Analysis

NueVida Resources, LLC

Ardourel 33081718 Pad
Section 18 -T33N-R8W, La Plata County, CO


05/18/2022

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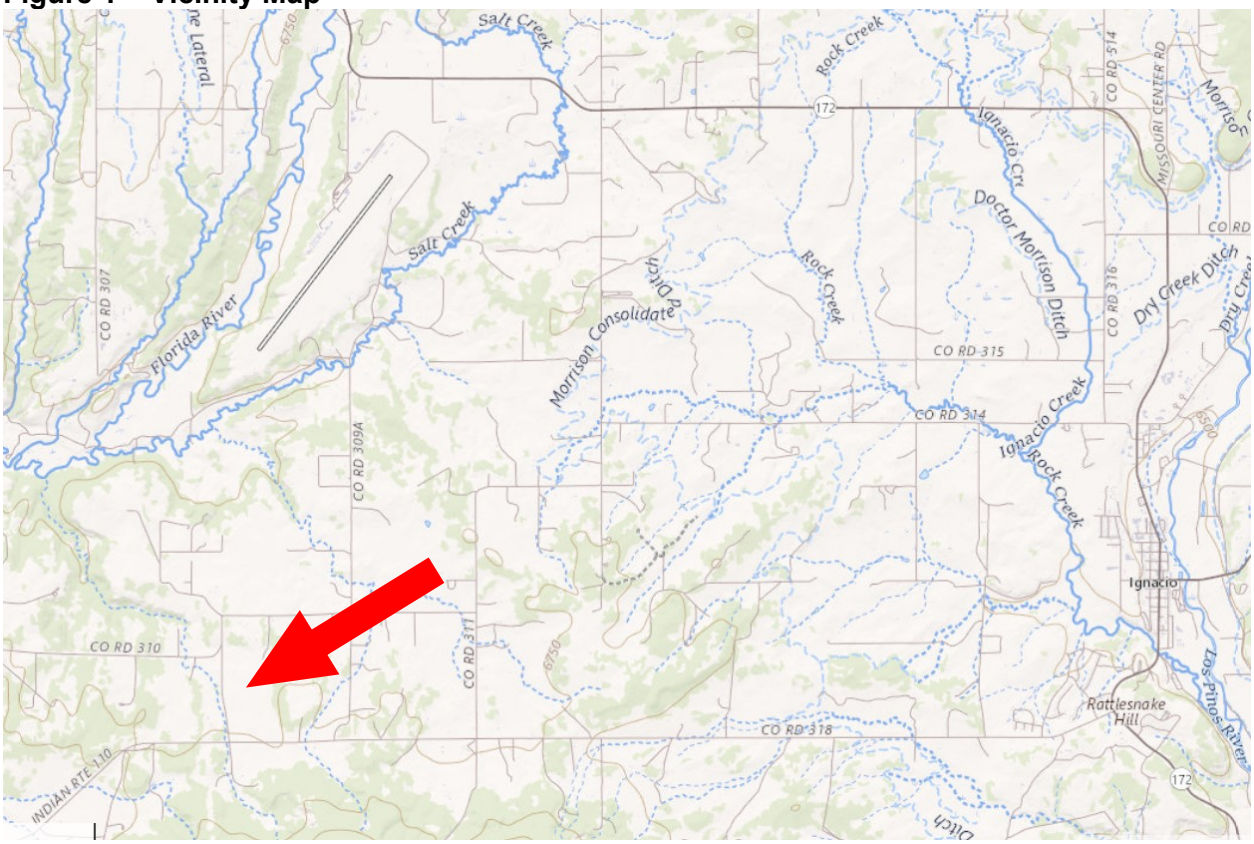
## I. INTRODUCTION

This report has been prepared to quantify the traffic generation anticipated by development of NueVida Resources Ardourel Pad (#33081718) and to tabulate the existing and proposed traffic uses within the project vicinity. The study will evaluate the ability of the County's existing roadways and intersections to accommodate these trips with recommended mitigation measures, where appropriate.

### a. Existing Land Use/Site Information

The project site for the proposed development is located north of CR318 in La Plata County, Colorado, LPC assessor's parcel number 595318300056. The site is bound by parcels 595318200055 to the north and east, 595113200035 to the north and west, 595113400285 to the west, and CR318 to the south. The project site is currently being used for oil and gas exploration. The focus of this study will be on the intersection of the private road accessing the site and CR318.

**Figure 1 – Vicinity Map**



### b. Proposed Development

NueVida Resources proposes to develop the Ardourel Pad (#33081718) for natural gas extraction and transportation. The development has been proposed to include a multi-well gas well pad, access roads, pipeline, tank pad Temporary Use Area (TUA), and temporary pump pad located on private land owned by the Ardourel Trust. Access to the project would be from County Road 318 to an existing graveled access road that is currently utilized by a different operator. From the existing graveled access road, two separate access roads will connect with the tank pad TUA, and two separate access roads will connect to the well pad from the existing access road to accommodate for pass through traffic on both pads.

The initial phase will consist of the completion of 2 wells. Construction of the well pad and tank pad TUA and installation of the water storage tanks will take approximately 58 days to complete. Drilling operations will take approximately 40 days to complete for the two wells. The drilling rig will then be removed, and a two-week period will begin for preparation to complete the wells. Completion operations for both wells will take approximately 30 days.

Based upon the performance of the initial 2-wells, subsequent phases may be pursued which would result in the completion of 6 additional wells.

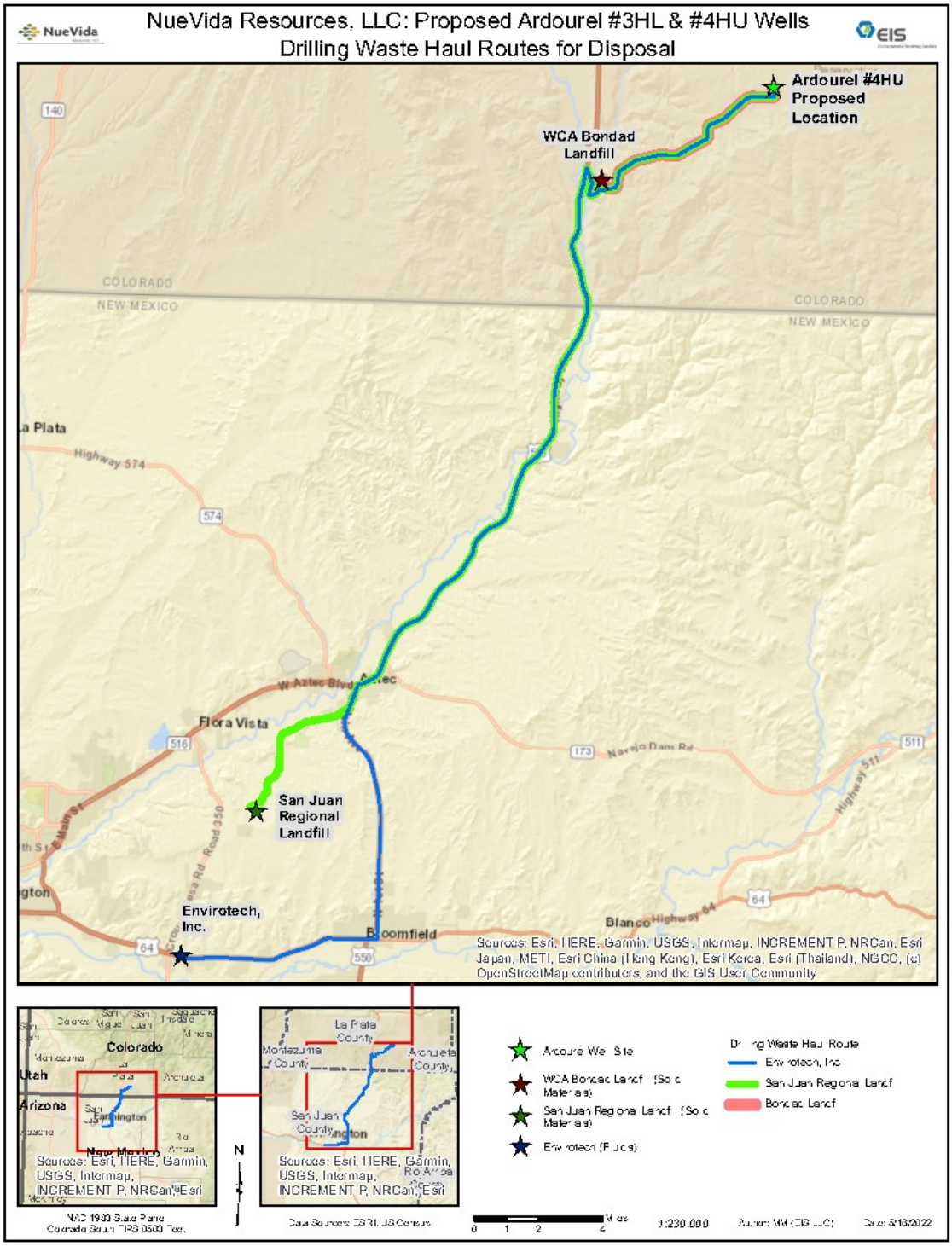
### c. Access Route

The route for development activities accesses the well location via County Road 318. Travel on County Road 318 to the east offers the shortest route to State Highway 172 and the Towns of Ignacio and Bayfield. Travel on County Road 318 to the west offers the shortest route to US Route 550 and the City of Aztec, NM.

### d. Haul Routes

The haul routes for disposal of solid materials (incl. drill cuttings) egress from the site via County Road 318 and proceed to the west. Two landfills, WCA Bondad Landfill 1500 CR 318 & San Juan Landfill 78 CR 3140, Aztec, NM, are the planned destinations for these materials. The haul route for drilling fluids is also planned to exit the site via CR 318 to the west and ends at a landfarm located at 5796 US Hwy 64, Farmington, NM (Envirotech). See Figure 2 for Haul Route Map.

**Figure 2 – Haul Route Map**



## II. TRIP GENERATION

The vast majority of all anticipated site-specific trips will occur during the construction phases of the project. Trips for these phases have been quantified and described in the matrices included in Appendix A.

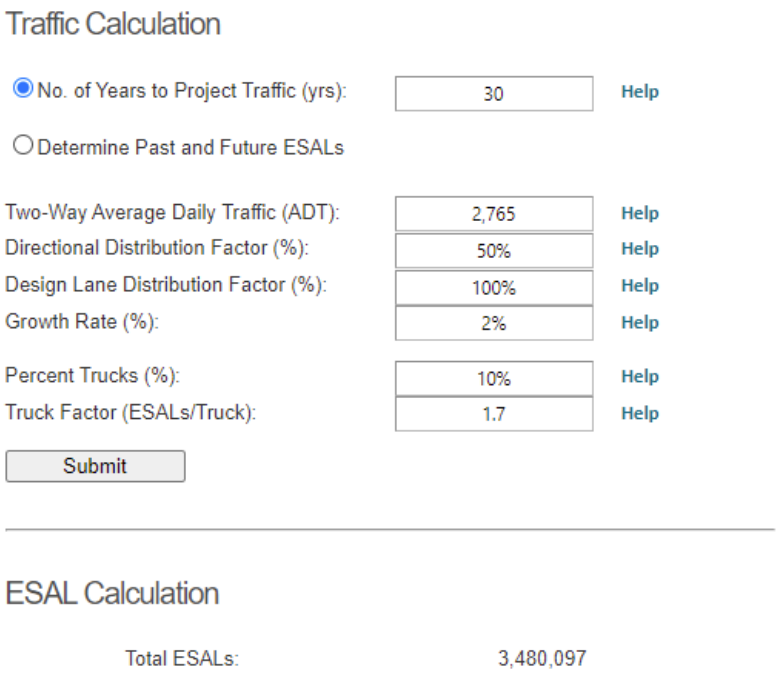
### a. Discussion of Impacts to Existing County Road

All vehicles hauling heavy equipment and materials must be legal loads to conform to state regulations. Oversized loads will be required to utilize mobile traffic control in conformance with the Manual on Uniform Traffic Control Devices (MUTCD). This may include pilot cars, portable message boards, etc. for the entirety of the route.

The Auxiliary Lane Requirements for road category NR-B of the State Highway Access Code was evaluated to determine if left or right turn lanes are warranted. The low projected volumes of the extended use case are not judged to meet the requirements for auxiliary turning lanes or a signalized intersection.

The most recent traffic data was provided from a traffic count on 6/2021 for CR 310 at US 550. The 3-day average was 2,765 ADT. ESAL calculations for background traffic were completed for the 30-year lifecycle of the well pad with an assumed 2% growth rate, 10% Truck volume, and 1.7 (ESALs/Truck) Truck Factor. This resulted in a Total ESAL of 3,480,097.

**Figure 2 – Total ESAL Calculation (Background Traffic)**



18k ESALs were estimated for the 30-year site-specific trips generated by both the 2-well initial phase and 8-well maximum scenarios. When expressed as a percentage of the background traffic, the 30-year 2-well scenario represented a 0.03% increase in ESALs and the 30-year 8-well scenario was calculated at a 0.13% increase. Refer to Table 1 for estimate of Long-Term Maintenance Fee.

**Table 1 – Long-Term Maintenance Fee**

**Long-Term Maintenance Fee**

| CR 318 | | | Notes |
|---|---|---|---|
| HMA Mill and Overlay | $ 600,000 | /mi | 30-year life cycle |
| Chip Seal ($30,000/treatment) | $ 60,000 | /mi | (2) Chip Seal treatments over 30-yr life cycle |
| Length | 15.11 | mi | |
| 30-yr Total Cost of Road Maintenance | $ 9,972,600 | | |
| | | | |
| **2-well Scenario** | | | |
| Project Generated 30-yr ESALs | 1,095 | | |
| Background 30-yr ESAls | 3,480,097 | | |
| 30-yr, 2-well scenario ESAL increase | 0.03% | | |
| Total Maintenance Fee | $ 2,992 | | |
| Total Maintenance Fee per year | $ 100 | /yr | |
| | | | |
| **8-well Scenario** | | | |
| Project Generated 30-yr ESALs | 4,380 | | |
| Background 30-yr ESAls | 3,480,097 | | |
| 30-yr, 8-well scenario ESAL increase | 0.13% | | |
| Total Maintenance Fee | $ 12,964 | | |
| Total Maintenance Fee per year | $ 432 | /yr | |

### b. Sight Distance

The intersection of the graveled access road and County Road 318 fails sight distance criteria as required by the State Highway Access Code for Multi-Unit Trucks. It is assumed that the majority of trucks of this size and capacity shall be used only during the construction phase of the project, with any regularity, and would be making a left-turn from a stopped condition to return to their base of operations in Ignacio and Bayfield. It is recommended that temporary work zone traffic control be utilized to the west of the intersection during the construction phases of the proposed

project in accordance with the MUTCD and shall include flaggers for oversize / overweight trucks, per La Plata County requirement.

### c. Access Road Improvement

The existing graveled access road is 12' wide with 2' clear zones and currently meets driveway surface width standards as required by Chapter 74 of the La Plata County Land Use Code. It is recommended that turnouts be constructed in accordance with Sec. 74-8 Driveway Standards and Permits, to accommodate 2-way construction traffic. The operator shall be liable for any damage to the shoulder of the county road at the project entrance.

## III. SUMMARY AND CONCLUSIONS

In order to determine the impact that the proposed development will have on the existing County Road system, this study has examined the existing and proposed land use, projected trip generation, possible highway improvements, and the layout of the proposed access. It has been concluded that the projected number of trips generated by the development will be low enough as to not warrant auxiliary turning lanes or a signal at the proposed access. Turnouts are to be constructed along the access road to accommodate 2-way construction traffic.

### a. Maintenance of Traffic

Motorists are to be made aware of the expected large truck traffic during the construction phase of the project by means of temporary work zone traffic control devices. Flaggers and Signage shall follow the appropriate elements of the MUTCD (Part 6: Temporary Traffic Control). A Traffic Control Plan is to be developed and approved by the county engineer prior to commencement of construction activities.

# APPENDIX A

**NueVida Resources, LLC**
**OPERATION ACTIVITIES - ESTIMATED TRAFFIC - 2-Well**
**SECTION 18 -T33N-R8W, LAPLATA CNTY, CO**
**Oct-21**

| OPERATION ACTIVITY | Number loads of Equipment | Frequency Daily | Weekly | Other | Total no. Trips | Passenger | Single Unit | Combination | 18k ESALS Generated | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Well Pad & Water Storage*** | | | | | | | | | | |
| ***Pad Construction (24 -28 days): Daylight*** | | | | | | | | | | *Well Pad and Water Storge Pad will be constructed simultaneously (2 crews).* |
| - Construction Equipment | 6 | | | In & Out -1 x | 12 | 0 | 0 | 13 | 13 | Heavy equipment: 2 -D-8 Cat,Blade, small bob-cat, 2 trailers-misc equip |
| - Fuel Truck | 1 | | 3 | | 15 | 0 | 4 | 0 | 4 | 5 days |
| - Water Truck | 1 | 1 | | | 20 | 0 | 5 | 0 | 5 | 20 days: Dust control |
| - Pick-up Trucks | 4 | 4 | | | 100 | 0 | 0 | 0 | 0 | 25 days: 2 crews daily and supervisors |
| - Dump Trucks (Gravel for Drilling Pad) | 720 | 36 | | | 720 | 0 | 179 | 0 | 179 | 13,000 tons gravel estimated for well pad construction |
| | | | | | | | | | | 18-ton/load =720 loads; 20 days - 36 loads/day ( 3-4 trucks per hour) |
| | Totals | 41 | 3 | | 867 | | | | 201 | |
| ***Production Facilities & Water Storage*** | | | | | | | | | | |
| ***Tank Installation-TUA (30 days): Daylight*** | | | | | | | | | | *Production Facilities and Water Storage Tanks installation will be done simultaneously (2 crews each).* |
| - Production Equipment | 8 | | | In Only | 8 | 0 | 0 | 9 | 9 | 2-400 Bbl Tks, 2-separators, 1 -dehy skid, fuel skid, 2-sand traps, 3- loads pipe |
| - Pick up Trucks | 3 | 3 | | | 72 | 0 | 0 | 0 | 0 | 24 days: 2 crews & supervisor |
| - Roustabout Truck | 1 | 1 | | | 24 | 0 | 0 | 0 | 0 | |
| - Welder & Truck | 1 | 1 | | | 20 | 0 | 0 | 0 | 0 | |
| - Back-hoe | 1 | | | In & Out -1x | 2 | 0 | 0 | 2 | 2 | Pick-up truck and flatbed trailer |
| - Small Crane | 1 | | | In & Out -1x | 2 | 0 | 0 | 2 | 2 | |
| - Water Storage Tanks | 54 | 6 | | In Only-2 weeks | 54 | 0 | 0 | 59 | 59 | 18-40MBbl AST tanks: 3 semi loads per tank; 2 tanks erect/day (9-10 days) |
| - Pick-up trucks | 3 | 3 | | | 72 | 0 | 0 | 0 | 0 | 24 days: 2 crews and supervisor |
| - Roustabout Truck | 1 | 1 | | | 24 | 0 | 0 | 0 | 0 | Install liners (3/day - 6 days); Lay fill-up lines (2-3 days) |
| - Small crane | 1 | | | In & Out -1x | 2 | 0 | 0 | 2 | 2 | |
| | Totals | 15 | 0 | | 280 | | | | 75 | |
| ***Drilling Operation (36-40 days): 24 hours*** | | | | | | | | | | |
| - Drilling Rig (Aztec 100) | 34 | | | In & Out -1x | 68 | 0 | 0 | 74 | 74 | Heavy equipment (2 days move-in; 2 days move-out) |
| - Trailers & Assoc Equipment | 15 | | | In & Out -1x | 30 | 0 | 0 | 33 | 33 | 6 trailers, Fresh water -3, Septic -3, Generators -3 |
| - Directional Equipment | 2 | | | In & Out -1x | 4 | 0 | 0 | 4 | 4 | Two flatbed trailers with equipment |
| - Closed loop system | 8 | | | In & Out -1x | 16 | 0 | 0 | 17 | 17 | 4-400 BBl tanks, 2 -solids bins, front end loader, 1 trailer (iron) |
| - Drilling mud | 6 | | 1 | 6-In & 2-out | 8 | 0 | 2 | 0 | 2 | 2 Truck-loads initially. Supplemental loads as needed (estimate 4). Load out -2 |
| - Water Truck | 1 | 1 | | | 42 | 0 | 10 | 0 | 10 | 1200 Bbls (12 loads) initially; then 1 x per day (30 days) |
| - Fuel Truck (LNG) | 1 | | 1 | | 5 | 0 | 1 | 0 | 1 | |
| - Miscellaneous Equipment | 8 | | | In & Out -1x | 8 | 0 | 0 | 9 | 9 | Front end loader, Surface Light package, 2-sets pipe racks, 4- misc equipment |
| - Casing Crews | 3 | | | In & Out-6x | 18 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment (1 |
| - Cementing Crews | 5 | | | In & Out-6x | 30 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment(3 |
| - BOP Testing | 3 | | | In & Out -6x | 18 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment(1 |
| - Welder | 1 | | | In & Out -6x | 6 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Welder & truck |
| - Casing | 22 | | | In & Out | 22 | 0 | 0 | | 0 | 2 wells - Surface casing - 2 loads ; Intermediate casing - 8 loads; Production casing - 12 loads |
| - Daily traffic (pick up trucks) | 14 | 14 | | | 560 | 2 | 0 | 0 | 2 | 1 - mud engineer, 2 - geologist, 2- rig crews, 2- supervisors, 2- closed loop crews, 5 - various (40 days) |

| OPERATION ACTIVITY | Number loads of Equipment | Frequency Daily | Weekly | Other | Total no. Trips | Passenger | Single Unit | Combination | 18k ESALS Generated | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | Totals | 15 | 2 | | 835 | | | | 153 | |
| ***Completion/Frac Stimulation & Clean-Out*** | | | | | | | | | | |
| ***( CTU) Operation (28-33 days): 24 hours*** | | | | | | | | | | |
| - Frac Equipment (Liberty Oil or other) | 40 | | | In & Out - 1x | 80 | 0 | 20 | 0 | 20 | Equipment (2 days move-in, 2 days move-out): 22 pump trucks; 2 blenders; 6 sand masters; 2 chem add |
| | | | | | | | | | | trucks; 2 chem transfer trucks; 4 iron trucks; 4 - miscellaneous |
| - Sand Hauling | 1040 | 56 | | In & Out | 1040 | 0 | 259 | 0 | 259 | Initial set-up 4 stages on start up (40 sand bins - 40 loads) |
| | | | | | | | | | | 400 Mlbs/stg; 10 loads/stg; 40 Mlbs/truck; 1 stage = 10 trucks |
| | | | | | | | | | | 100 stages total for 2 wells; average 6 stages/day (18 days); 1000 truck loads (56 trucks/day-2.3 trucks/hr |
| - Frac crews & supervisors : 2 crews | 5 | 10 | | | 200 | 1 | 0 | 0 | 1 | 20 days- 12 hour shifts |
| (2 crew vans; 3 supervisor pickup trucks) | | | | | | | | | | |
| - Perforating Equipment | 3 | | | In & Out - 1 x | 6 | 0 | 0 | 7 | 7 | Equipment ( 1- day move-in; 1 day move-out): 1 crane; 1 wireline truck; 1 trailer w/equipment |
| - Perforating crew: 2 crews | 1 | 2 | | | 40 | | 0 | 0 | 0 | 20 days -12 hour shifts ( 1 pickup truck per crew) |
| - Perforating guns (daily) | 1 | 1 | | | 18 | 0 | 4 | 0 | 4 | One trailer load per day ( 6 sets perf guns - 6 stages) |
| - Water treatment van | 2 | | | In & Out -1x | 4 | 0 | 0 | 0 | 0 | Equipment ( 1 treating van and trailer w/equipment) |
| - Water treatment personnel: 2 crews | 1 | 2 | | | 40 | 0 | 0 | 0 | 0 | 20 days - 12 hour shifts ( 1 pickup truck per crew) |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| - Water transfer equipment | | 8 | | | In & Out -1x | 16 | 0 | 0 | 17 | 17 | 1 Modular tank; 2 transfer pumps; lay flat line |
| - Water transfer crews : 2 crews | | 1 | | 2 | | 40 | 0 | 0 | 0 | 0 | 20 days - 12 hour shifts ( 1 pickup per crew) |
| | | | | | | | | | | | |
| - Fuel truck | | 1 | | 1 | | 18 | 0 | 4 | 0 | 4 | 18 days |
| | | | | | | | | | | | |
| ***CTU Operations (6-8 days ): 24 hours*** | | | | | | | | | | | *CTU Operations and Flowback crew set up at same time* |
| - CTU Unit and Equipment | | 3 | | | In & Out - 1x | 6 | 0 | 1 | 0 | 1 | Equipment (1 day move in, 1 day move out); CTU Unit, CTU spool, equipment trailer |
| - CTU crew and supervisor | | 1 | | 2 | | 16 | 0 | 0 | 0 | 0 | 8 days -12 hr shifts |
| | | | | | | | | | | | |
| | | Totals | | 76 | | 1524 | | | | 314 | |
| ***Flow Back Operation ( 10-14 days): 24 hours*** | | | | | | | | | | | *Water Tank Removal and Flowback Operations done simultaneously* |
| | | | | | | | | | | | Minimal Equipment/personnel for this phase |
| - Flow back Crew (12 hour shifts) | | 2 | | 2 | | 28 | 0 | 0 | 0 | 0 | 14 days |
| - Flowback equipment | | 12 | | | In & Out- 1x | 24 | 0 | 0 | 26 | 26 | Flowback (temporary) equipment: 1- hi-pressure separator, 8- 400 Bbl tanks, 3 trailers line pipe/misc |
| - Supervisors | | 2 | | 2 | | 28 | 0 | 0 | 0 | 0 | 14 days |
| - Water Truck - Temporary haul water (10 days) | | 80 | | 8 | | 80 | 0 | 20 | 0 | 20 | As needed. Assume 8 trips day, pending rerouting water through 8" HDPE line to WDW's. |
| | | | | | | | | | | | |
| | | Totals | | 12 | | 160 | | | | 46 | |
| ***Water Storage Tank Removal (15 days):Daylight*** | | | | | | | | | | | *Water Tank Removal and Flowback Operations done simultaneously* |
| | | | | | | | | | | | |
| - Water Storage Tanks | | 54 | | 6 | 27 | Out Only - 2 weeks | 54 | 0 | 0 | 59 | 59 | 18-40MBbl AST tanks: 3 semi loads per tank |
| - Pick-up trucks | | 3 | | 3 | | | 45 | 0 | 0 | 0 | 0 | 15 days: 2 crews and supervisor |
| - Roustabout truck | | 1 | | 1 | | | 15 | 0 | 0 | 0 | 0 | 15 days |
| - Small crane | | 1 | | | | In & Out -1x | 2 | 0 | 0 | 2 | 2 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | Totals | | 10 | | | 116 | | | | 61 | |
| ***Production Phase ( Life of well - 30 years): Daylight*** | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| - Pumper | | 1 | | 1 | | | 900 | 0 | 224 | 0 | 224 | Pumper to check well 1-x per time in the a.m. 30 min to 1 hour on location. |
| - Foreman | | | | | 1 | | 120 | 0 | 0 | 0 | 0 | As needed monthly. Assume 1-x per week. |
| | | | | | | | | | | | | |
| | | Totals | | 1 | 1 | | 1020 | | | | 224 | Per month: daylight (1 hour per day) |

| | |
|---|---|
| Total 18k ESALs Generated (Operation) | 1074 |

**NueVida Resources, LLC**
**INTERIM RECLAMATION - ESTIMATED TRAFFIC - 2-Well**
**SECTION 18 -T33N-R8W, LAPLATA CNTY, CO**
**Dec-21**

| OPERATION ACTIVITY | | Number loads | Frequency | | | Total no. | Passenger | Single Unit | Combination | 18k ESALS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | of Equipment | Daily | Weekly | Other | Trips | | | | Generated | COMMENTS |
| ***Well Pad & Water Storage*** | | | | | | | | | | | |
| ***Interim Reclamation (12 - 15 days): Daylight*** | ***Base Location*** | | | | | | | | | | *Well Pad and Water Storge Pad will be constructed simultaneously (2 crews).* |
| | | | | | | | | | | | |
| - Construction Equipment/Reseeding equipment | Bayfield, CO | 6 | | | In & Out -1 x | 12 | 0 | 0 | 13 | 13 | Heavy equipment: 1 -D-8 Cat,Blade, small bob-cat, 2 trailers-misc equip, Reseed equipment |
| - Fuel Truck | Ignacio, CO | 1 | | 2 | | 12 | 0 | 3 | 0 | 3 | 6 days |
| - Water Truck | Ignacio, CO | 1 | 1 | | | 15 | 0 | 4 | 0 | 4 | 15 days: Dust control |
| - Pick-up Trucks | Bayfield , CO | 4 | 4 | | | 60 | 0 | 0 | 0 | 0 | 15 days: 2 crews daily and supervisors |
| - Seed and matting | Bayfield, CO | 2 | | 2 | In & Out -1 x | 4 | 0 | 1 | 0 | 1 | 2 days |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | Totals | 5 | 4 | | 103 | Total 18k ESALs Generated (Reclamation) | | | 21 | |

**NueVida Resources, LLC**
**OPERATION ACTIVITIES - ESTIMATED TRAFFIC - 8-Well**
**SECTION 18 -T33N-R8W, LAPLATA CNTY, CO**
**Oct-21**

| OPERATION ACTIVITY | Number loads of Equipment | Frequency Daily | Weekly | Other | Total no. Trips | Passenger | Single Unit | Combination | 18k ESALS Generated | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Well Pad & Water Storage*** | | | | | | | | | | |
| ***Pad Construction (24 -28 days): Daylight*** | | | | | | | | | | *Well Pad and Water Storge Pad will be constructed simultaneously (2 crews).* |
| - Construction Equipment | 6 | | | In & Out -1 x | 48 | 0 | 0 | 52 | 52 | Heavy equipment: 2 -D-8 Cat,Blade, small bob-cat, 2 trailers-misc equip |
| - Fuel Truck | 1 | | 3 | | 60 | 0 | 15 | 0 | 15 | 5 days |
| - Water Truck | 1 | 1 | | | 80 | 0 | 20 | 0 | 20 | 20 days: Dust control |
| - Pick-up Trucks | 4 | 4 | | | 400 | 1 | 0 | 0 | 1 | 25 days: 2 crews daily and supervisors |
| - Dump Trucks (Gravel for Drilling Pad) | 720 | 36 | | | 2880 | 0 | 717 | 0 | 717 | 13,000 tons gravel estimated for well pad construction |
| | | | | | | | | | | 18-ton/load =720 loads; 20 days - 36 loads/day ( 3-4 trucks per hour) |
| | Totals | 41 | 3 | | 3468 | | | | 805 | |
| ***Production Facilities & Water Storage*** | | | | | | | | | | |
| ***Tank Installation-TUA (30 days): Daylight*** | | | | | | | | | | *Production Facilities and Water Storage Tanks installation will be done simultaneously (2 crews each).* |
| - Production Equipment | 8 | | | In Only | 32 | 0 | 0 | 35 | 35 | 2-400 Bbl Tks, 2-separators, 1 -dehy skid, fuel skid, 2-sand traps, 3- loads pipe |
| - Pick up Trucks | 3 | 3 | | | 288 | 1 | 0 | 0 | 1 | 24 days: 2 crews & supervisor |
| - Roustabout Truck | 1 | 1 | | | 96 | 0 | 0 | 0 | 0 | |
| - Welder & Truck | 1 | 1 | | | 80 | 0 | 0 | 0 | 0 | |
| - Back-hoe | 1 | | | In & Out -1x | 8 | 0 | 0 | 9 | 9 | Pick-up truck and flatbed trailer |
| - Small Crane | 1 | | | In & Out -1x | 8 | 0 | 0 | 9 | 9 | |
| - Water Storage Tanks | 54 | 6 | | In Only-2 weeks | 216 | 0 | 0 | 235 | 235 | 18-40MBbl AST tanks: 3 semi loads per tank; 2 tanks erect/day (9-10 days) |
| - Pick-up trucks | 3 | 3 | | | 288 | 1 | 0 | 0 | 1 | 24 days: 2 crews and supervisor |
| - Roustabout Truck | 1 | 1 | | | 96 | 0 | 0 | 0 | 0 | Install liners (3/day - 6 days); Lay fill-up lines (2-3 days) |
| - Small crane | 1 | | | In & Out -1x | 8 | 0 | 0 | 9 | 9 | |
| | Totals | 15 | 0 | | 1120 | | | | 298 | |
| ***Drilling Operation (36-40 days): 24 hours*** | | | | | | | | | | |
| - Drilling Rig (Aztec 100) | 34 | | | In & Out -1x | 272 | 0 | 0 | 296 | 296 | Heavy equipment (2 days move-in; 2 days move-out) |
| - Trailers & Assoc Equipment | 15 | | | In & Out -1x | 120 | 0 | 0 | 130 | 130 | 6 trailers, Fresh water -3, Septic -3, Generators -3 |
| - Directional Equipment | 2 | | | In & Out -1x | 16 | 0 | 0 | 17 | 17 | Two flatbed trailers with equipment |
| - Closed loop system | 8 | | | In & Out -1x | 64 | 0 | 0 | 70 | 70 | 4-400 BBl tanks, 2 -solids bins, front end loader, 1 trailer (iron) |
| - Drilling mud | 6 | | 1 | 6-In & 2-out | 32 | 0 | 8 | 0 | 8 | 2 Truck-loads initially. Supplemental loads as needed (estimate 4). Load out -2 |
| - Water Truck | 1 | 1 | | | 168 | 0 | 42 | 0 | 42 | 1200 Bbls (12 loads) initially; then 1 x per day (30 days) |
| - Fuel Truck (LNG) | 1 | | 1 | | 20 | 0 | 5 | 0 | 5 | |
| - Miscellaneous Equipment | 8 | | | In & Out -1x | 32 | 0 | 0 | 35 | 35 | Front end loader, Surface Light package, 2-sets pipe racks, 4- misc equipment |
| - Casing Crews | 3 | | | In & Out-6x | 72 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment (1 |
| - Cementing Crews | 5 | | | In & Out-6x | 120 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment(3 |
| - BOP Testing | 3 | | | In & Out -6x | 72 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Crews,Supervisor,Equipment(1 |
| - Welder | 1 | | | In & Out -6x | 24 | 0 | 0 | 0 | 0 | 2 wells-3 sets of operations (Surface, Intermediate and Longstring pipe): Welder & truck |
| - Casing | 22 | | | In & Out | 88 | 0 | 0 | | 0 | 2 wells - Surface casing - 2 loads ; Intermediate casing - 8 loads; Production casing - 12 loads |
| - Daily traffic (pick up trucks) | 14 | 14 | | | 2240 | 7 | 0 | 0 | 7 | 1 - mud engineer, 2 - geologist, 2- rig crews, 2- supervisors, 2- closed loop crews, 5 - various (40 days) |

| OPERATION ACTIVITY | Number loads of Equipment | Frequency Daily | Weekly | Other | Total no. Trips | Passenger | Single Unit | Combination | 18k ESALS Generated | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | Totals | 15 | 2 | | 3340 | | | | 610 | |
| ***Completion/Frac Stimulation & Clean-Out*** | | | | | | | | | | |
| ***( CTU) Operation (28-33 days): 24 hours*** | | | | | | | | | | |
| - Frac Equipment (Liberty Oil or other) | 40 | | | In & Out - 1x | 320 | 0 | 80 | 0 | 80 | Equipment (2 days move-in, 2 days move-out): 22 pump trucks; 2 blenders; 6 sand masters; 2 chem add |
| | | | | | | | | | | trucks; 2 chem transfer trucks; 4 iron trucks; 4 - miscellaneous |
| - Sand Hauling | 1040 | 56 | | In & Out | 4160 | 0 | 1036 | 0 | 1036 | Initial set-up 4 stages on start up (40 sand bins - 40 loads) |
| | | | | | | | | | | 400 Mlbs/stg; 10 loads/stg; 40 Mlbs/truck; 1 stage = 10 trucks |
| | | | | | | | | | | 100 stages total for 2 wells; average 6 stages/day (18 days); 1000 truck loads (56 trucks/day-2.3 trucks/hr |
| - Frac crews & supervisors : 2 crews | 5 | 10 | | | 800 | 2 | 0 | 0 | 2 | 20 days- 12 hour shifts |
| (2 crew vans; 3 supervisor pickup trucks) | | | | | | | | | | |
| - Perforating Equipment | 3 | | | In & Out - 1 x | 24 | 0 | 0 | 26 | 26 | Equipment ( 1- day move-in; 1 day move-out): 1 crane; 1 wireline truck; 1 trailer w/equipment |
| - Perforating crew: 2 crews | 1 | 2 | | | 160 | | 0 | 0 | 0 | 20 days -12 hour shifts ( 1 pickup truck per crew) |
| - Perforating guns (daily) | 1 | 1 | | | 72 | 0 | 18 | 0 | 18 | One trailer load per day ( 6 sets perf guns - 6 stages) |
| - Water treatment van | 2 | | | In & Out -1x | 16 | 0 | 0 | 0 | 0 | Equipment ( 1 treating van and trailer w/equipment) |
| - Water treatment personnel: 2 crews | 1 | 2 | | | 160 | 0 | 0 | 0 | 0 | 20 days - 12 hour shifts ( 1 pickup truck per crew) |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| - Water transfer equipment | | 8 | | | In & Out -1x | 64 | 0 | 0 | 70 | 70 | 1 Modular tank; 2 transfer pumps; lay flat line |
| - Water transfer crews : 2 crews | | 1 | | 2 | | 160 | 0 | 0 | 0 | 0 | 20 days - 12 hour shifts ( 1 pickup per crew) |
| | | | | | | | | | | | |
| - Fuel truck | | 1 | | 1 | | 72 | 0 | 18 | 0 | 18 | 18 days |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| ***CTU Operations (6-8 days ): 24 hours*** | | | | | | | | | | | *CTU Operations and Flowback crew set up at same time* |
| - CTU Unit and Equipment | | 3 | | | In & Out - 1x | 24 | 0 | 6 | 0 | 6 | Equipment (1 day move in, 1 day move out); CTU Unit, CTU spool, equipment trailer |
| - CTU crew and supervisor | | 1 | | 2 | | 64 | 0 | 0 | 0 | 0 | 8 days -12 hr shifts |
| | | | | | | | | | | | |
| | | Totals | | 76 | | 6096 | | | | 1257 | |
| ***Flow Back Operation ( 10-14 days): 24 hours*** | | | | | | | | | | | *Water Tank Removal and Flowback Operations done simultaneously* |
| | | | | | | | | | | | Minimal Equipment/personnel for this phase |
| - Flow back Crew (12 hour shifts) | | 2 | | 2 | | 112 | 0 | 0 | 0 | 0 | 14 days |
| - Flowback equipment | | 12 | | | In & Out- 1x | 96 | 0 | 0 | 104 | 104 | Flowback (temporary) equipment: 1- hi-pressure separator, 8- 400 Bbl tanks, 3 trailers line pipe/misc |
| - Supervisors | | 2 | | 2 | | 112 | 0 | 0 | 0 | 0 | 14 days |
| - Water Truck - Temporary haul water (10 days) | | 80 | | 8 | | 320 | 0 | 80 | 0 | 80 | As needed. Assume 8 trips day, pending rerouting water through 8" HDPE line to WDW's. |
| | | | | | | | | | | | |
| | | Totals | | 12 | | 640 | | | | 185 | |
| ***Water Storage Tank Removal (15 days):Daylight*** | | | | | | | | | | | *Water Tank Removal and Flowback Operations done simultaneously* |
| | | | | | | | | | | | |
| - Water Storage Tanks | | 54 | | 6 | 27 | Out Only - 2 weeks | 216 | 0 | 0 | 235 | 235 | 18-40MBbl AST tanks: 3 semi loads per tank |
| - Pick-up trucks | | 3 | | 3 | | | 180 | 1 | 0 | 0 | 1 | 15 days: 2 crews and supervisor |
| - Roustabout truck | | 1 | | 1 | | | 60 | 0 | 0 | 0 | 0 | 15 days |
| - Small crane | | 1 | | | | In & Out -1x | 8 | 0 | 0 | 9 | 9 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | Totals | | 10 | | | 464 | | | | 244 | |
| ***Production Phase ( Life of well - 30 years): Daylight*** | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| - Pumper | | 1 | | 1 | | | 3600 | 0 | 896 | 0 | 896 | Pumper to check well 1-x per time in the a.m. 30 min to 1 hour on location. |
| - Foreman | | | | | 1 | | 480 | 1 | 0 | 0 | 1 | As needed monthly. Assume 1-x per week. |
| | | | | | | | | | | | | |
| | | Totals | | 1 | 1 | | 1020 | | | | 898 | Per month: daylight (1 hour per day) |

| | |
|---|---|
| Total 18k ESALs Generated (Operation) | 4297 |

**NueVida Resources, LLC**
**INTERIM RECLAMATION - ESTIMATED TRAFFIC - 8-Well**
**SECTION 18 -T33N-R8W, LAPLATA CNTY, CO**
**Dec-21**

| OPERATION ACTIVITY | | Number loads | Frequency | | | Total no. | | | | 18k ESALS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | of Equipment | Daily | Weekly | Other | Trips | Passenger | Single Unit | Combination | Generated | COMMENTS |
| ***Well Pad & Water Storage*** | | | | | | | | | | | |
| ***Interim Reclamation (12 - 15 days): Daylight*** | ***Base Location*** | | | | | | | | | | *Well Pad and Water Storge Pad will be constructed simultaneously (2 crews).* |
| | | | | | | | | | | | |
| - Construction Equipment/Reseeding equipment | Bayfield, CO | 6 | | | In & Out -1 x | 48 | 0 | 0 | 52 | 52 | Heavy equipment: 1 -D-8 Cat,Blade, small bob-cat, 2 trailers-misc equip, Reseed equipment |
| - Fuel Truck | Ignacio, CO | 1 | | 2 | | 48 | 0 | 12 | 0 | 12 | 6 days |
| - Water Truck | Ignacio, CO | 1 | 1 | | | 60 | 0 | 15 | 0 | 15 | 15 days: Dust control |
| - Pick-up Trucks | Bayfield , CO | 4 | 4 | | | 240 | 0 | 0 | 0 | 0 | 15 days: 2 crews daily and supervisors |
| - Seed and matting | Bayfield, CO | 2 | | 2 | In & Out -1 x | 16 | 0 | 4 | 0 | 4 | 2 days |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | Totals | 5 | 4 | | 412 | Total 18k ESALs Generated (Reclamation) | | | 83 | |

# APPENDIX B


GRAPHIC SCALE
0 5 10 FEET 20 30
0 ¼ ½ ¾ 1 INCHES 2 3

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# Ardourel Wellpad #3308171 8
NUEVIDA RESOURCES, LLC
LA PLATA COUNTY, CO

Issue Record:
ISSUED FOR PERMIT 01-07-2022

Revisions:

Project Number: 21-330
Drawn By: KHK
Designed by:
Checked By:

Sheet
**C1.0**

**APPENDIX B INTERSECTION DETAIL**

g:\2021\21-330 nuevida resources traffic analysis\cad\sheets\app b intersection sketch.dwg DATE:2/25/2022 USER:KKNOBLE PLOT SCALE=1:2