



APD ID: 10400013080

Submission Date: 04/24/2017

Operator Name: ARMSTRONG ENERGY CORP

Well Name: LIZA JANE FEDERAL

Well Number: 1

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

17\_368\_VICINITY.mxd\_04-04-2017.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

17\_369\_ACCESS\_ROAD\_04-04-2017.pdf

New road type: LOCAL

Length: 3486 Feet

Width (ft.): 30

Max slope (%): 3

Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 30

New road access erosion control: per BLM instructions during onsite

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** scrape and stockpile on west side of location, seed immediately

**Access other construction information:** N/S portion of new road may be shifted 90'-120' to the east to accommodate BLM requested changes in battery layout

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** OTHER, WATERDIP

**Drainage Control comments:** road will be crowned, per BLM instructions during onsite

**Road Drainage Control Structures (DCS) description:** per BLM instructions during onsite

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Surrounding\_Wells\_04-13-2017.jpg

**Existing Wells description:**

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Estimated Production Facilities description:** Two 500bbl steel oil tanks on west edge of location, one 500bbl fiberglass water tank on west edge of location in line with oil tanks. Arranged to allow room for additional tanks of each. One 1MMBTU line heater, one 4'x20' heater treater, one 3 phase separator, all within the containment. Anticipate a dirt containment, sprayed with 30+mil containment liner, approximately 200'x60'. Two feet deep yields containment capacity of over 4200 bbl. Truck load lines and containment buckets will be within containment walls. Water transfer pump and circulating pump within containment walls.

**Production Facilities map:**

Llza\_Jane\_Fed\_\_1\_Site\_Diagram\_4\_24\_17\_04-24-2017.pdf

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Water source use type:** INTERMEDIATE/PRODUCTION CASING,  
SURFACE CASING

**Water source type:** OTHER

**Describe type:** Contract water hauler utilizing multiple water sources  
but primarily from Stearns in Crossroads, NM or from Lovington, NM

**Source longitude:** -103.339485

**Source latitude:** 33.512447

**Source datum:** NAD27

**Water source permit type:** WATER WELL

**Source land ownership:** PRIVATE

**Water source transport method:** TRUCKING

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 6000

**Source volume (acre-feet):** 0.7733586

**Source volume (gal):** 252000

**Water source and transportation map:**

Stearns\_Water\_map\_04-13-2017.jpg

**Water source comments:** Various water haulers utilizing various private water sources located in Crossroads, NM or Lovington, NM

**New water well?** NO

#### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**Additional information attachment:**

**Section 6 - Construction Materials**

**Construction Materials description:**

**Construction Materials source location attachment:**

**Section 7 - Methods for Handling Waste**

**Waste type:** DRILLING

**Waste content description:** cuttings will be captured in haul off bins and transported to Gandy Marly

**Amount of waste:** 35000 pounds

**Waste disposal frequency :** Daily

**Safe containment description:** Cuttings will be capture in roll off bins within the closed loop system

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** trucked to approved disposal facility, Gandy Marley Inc., disposal facility, permit number NM-01-0019

**Reserve Pit**

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

**Cuttings Area**

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)** **Cuttings area width (ft.)**

**Cuttings area depth (ft.)** **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Llza\_Jane\_Fed\_\_1\_Site\_Diagram\_4\_24\_17\_04-24-2017.pdf

**Comments:**

### Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

**Drainage/Erosion control construction:** Grading, berms and large rocks will be used to minimize erosion during construction.

**Drainage/Erosion control reclamation:** Large rock will be used on high side of location to minimize erosion. Reclaimed areas will be reseeded as soon as possible to establish growth and minimize erosion.

**Wellpad long term disturbance (acres):** 1.2

**Wellpad short term disturbance (acres):** 1.9

**Access road long term disturbance (acres):** 2.4

**Access road short term disturbance (acres):** 2.4

**Pipeline long term disturbance (acres):** 0.08002755

**Pipeline short term disturbance (acres):** 0.3201102

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 3.6800275

**Total short term disturbance:** 4.62011

**Reconstruction method:** Pad that is reclaimed will be recontoured to original contour.

**Topsoil redistribution:** 6" of native topsoil will be scraped and winrowed on the West side of the location. Topsoil will be redistributed and reseeded on reclaimed portion of pad (70' of west side and 40' of north side) and what is not used will be seeded in place.

**Soil treatment:** topsoil will be reseeded upon both initial reclamation and final reclamation.

**Existing Vegetation at the well pad:** Buffalo grass, yucca, grama grass

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Buffalo grass, yucca, grama grass

**Existing Vegetation Community at the road attachment:**

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**Existing Vegetation Community at the pipeline:** Buffalo grass, yucca, grama grass

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:**

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

### Seed Management

#### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

#### Seed Summary

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

#### Operator Contact/Responsible Official Contact Info

**First Name:** Rocky

**Last Name:** Ray

**Phone:** (575)420-6371

**Email:** rocky@aecnm.com

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** spot spray of weeds on location and road only

**Weed treatment plan attachment:**

**Monitoring plan description:** visual monitoring of weeds on location and road, monitor reclaimed portions for growth

**Monitoring plan attachment:**

**Success standards:** Per BLM success standards

**Pit closure description:** Closed loop system will be used in lieu of open pits

**Pit closure attachment:**

### Section 11 - Surface Ownership

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** ARMSTRONG ENERGY CORP

**Well Name:** LIZA JANE FEDERAL

**Well Number:** 1

**Fee Owner:** ROY LEE AND WAVERLY CRISWELL **Fee Owner Address:** PO BOX 35

**Phone:** (575)914-5755

**Email:**

**Surface use plan certification:**

**Surface use plan certification document:**

**Surface access agreement or bond:**

**Surface Access Agreement Need description:**

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

### ROW Applications

**SUPO Additional Information:** archaeological survey attached here Surface Use Agreement with surface owner also attached here.

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Onsite conducted 4/20/17. BLM requested we move battery from western edge of location to SE corner. This will require shifting the N/S portion of the access road 90' - 120' to the east in order to accommodate truck loading. This shift is not reflected on the attached new road survey and was approved verbally during the onsite.

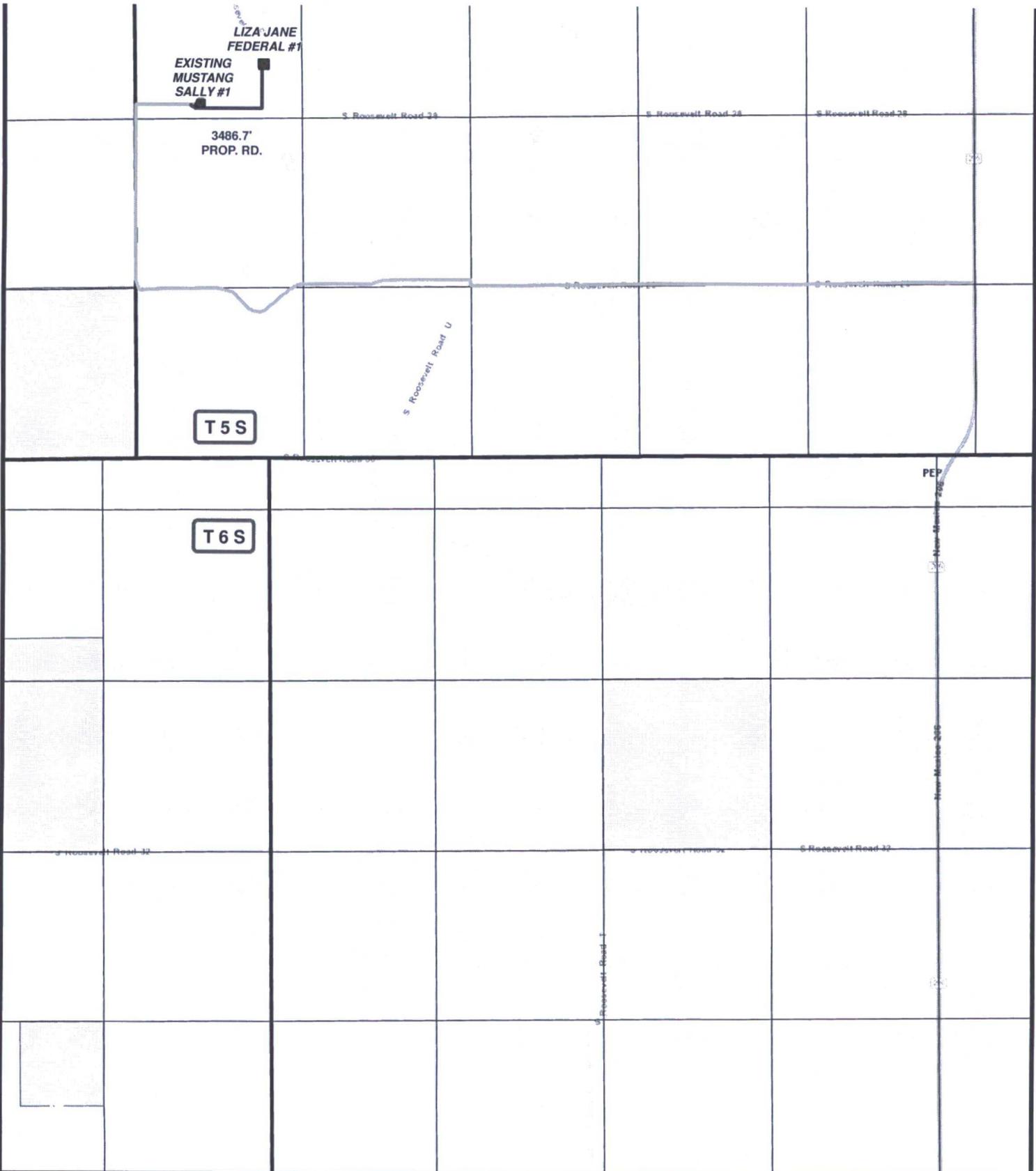
### Other SUPO Attachment

OnsiteResults\_LizaJaneFed1\_04-24-2017.pdf

Liza\_Jane\_arch\_survey\_4\_6\_17\_04-24-2017.pdf

Criswell\_SUA\_10\_8\_09\_05-08-2017.pdf

Handwritten text, possibly a signature or name, written in a cursive style. The text is oriented diagonally across the page.



LIZA-JANE  
FEDERAL #1  
EXISTING  
MUSTANG  
SALLY #1

3486.7'  
PROP. RD.

T 5 S

T 6 S

S Roosevelt Road U

PEP

NM

New Mexico 306

**LEGEND**

- WELL
- WELLPAD
- EXISTING
- PROPOSED

**LIZA JANE FEDERAL #1**

SEC: 19    TWP: 5 S.    RGE: 34 E.    ELEVATION: 4331.2'  
 STATE: NEW MEXICO COUNTY: ROOSEVELT 1630' FSL & 1220' FEL  
 W.O. # 17-368    LEASE: LIZA JANE FED    SURVEY: N.M.P.M



VICINITY MAP

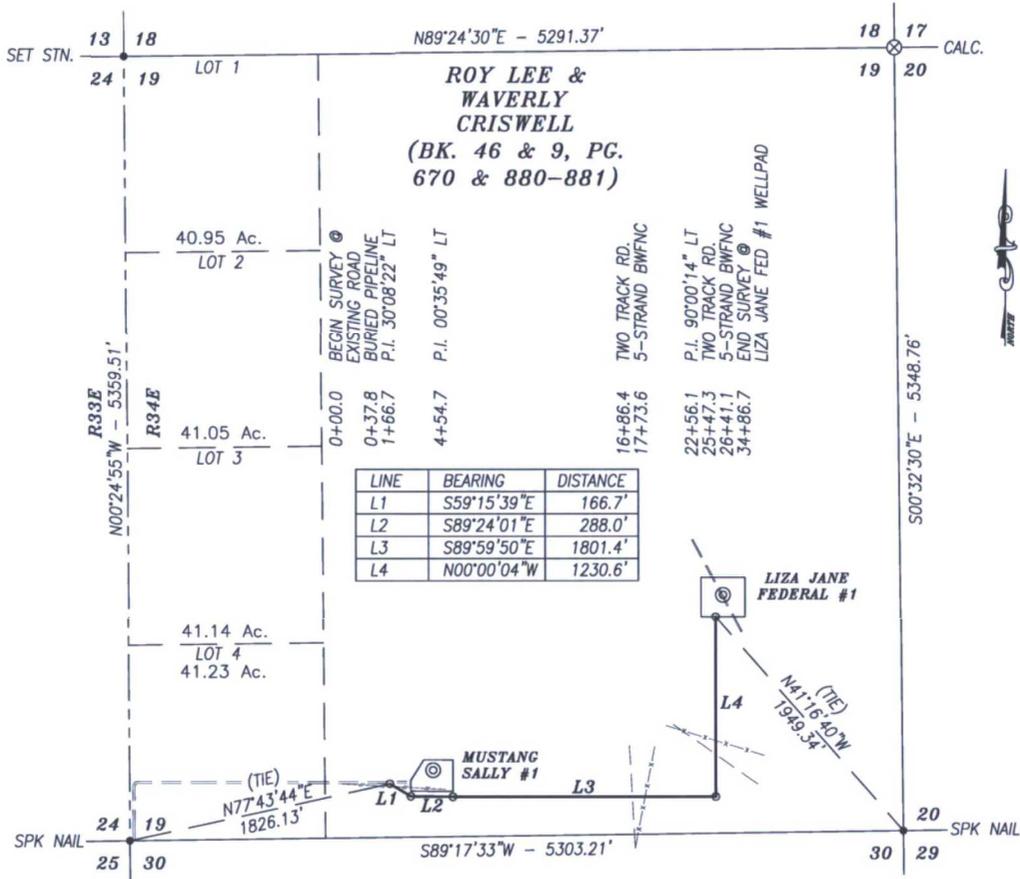
04/3/2017

V.D.



**HARCROW SURVEYING, LLC.**  
 2314 W. MAIN ST, ARTESIA, NM 88210  
 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com

**ACCESS ROAD PLAT**  
**ARMSTRONG ENERGY CORPORATION**  
 A PROPOSED ACCESS ROAD FROM AN EXISTING LEASE ROAD  
 TO THE LIZA JANE FEDERAL #1 IN  
**SECTION 19, TOWNSHIP 5 SOUTH, RANGE 34 EAST, N.M.P.M.,**  
 ROOSEVELT COUNTY, NEW MEXICO.



**DESCRIPTION**

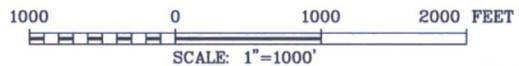
A STRIP OF LAND 30.0 FEET WIDE AND 3486.7 FEET OR 211.32 RODS OR 0.660 MILES IN LENGTH CROSSING FEE LAND IN SECTION 19, TOWNSHIP 5 SOUTH, RANGE 34 EAST, ROOSEVELT COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

**BASIS OF BEARING:**  
 BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

**HARCROW SURVEYING, LLC**  
 2314 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
 CHAD HARCROW N.M.P.S. NO. 17777  
 4/4/17  
 DATE

<b>ARMSTRONG ENERGY CORPORATION</b>	
SURVEY OF A PROPOSED ACCESS ROAD LOCATED IN SECTION 19, TOWNSHIP 5 SOUTH, RANGE 34 EAST, NMPM, ROOSEVELT COUNTY, NEW MEXICO	
SURVEY DATE: MARCH 31, 2017	
DRAFTING DATE: APRIL 4, 2017	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: VD
	FILE: 17-369

Liya Jane Federal #1  
30-041 -  
Section 19 TSS R34E  
1630' FSL & 1220' FEL  
Roosevelt County, NM

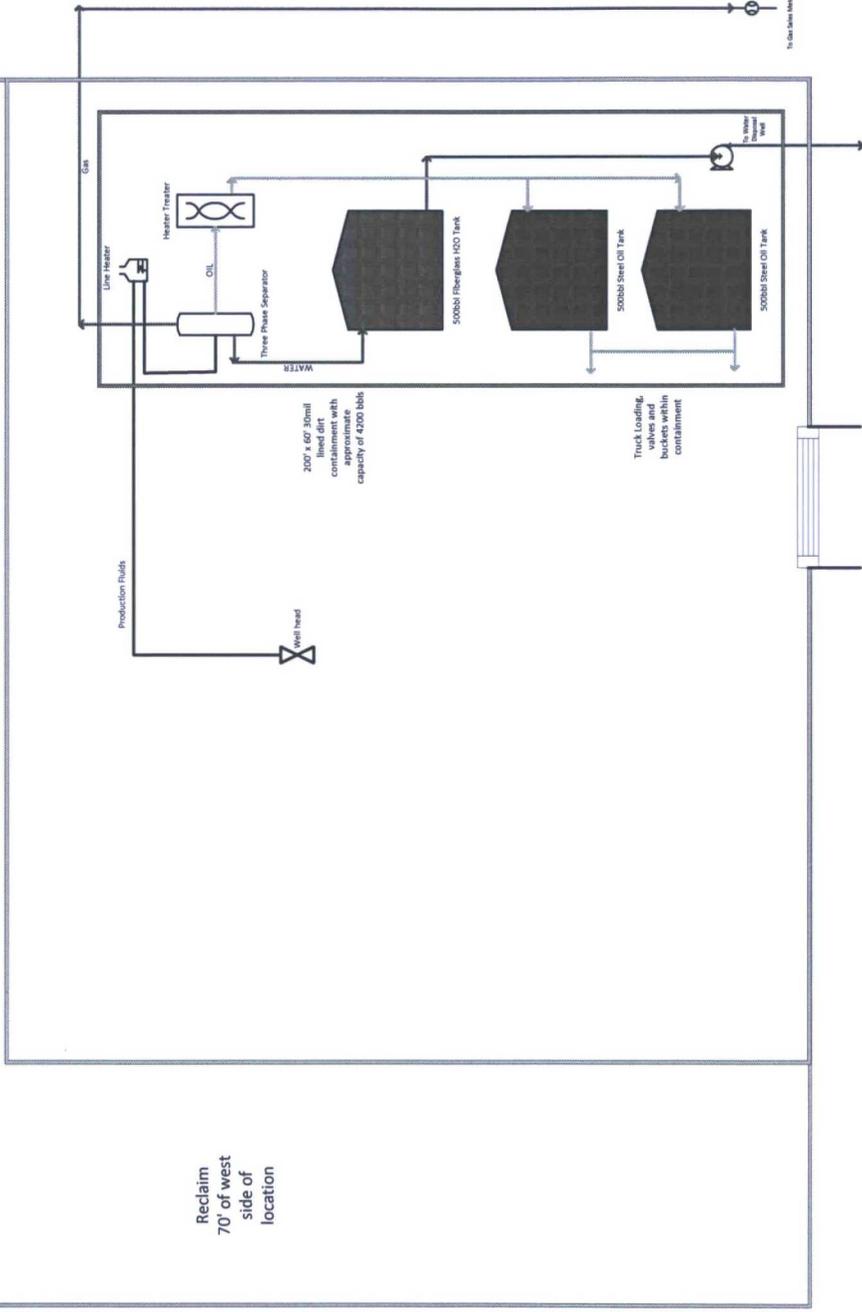


300'

Reclaim 40' of north  
side of location

Reclaim  
70' of west  
side of  
location

270'



Liza Jane Federal #1  
30-041-  
Section 19 T55 R34E  
1630' FSL & 1220' FEL  
Roosevelt County, NM

