

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> HORROCKS 2-35A1E				
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> BLUEBELL				
<b>4. TYPE OF WELL</b> Oil Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>				
<b>6. NAME OF OPERATOR</b> EP ENERGY E&P COMPANY, L.P.						<b>7. OPERATOR PHONE</b> 713 997-5138				
<b>8. ADDRESS OF OPERATOR</b> 1001 Louisiana, Houston, TX, 77002						<b>9. OPERATOR E-MAIL</b> Linda.Renken@epenergy.com				
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> Fee			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>				
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b> RONALD GLEN HORROCKS TRUST						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b> 4358285316				
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b> P O BOX 34, ,						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b> CORY.MATHEWS@EPENERGY.COM				
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
<b>20. LOCATION OF WELL</b>		<b>FOOTAGES</b>		<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>		
LOCATION AT SURFACE		1041 FNL 1024 FEL		NENE	35	1.0 S	1.0 E	U		
Top of Uppermost Producing Zone		1041 FNL 1024 FEL		NENE	35	1.0 S	1.0 E	U		
At Total Depth		1041 FNL 1024 FEL		NENE	35	1.0 S	1.0 E	U		
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 1041			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640				
<b>27. ELEVATION - GROUND LEVEL</b> 5271			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 2000			<b>26. PROPOSED DEPTH</b> MD: 13300 TVD: 13300				
<b>28. BOND NUMBER</b> 400JU0708			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> East Duchesne City Water							
<b>Hole, Casing, and Cement Information</b>										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Cond	17.5	13.375	0 - 600	54.5	J-55 ST&C	0.0	Class G	758	1.15	15.8
Surf	12.25	9.625	0 - 4000	40.0	N-80 LT&C	10.5	Type V	550	2.79	12.0
							Class G	376	1.3	14.3
I1	8.75	7	0 - 9420	29.0	HCP-110 LT&C	10.1	Varocem	435	1.81	12.5
							Varocem	223	1.62	13.0
Prod	6.125	5	0 - 13300	18.0	HCP-110 LT&C	13.7	Class G	250	1.42	14.2
<b>ATTACHMENTS</b>										
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
<b>NAME</b> Linda Renken			<b>TITLE</b> Sr. Regulatory Analyst			<b>PHONE</b> 713 997-5138				
<b>SIGNATURE</b>			<b>DATE</b> 04/27/2016			<b>EMAIL</b> linda.renken@epenergy.com				
<b>API NUMBER ASSIGNED</b> 43047555340000			<b>APPROVAL</b>   Permit Manager							

**Horrocks 2-35A1E  
Sec. 35, T1S, R1E  
UINTAH COUNTY, UT**

**EP ENERGY E&P COMPANY, L.P.**

**DRILLING PROGRAM**

**1. Estimated Tops of Important Geologic Markers**

<u>Formation</u>	<u>Depth</u>
Green River (GRRV)	5,044' MD/TVD
Green River (GRTN1)	6277' MD/TVD
Mahogany Bench	7,120' MD/TVD
L. Green River	8,341' MD/TVD
Wasatch	9,316' MD/TVD
T.D. (Permit)	13,300' MD/TVD

**2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:**

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River (GRRV)	5,044' MD/TVD
	Green River (GRTN1)	6277' MD/TVD
	Mahogany Bench	7,120' MD/TVD
Oil	L. Green River	8,341' MD/TVD
Oil	Wasatch	9,316' MD/TVD

**3. Pressure Control Equipment: (Schematic Attached)**

A 5.0" by 20.0" rotating head on structural pipe from surface to 600' MD/TVD. A 13-5/8" 10M BOP w/ rotating head from 600' MD/TVD to 4,000' MD/TVD on Conductor. A 13-5/8" 10M BOP stack (top to bottom) w/ rotating head, 10M annular, 5" pipe rams, blind rams, mud cross, single w/ 3.5" X 5" flex rams and B section used from 4,000' MD/TVD to 9,420' MD/TVD. A 13-5/8" 10M BOP stack (top to bottom) w/ rotating head, 10M annular, 4" pipe rams, blind rams, mud cross, 3.5" X 5" flex rams and B section used from 9,420' MD/TVD to TD (13,300' MD/TVD).

The BOPE and related equipment will meet the requirements of the 5M and 10M system.

**OPERATORS MINIMUM SPECIFICATIONS FOR BOPE:**

The conductor casing will be equipped with a flanged casing head of 5M psi working pressure. A 13-5/8" x 10M psi BOP and 10M psi annular will be nipped up on the conductor casing and tested to 250 psi low test / 3,000 psi high test for 10 minutes each prior to drilling out. The conductor casing will be tested to 1,000

psi. for 30 mins. Surface casing will be tested to 1000 psi. Intermediate casing will be tested to the greater of 1,500 psi or 0.22 psi/ft. The choke manifold equipment, upper Kelly cock and floor safety valves will be tested to 5M psi. The annular preventer will be tested to 250 psi low test / 4,000 psi high test. The 10M BOP will be installed with a rotating head, 5" pipe rams, blind rams, mud cross, 4" pipe rams from conductor shoe to TD. The BOPE will be hydraulically operated.

In addition, the BOP equipment will be tested after running both the surface casing, intermediate casing, or after any repairs to the equipment and at least once every 30 days. Pipe and blind rams will be activated on each trip, annular preventer will be activated weekly and weekly BOP drills will be held with each crew.

**Statement on Accumulator System and Location of Hydraulic Controls:**

Nabors X21 will be used to drill the proposed well. Operations will commence after approval of this application. Manual and/or hydraulic controls will be in compliance with 5M and 10M psi systems.

**Auxiliary Equipment:**

- A) Pason Gas Monitoring 600' - TD
- B) Mud logger with gas monitor – 4,000' to TD
- C) Choke manifold with one manual and one hydraulic operated choke
- D) Full opening floor valve with drill pipe thread
- E) Upper and lower Kelly cock
- F) Shaker, de-sander and centrifuge

**4. Proposed Casing & Cementing Program:**

Please refer to the attached Wellbore Diagram.

All casing will meet or exceed the following design safety factors:

- Burst = 1.00
- Collapse = 1.125
- Tension = 1.2 (including 100k# overpull)

Cement design calculations for intermediate and production hole will be based on minimum 10% excess over gauge hole volumes. Actual volumes pumped will be a minimum of 10% excess over caliper volume to designed tops of cement for any section logged. A minimum of 50% excess over gauge volume will be pumped on surface casing.

**5. Drilling Fluids Program:**

Proposed Mud Program:

Interval	Type	Mud Weight
Surface	WBM	10.5
Intermediate	WBM	9.5 – 10.1
Production	WBM	11.0 – 13.7

Anticipated mud weights are based on actual offset well bottom-hole pressure data. Mud weights utilized may be somewhat higher to allow for trip margin and to provide hole stability for running logs and casing.

Visual mud monitoring equipment will be utilized.

6. **Evaluation Program:**

Logs:

Mud Log: 4,000' MD/TVD – TD

Open Hole Logs: Gamma Ray, Neutron-Density, Resistivity, Sonic, from surface casing shoe to TD.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 13,300' TVD equals approximately 9,475 psi. This is calculated based on a 0.7124 psi/ft gradient (13.7 ppg mud density at TD).

Maximum anticipated surface pressure equals approximately 6,549 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/ft).

Maximum anticipated surface pressure based on frac gradient at 7" casing shoe is 0.8 psi/ft at 9,420' TVD = 7,536 psi

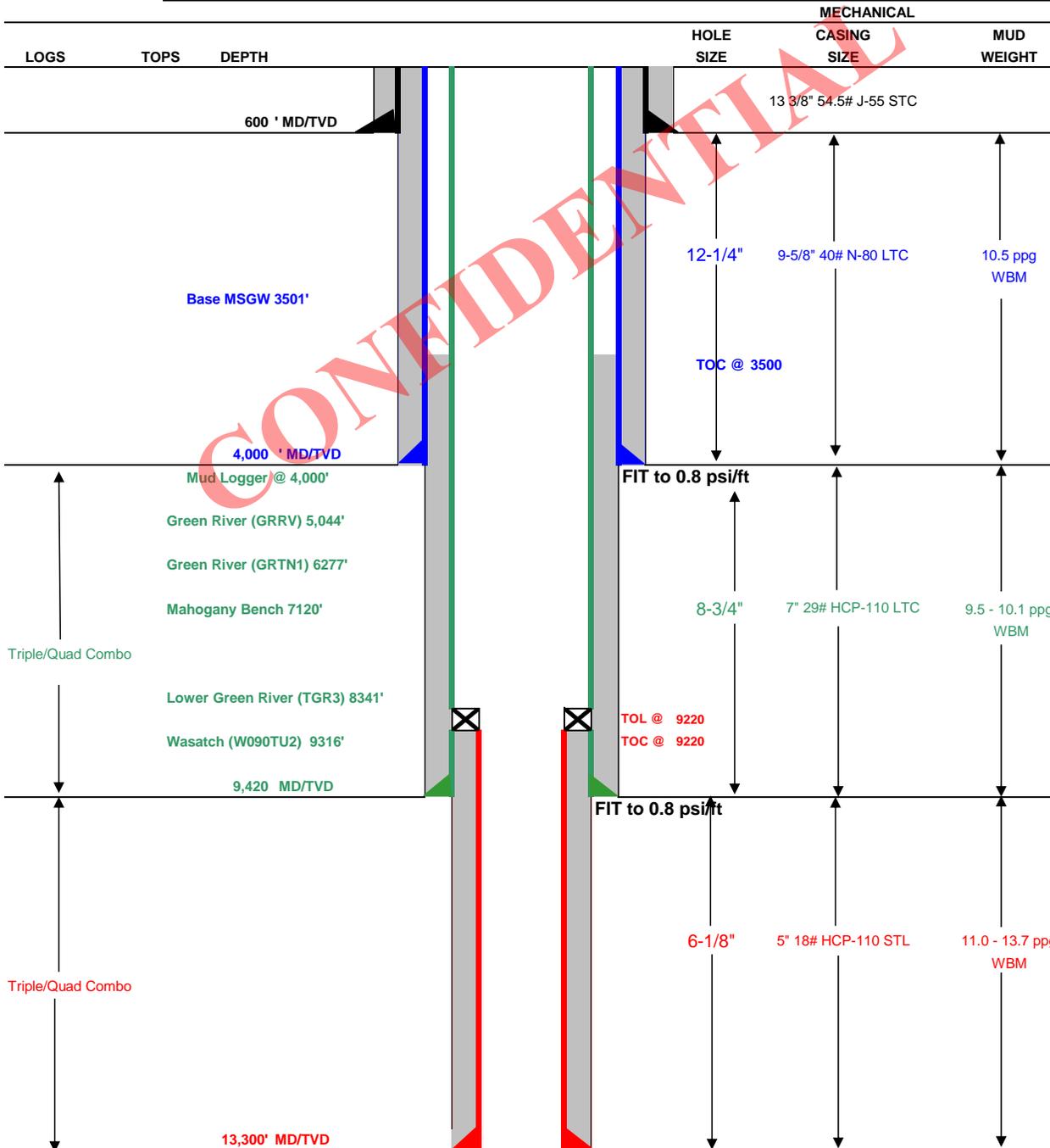
BOPE and casing design will be based on the lesser of the two MASPs which is 6,549 psi.

8. **OPERATOR REQUESTS THAT THE PROPOSED WELL BE PLACED ON CONFIDENTIAL STATUS.**



Drilling Schematic

<b>Company Name:</b> EP ENERGY	<b>Date:</b> April 15, 2016
<b>Well Name:</b> Horrocks 2-35A1E	<b>TD:</b> 13,300' MD/TVD
<b>Field, County, State:</b> Altamont, Uintah, Utah	<b>AFE #:</b> TBD
<b>Surface Location:</b> Sec 35 T1S R1E 1,041' FNL 1024' FEL	<b>BHL:</b> Straight Hole
<b>Objective Zone(s):</b> Green River, Wasatch	<b>Elevation:</b> 5,268'
<b>Rig:</b> Nabors X21	<b>Spud (est.):</b> TBD
<b>BOPE Info:</b> 13-5/8" 10M w/ rotating head from 600' to 4,000'. 13-5/8" 10M BOPE w/ rotating head & 10M annular from 4,000' to 9,420'. 13-5/8" 10M BOPE w/ rotating head, 10M annular, 5" pipe rams, blind rams, single w/ 3.5"x" Flex rams from 9,420' to TD.	



**DRILLING PROGRAM**

CASING PROGRAM	SIZE	INTERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	13 3/8"	0 600	54.5	J-55	STC	2,740	1,130	514
SURFACE	9-5/8"	0 4000	40.00	N-80	LTC	5,750	3,090	737
INTERMEDIATE	7"	0 9420	29.00	HCP-110	LTC	11,220	9,750	797
PRODUCTION LINER	5"	9220 13300	18.00	HCP-110	STL	13,940	15,450	495

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
CONDUCTOR		600	Class G + 3% CACL2	758	100%	15.8 ppg	1.15
SURFACE	Lead	3,000	Premium Type V Cement + 16% Gel + 5 lb/sk Gilsonite+ 0.3% Salt + 0.25 lb/sk Flocele	550	75%	12.0 ppg	2.79
	Tail	1,000	Premium Class G Cement (50/50) + 2% Gel + 3% Salt + 0.25 lb/sk Flocele	376	50%	14.3 ppg	1.30
INTERMEDIATE	Lead	4,120	VariCem SYSTEM: Holcim II/V 60%, Boral Craig Pozmix 30%, Silicalite 10% + 0.2% Halad-344 + 2% Bentonite + 0.25 lb/sk Pol-E-Flake + 0.1% HR-5 + 0.05% SA-1015 + 2 lb/sk WellLife 708	435	30%	12.5 ppg	1.81
	Tail	1,800	VariCem SYSTEM: Holcim II/V 60%, Boral Craig Pozmix 30%, Silicalite 10% + 0.2% Halad-344 + 2% Bentonite + 0.25 lb/sk Pol-E-Flake + 0.1% HR-5 + 0.05% SA-1015 + 2 lb/sk WellLife 708	223	30%	13.0 ppg	1.62
PRODUCTION LINER		4,080	Expandacem SYSTEM: 50/50 Class G Cement + 0.2% Super CBL +0.3% Halad 344 + 0.3% Halad 413 + 5 lb/sk Silicalite + 20% SSA-1 + 2% Bentonite + 0.75% HR-5	250	25%	14.20	1.42

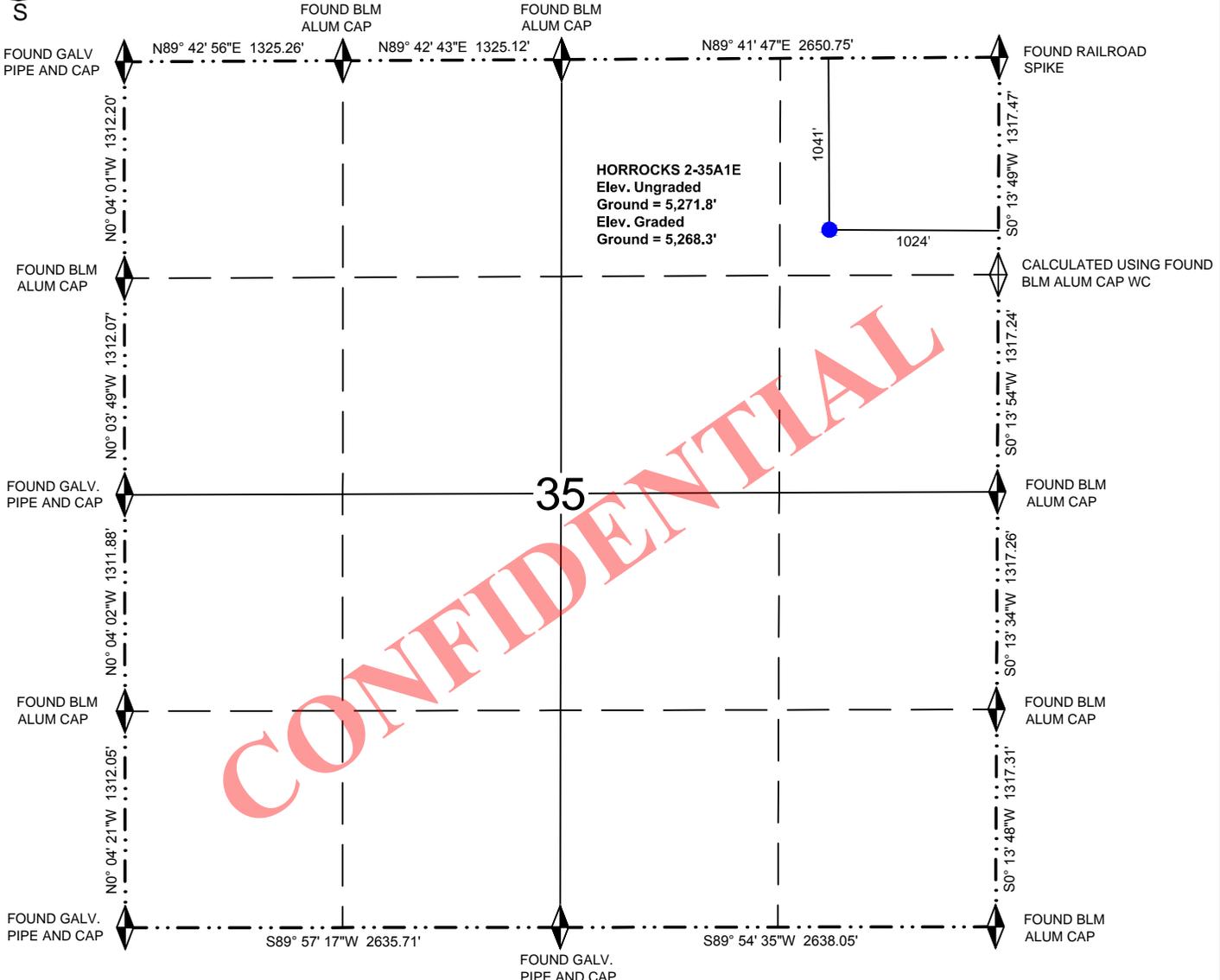
FLOAT EQUIPMENT & CENTRALIZERS	
CONDUCTOR	PDC drillable guide shoe, 1 joint, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing.
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Marker joint at +/-8,341'.
LINER	Float shoe, 1 joint, float collar,1 joint, landing collar. Thread lock all FE. Marker joints every 1000'.

PROJECT ENGINEER(S): Brent Baker 713-997-3323

MANAGER: Sergio Mares



**EP ENERGY**  
**WELL LOCATION PLAT**  
**WELL: HORROCKS 2-35A1E**



**LEGEND**

- = FOUND SECTION CORNER
- = CALCULATED POINT
- = PROPOSED WELL HEAD
- = SECTION LINE
- = QUARTER SECTION LINE
- = SIXTEENTH SECTION LINE

**NOTES:**

1. WELL FOOTAGES ARE MEASURED AT RIGHT ANGLES TO THE SECTION LINE.
2. ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED.
3. BEARINGS ARE DERIVED FROM G.P.S. OBSERVATIONS AND EQUIPMENT.
4. THE GENERAL LAND OFFICE G.L.O. PLAT WAS USED FOR REFERENCE

**BASIS OF ELEVATION**

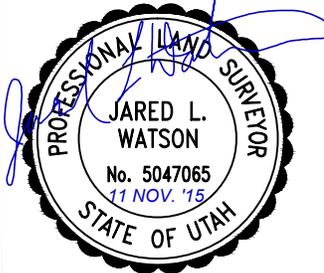
SPOT ELEVATION AT THE NORTHEAST CORNER OF SECTION 35, T1S, R1E, U.S.B.&M. NAVD 88 DATUM USING THE UTAH REFERENCE NETWORK SYSTEM. SAID ELEVATION IS 5270.35 FEET.

**NAD 83 (SURFACE LOCATION)**

LATITUDE = 40°21'26.53025"N (40.357370°)  
 LONGITUDE = 109°50'39.23601"W (-109.844232°)

**NAD 27 (SURFACE LOCATION)**

LATITUDE = 40°21'26.67861"N (40.357411°)  
 LONGITUDE = 109°50'36.70932"W (-109.843530°)

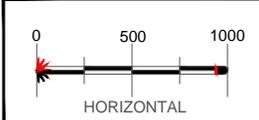


**OUTLAW ENGINEERING INC.**  
 P.O. BOX 1800  
 ROOSEVELT, UTAH 84066  
 (435) 232-4321



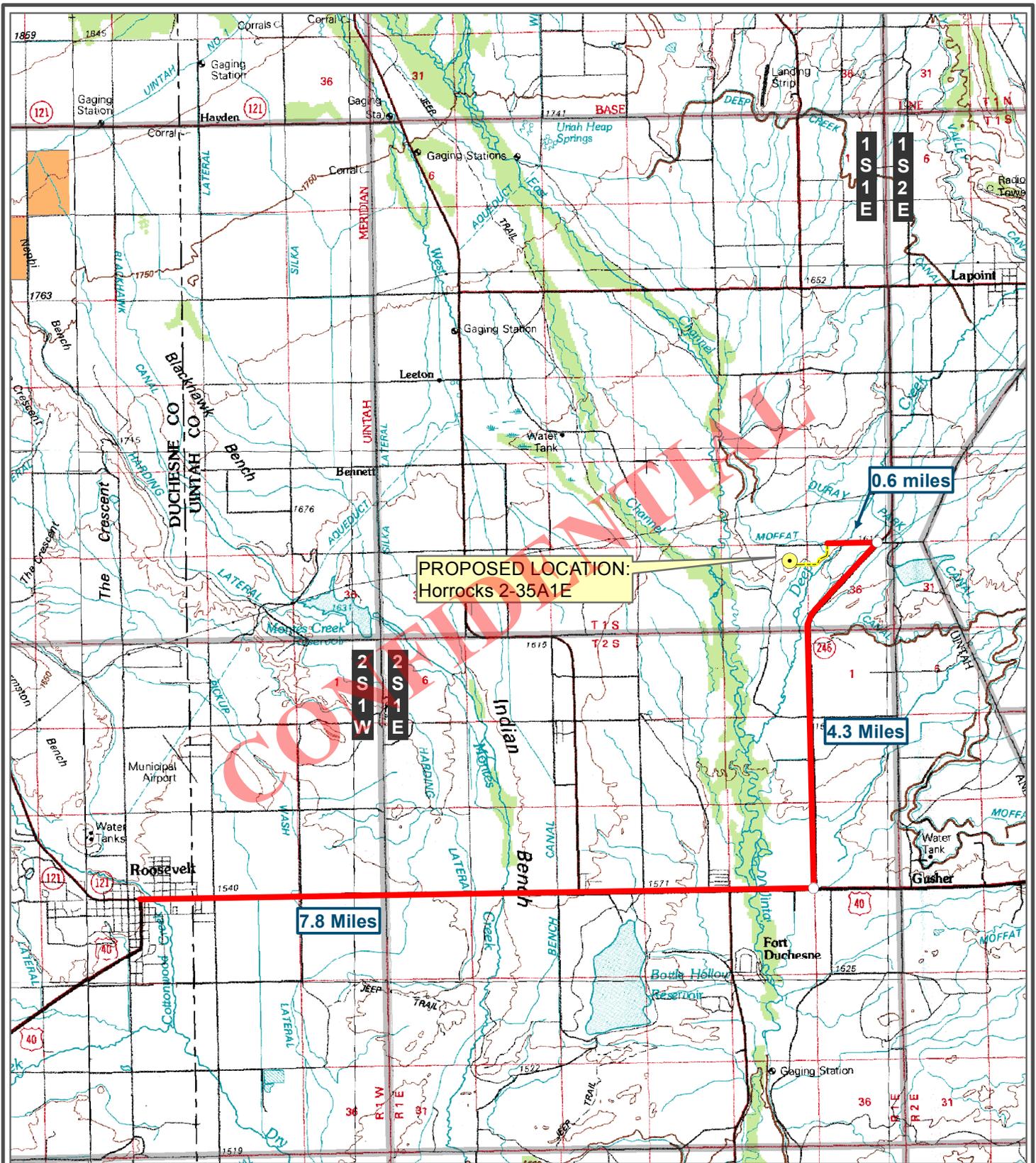
**WELL LOCATION PLAT**  
**WELL: HORROCKS 2-35A1E**  
 PAD LOCATION: NE 1/4 OF THE NE 1/4 OF SECTION 35,  
 T. 1 S., R. 1 E., U.S.B.&M.  
 UINTAH COUNTY, UTAH

**CERTIFICATE**  
 THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM THE FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
 REGISTERED LAND SURVEYOR, UTAH PLS #5047065



DATE SURVEYED: OCTOBER 8, 2015  
 SURVEYED BY: SY  
 DRAWN: NOVEMBER 11, 2015  
 DRAWN: JLV  
 SCALE: 1" = 1000'

SHEET NO.  
**1**



**PROPOSED LOCATION:**  
Horrocks 2-35A1E

0.6 miles

4.3 Miles

7.8 Miles



**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321



PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

**LEGEND**

- 2-35A1E Site Location
- Existing Access Road
- Proposed Access Road

- Federal
- Private
- State
- Tribal

**Horrocks 2-35A1E**

WELL LOCATION: NE 1/4 of the NE 1/4 SECTION 35,  
T.1S, R.1E, U.S.B.&M.  
UINTAH COUNTY, UTAH



**Site Location**

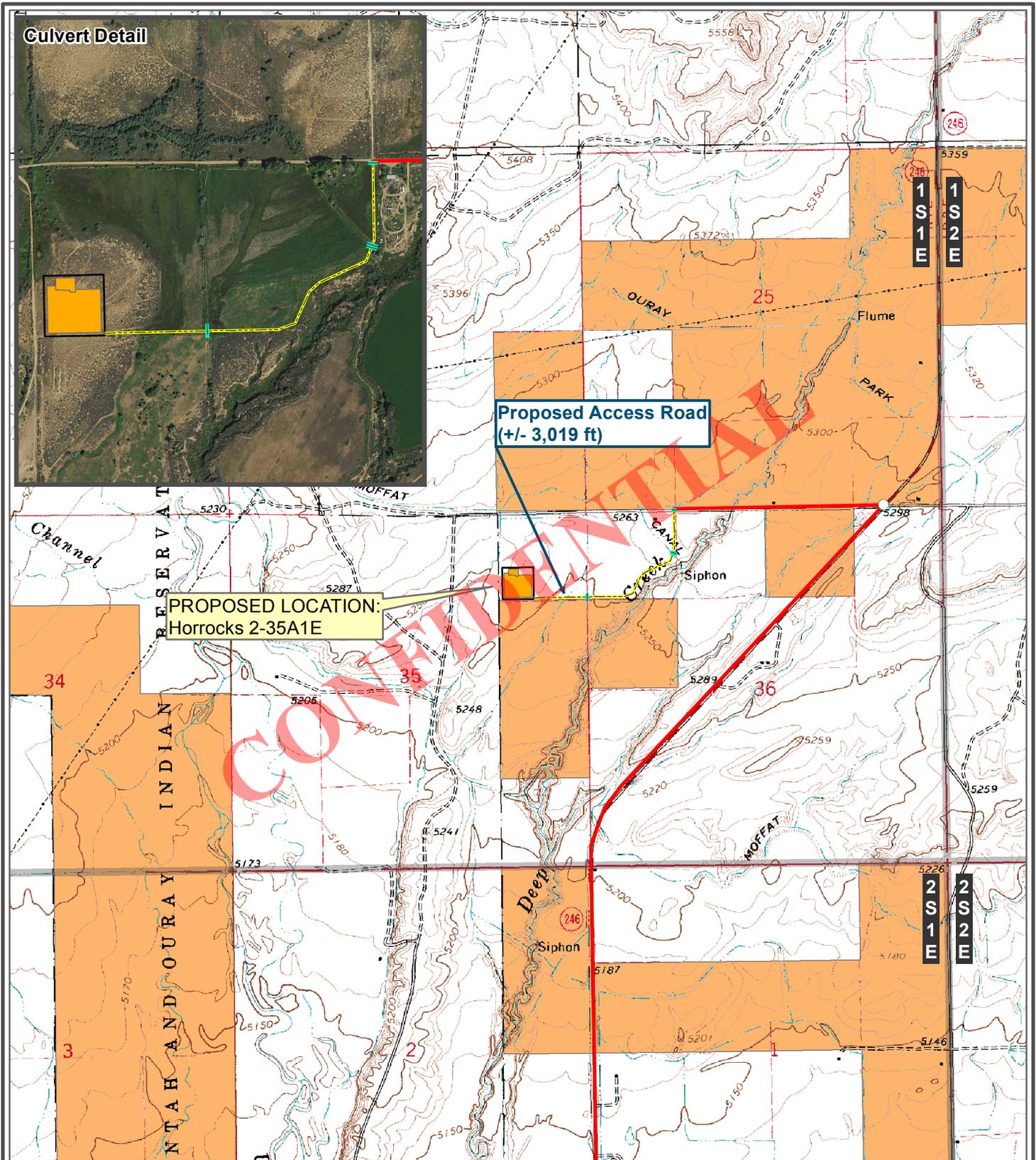
0 2,000 4,000 6,000 8,000 Feet

VERSION: **V3**  
SURVEYED: **3-28-16**

USGS 7.5' Fort Duchesne Quadrangle

MARCH 28, 2016  
SCALE: 1" = 8,342'  
AUTHOR: CMM

SHEET  
**A**



PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

**LEGEND**

- Proposed Access Road
- Existing Access Road
- Culvert Required
- Proposed Pad
- Limit of Disturbance

- Federal
- Private
- State
- Tribal

**Horrocks 2-35A1E**

WELL LOCATION: NE 1/4 of the NE 1/4 SECTION 35,  
 T.1S, R.1E, U.S.B.&M.  
 UINTAH COUNTY, UTAH



**Proposed Access Road**

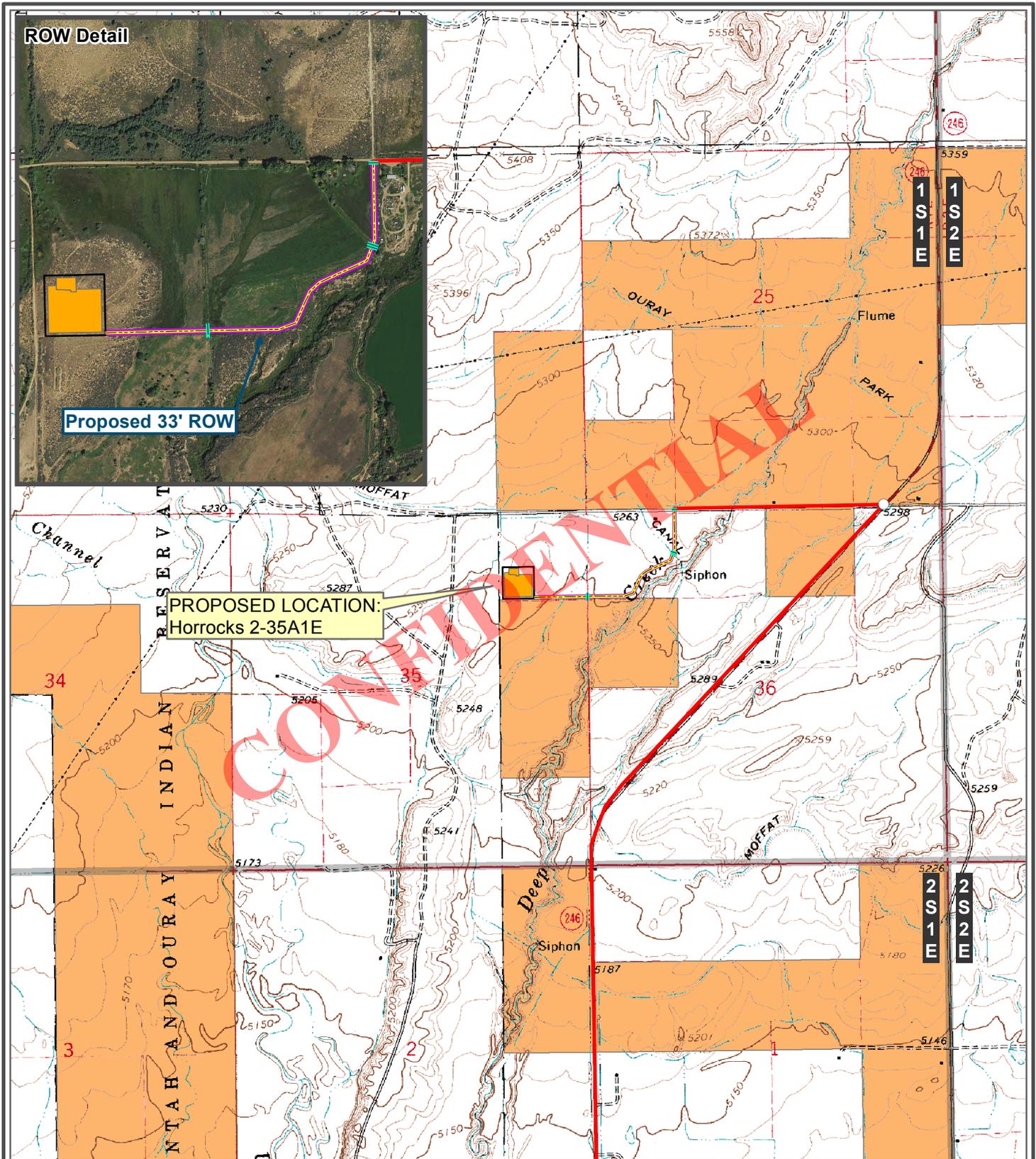
0 500 1,000 1,500 2,000 Feet

VERSION: **V3**  
 SURVEYED: **3-28-16**

USGS 7.5' Fort Duchesne Quadrangle

MARCH 28, 2016  
 SCALE: 1" = 2,000'  
 AUTHOR: CMM

SHEET **B**



**PROPOSED LOCATION:**  
Horrocks 2-35A1E



**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321



PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

**LEGEND**

- Proposed Access Road
- Existing Access Road
- Culvert Required
- Proposed Pad
- Limit of Disturbance
- ROW

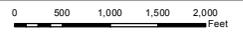
- Federal
- Private
- State
- Tribal

**Horrocks 2-35A1E**

WELL LOCATION: NE 1/4 of the NE 1/4 SECTION 35,  
T.1S, R.1E, U.S.B.&M.  
UINTAH COUNTY, UTAH



**Proposed ROW**

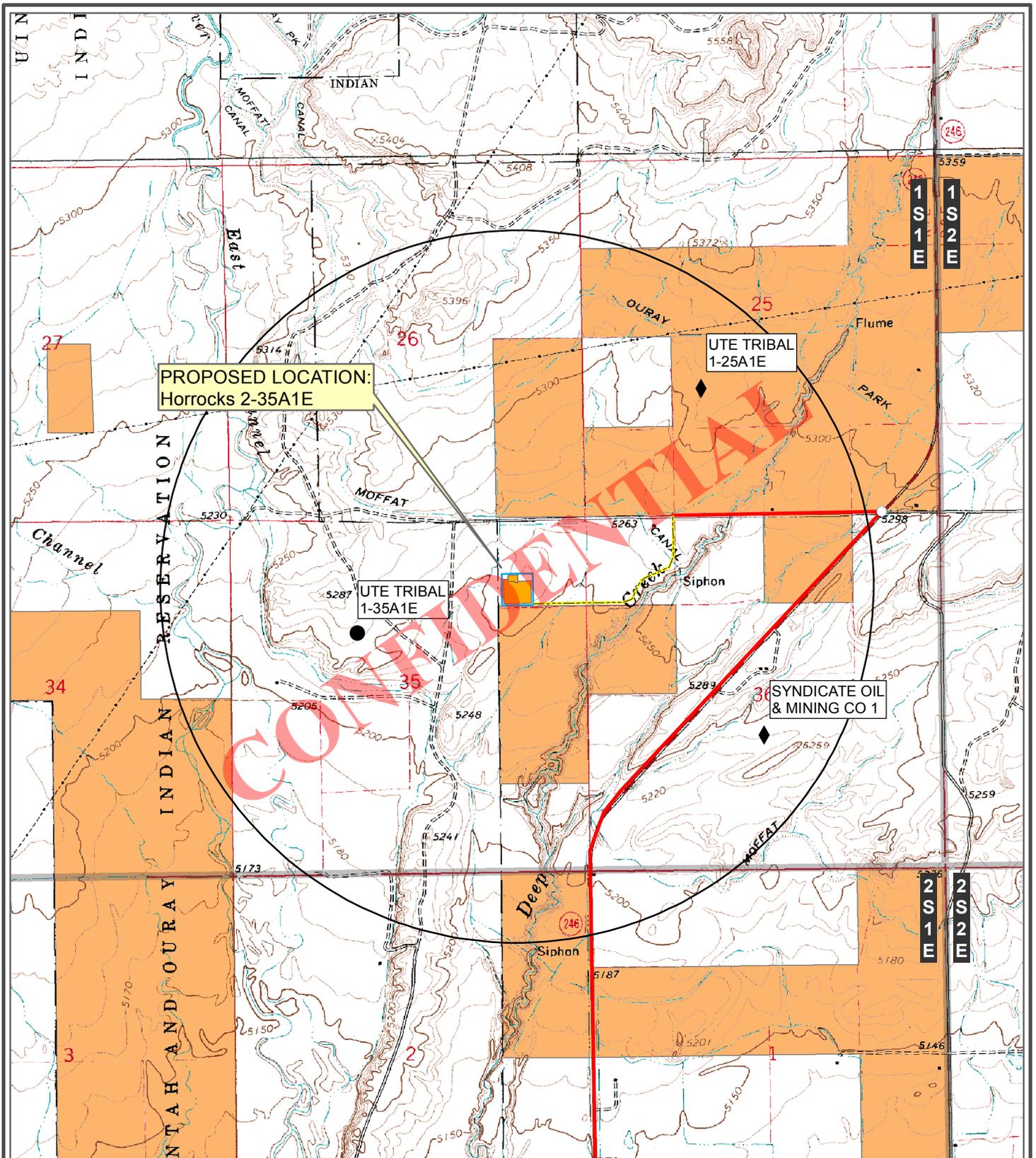


VERSION: **V3**  
SURVEYED: **3-28-16**

USGS 7.5' Fort Duchesne Quadrangle

MARCH 28, 2016  
SCALE: 1" = 2,000'  
AUTHOR: CMM

SHEET **C**



**OUTLAW ENGINEERING INC.**  
 P.O. BOX 1800  
 ROOSEVELT, UTAH 84066  
 (435) 232-4321

PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

**Surrounding Wells**

VERSION: **V3**  
 SURVEYED: **3-28-16**

**LEGEND**

- \* Active
- ▲ Approved Permit
- ⊕ Drilling
- Producing
- ◆ Plugged & Abandoned
- One Mile Radius

Federal
  Private
  State
  Tribal

**Horrocks 2-35A1E**  
 WELL LOCATION: NE 1/4 of the NE 1/4 SECTION 35,  
 T.1S, R.1E, U.S.B.&M.  
 UINAH COUNTY, UTAH

**EP ENERGY**

USGS 7.5' Fort Duchesne Quadrangle

MARCH 28, 2016  
 SCALE: 1" = 2,000'  
 AUTHOR: CMM

SHEET **D**

**AFFIDAVIT OF SURFACE USE AGREEMENT**

Corie A. Mathews personally appeared before me, and, being duly sworn, deposes and says:

1. My name is Corie A. Mathews. I am a Senior Landman for EP Energy E&P Company, L.P., whose address is 1001 Louisiana Street, Houston, Texas 77002 ("EP Energy").
2. EP Energy is the operator of the proposed Horrocks 2-35A1E well ("the Well") located in the NE/4 of the NE/4 of Section 35, Township 1 South, Range 1 East, USM, Uintah County, Utah (the "Drillsite Location"). The surface owner of the Drillsite location is Ronald Glen Horrocks Trust dated June 7, 2013, represented by Ronald Glen Horrocks, Trustee, whose address is PO Box 34, Lapoint, Utah 84039 and whose telephone number is (435) 828-5316 (the "Surface Owner").
3. EP Energy and the Surface Owner have entered into a Surface Use Agreement dated November 24, 2015 to cover any and all injuries or damages of every character and description sustained by the Surface Owner or Surface Owner's property as a result of operations associated with the drilling, completing and producing of the Well.

FURTHER AFFIANT SAYETH NOT.

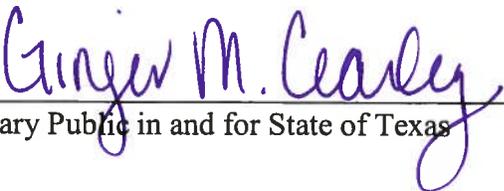
  
 \_\_\_\_\_  
 Corie A. Mathews

**ACKNOWLEDGEMENT**

STATE OF TEXAS           §  
   §  
 COUNTY OF HARRIS       §

This instrument was acknowledged before me on this the 14<sup>th</sup> day of April, 2016 by Corie A. Mathews as a Senior Landman for EP ENERGY E&P COMPANY, L.P., a Delaware limited partnership, on behalf of said partnership and acknowledged to me that he executed the same as his own free and voluntary act and deed for the uses and purposes therein set forth.



  
 \_\_\_\_\_  
 Notary Public in and for State of Texas

CONFIDENTIAL

EP Energy E&P Company, L.P.

**Related Surface Information**

1. **Current Surface Use:**

- Livestock Grazing and Oil and Gas Production.

2. **Proposed Surface Disturbance:**

- The road will be crown and ditch. Water wings will be constructed on the access road as needed.
- The topsoil will be windrowed and re-spread in the borrow area.
- New road to be constructed will be approximately 3,019 feet in length and 33 feet wide.
- All equipment and vehicles will be confined to the access road, pad and area specified in the APD.

3. **Location Of Existing Wells:**

- Existing oil, gas wells within one (1) mile radius of proposed well are provided in SHEET D.

4. **Location And Type Of Drilling Water Supply:**

- Drilling water: East Duchesne City Water

5. **Existing/Proposed Facilities For Productive Well:**

- There are no existing facilities that will be utilized for this well.
- A ~3,109 foot pipeline corridor will parallel the proposed access road. The corridor will contain one 4 inch gas line and one 2 inch gas line and one 4 inch Salt Water disposal line. Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area; backsloping and contouring all cut and fill slopes. These areas will be reseeded. Refer to plans for reclamation of surface for details.
- Upgrade and maintain access roads and drainage control structures (e.g., culverts, drainage dips, ditching, etc.) as necessary to prevent soil erosion and accommodate safe, year-round traffic.

6. **Existing/Proposed Facilities For Productive Well:**

- There are no existing facilities that will be utilized for this well.
- Upgrade and maintain access roads and drainage control structures (e.g., culverts, drainage dips, ditching, etc.) as necessary to prevent soil erosion and accommodate safe, year-round traffic.

7. **Construction Materials:**

- Native soil from road and location will be used for construction materials along with gravel and/or scoria road base material. In the event that conditions should necessitate graveling of all or part of the access road and location, surfacing materials will be purchased from commercial suppliers in the marketing area.

8. **Methods For Handling Waste Disposal:**

- The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of ½ the total depth below the original ground surface on the lowest point with the pit. The pit will be lined with a 20-mil polyethylene to prevent leakage of fluids. The liner will be rolled into place and secured at the ends, i.e. buried on top of the pit berms. Prior to use, the reserve pit will be fenced on three sides; the fourth side will be fenced at the time the rig is removed. Drilling fluids, cuttings and produced water will be contained in the reserve pit (trash will be placed in the trash cage). Fluids in the reserve pit will be allowed to evaporate prior to pit burial.
- Garbage and other trash will be contained in the portable trash cage and hauled off the location to an authorized disposal site. Any trash on the pad will be cleaned up prior to the rig moving off location and hauled to an authorized disposal site.
- Sewage will be handled in Portable Toilets.
- Produced water will be placed in the reserve pit for a period not to exceed ninety days after initial production. Any hydrocarbons produced during completion work will be contained in test tanks and removed from the location at a later date.
- Water from the reserve pit may be used for drilling of additional wells. The water will be trucked along access roads as approved in pertinent APD's.

9. **Ancillary Facilities:**

- There will be no ancillary facilities associated with this project.

Application for Permit to Drill – State DOGM  
Horrocks 2-35A1E  
Uintah County, Utah

**10. Surface Reclamation Plans:**

Backfilling of the pits will be done when dry. In the event of a dry hole, the location will be re-contoured, the topsoil will be distributed evenly over the entire location, and the seedbed prepared.

- Seed will be planted after the frost has left or before May 15<sup>th</sup>, 2017 or after September 15, 2017, and prior to ground frost. Slopes too steep for machinery will be hand broadcast and raked with twice the specified amount of seed.
  1. The construction program and design are on the attached cut, fill and cross sectional diagrams.
  2. Prior to construction, all topsoil will be removed from the entire site and stockpiled. Topsoil for this site is the first 6 inches of soil materials.
  3. After the location has been reshaped and after redistributing the topsoil, the operator will rip and scarify the drilling platform and access road on the contour, to a depth of at least 12 inches.
- Rehabilitation will begin upon the completion of the drilling. Complete rehabilitation will depend on weather conditions and the amount of time required to dry the reserve pit.
  1. All rehabilitation work including seeding will be completed as soon as weather and the reserve pit conditions are appropriate.
  2. Landowner will be contacted for rehabilitation requirements.

**11. Surface Ownership:**

See attached Letter in Lieu for list of surface owners, addresses, and phone numbers.

**Other Information:**

- The surface soil consists of clay, and silt.
- Flora – vegetation consists of the following: Sagebrush, Juniper and prairie grasses.
- Fauna – antelope, deer, coyotes, raptors, small mammals, and domestic grazing animals.
- Current surface uses – Livestock grazing and mineral exploration and production.

• **Operator and Contact Persons:**

**Construction and Reclamation:**

EP Energy E&P Company, L.P.  
Randy Fredrick - Construction  
17900 West 3750 North  
Altamont, Utah 84001  
435-454-4239 – Office  
435-621-1333 – Cell

**Regarding This APD**

EP Energy E&P Company, L.P.  
Linda Renken – Sr. Regulatory Analyst  
1001 Louisiana, Rm 2628D  
Houston, Texas 77002  
713-997-5138 – Office  
281-204-7056 - Cell

**Drilling Engineer**

EP Energy E&P Company, L.P.  
Brent Baker – Drilling Engineer  
1001 Louisiana, Rm 2523B  
Houston, Texas 77002  
713-997-3323 – Office  
832-457-6433 – Cell

Nabors X-21 13-5/8" 10M BOP Surface

Total Height of stack 15.1'

RKB To Center

Cameron Annular  
13-5/8" 10M

13.39'

Cameron DBL U  
13-5/8" 10M

18.04'

Drilling Spool  
13-5/8" 10M

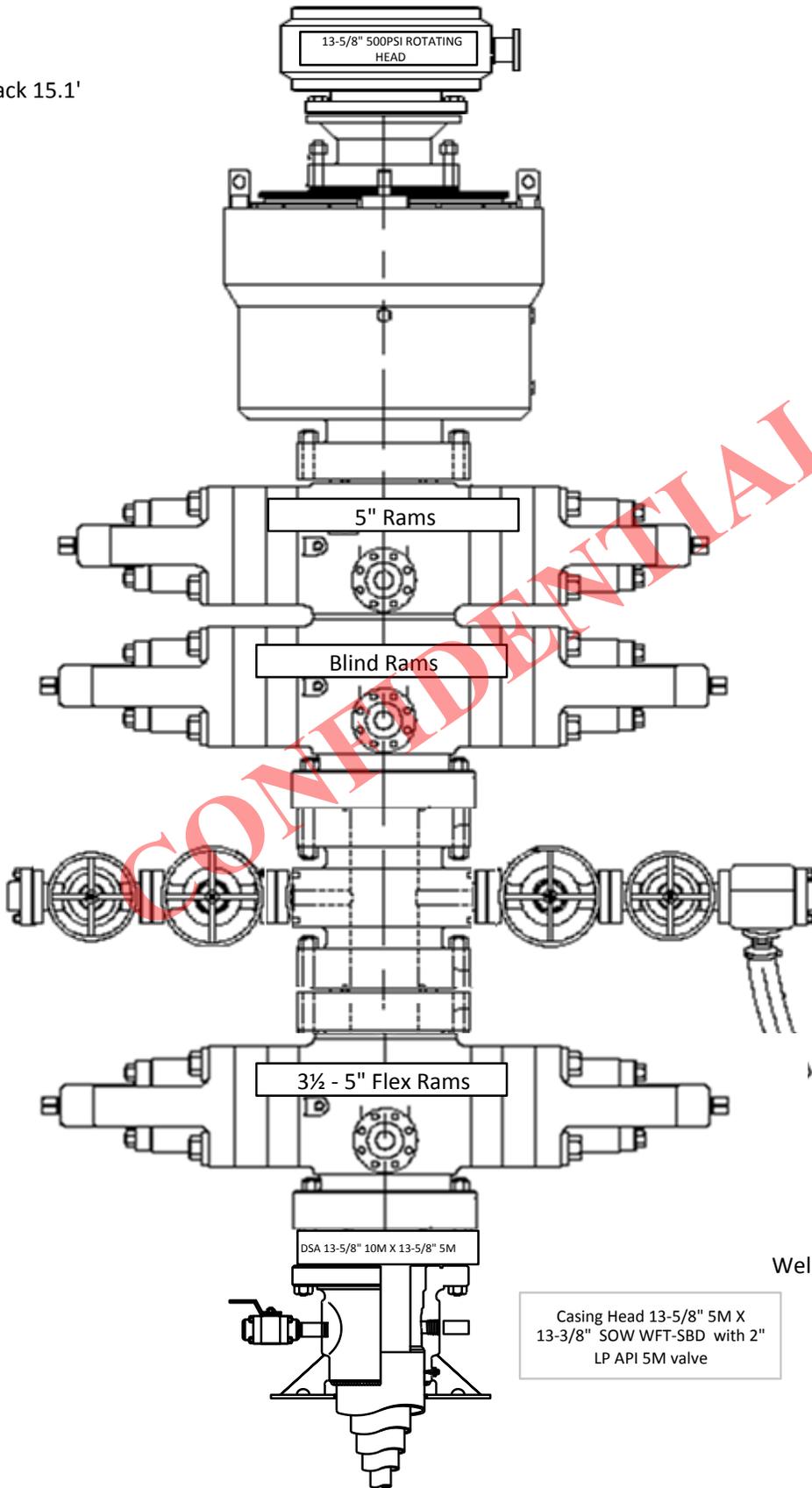
22.84'

Cameron U  
13-5/8" 10M

25.59'

DSA Top 29.85'

Wellhead Top 30.41'



Casing Head 13-5/8" 5M X  
13-3/8" SOW WFT-SBD with 2"  
LP API 5M valve

### Nabors X-21 13-5/8" 10M BOP Intermediate

Total Height of stack 15.1'

RKB To Center

Cameron Annular  
13-5/8" 10M

13.39'

Cameron DBL U  
13-5/8" 10M

17.71'

Drilling Spool  
13-5/8" 10M

22.51'

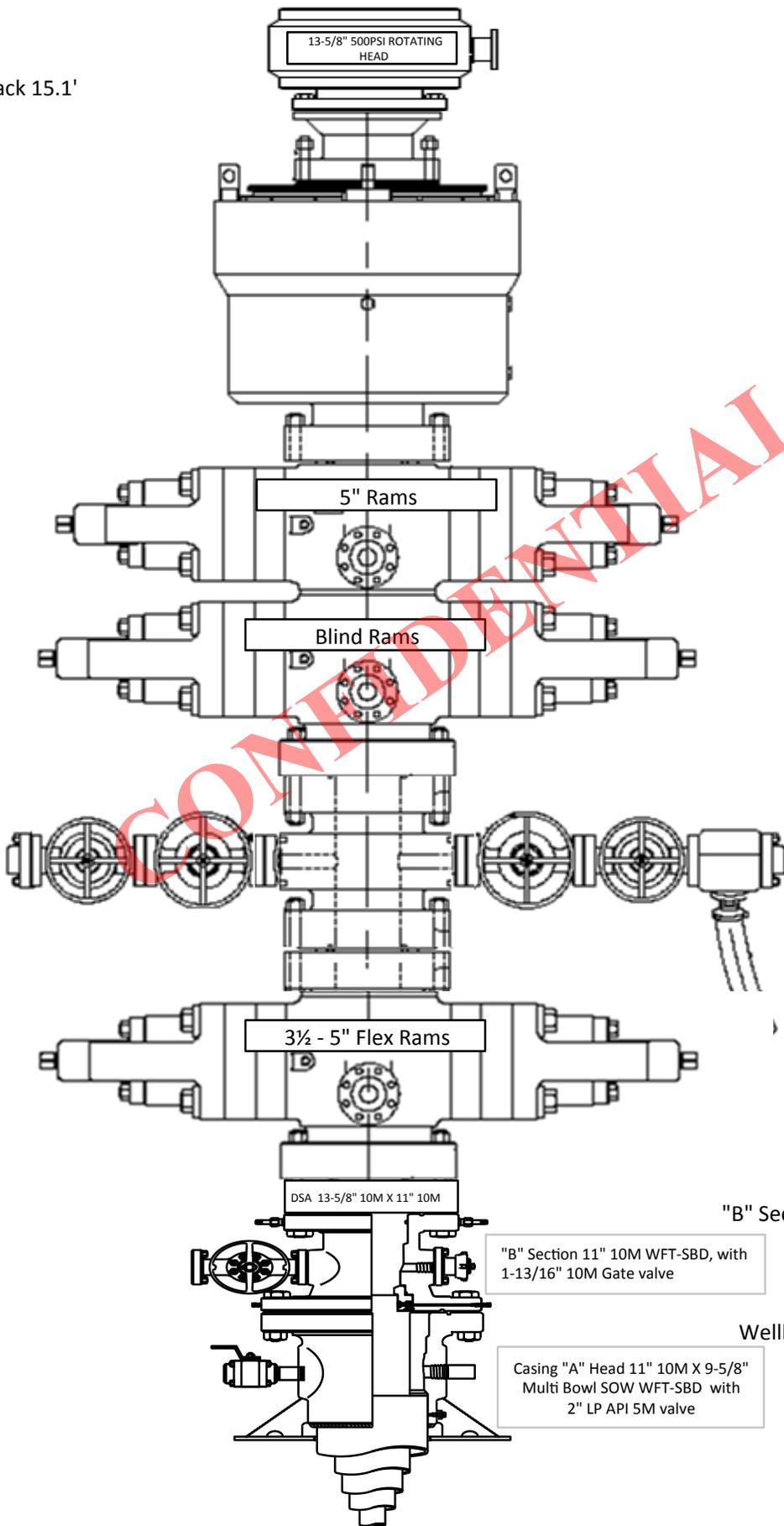
Cameron U  
13-5/8" 10M

25.26'

DSA Top 29.52'

"B" Section Top 30.74'

Wellhead Ground level



"B" Section 11" 10M WFT-SBD, with  
1-13/16" 10M Gate valve

Casing "A" Head 11" 10M X 9-5/8"  
Multi Bowl SOW WFT-SBD with  
2" LP API 5M valve

**Nabors X-21 13-5/8" 10M BOP Production**

Total Height of stack 15.1'

RKB To Center

Cameron Annular  
13-5/8" 10M

13.39'

Cameron DBL U  
13-5/8" 10M

17.71'

Drilling Spool  
13-5/8" 10M

22.51'

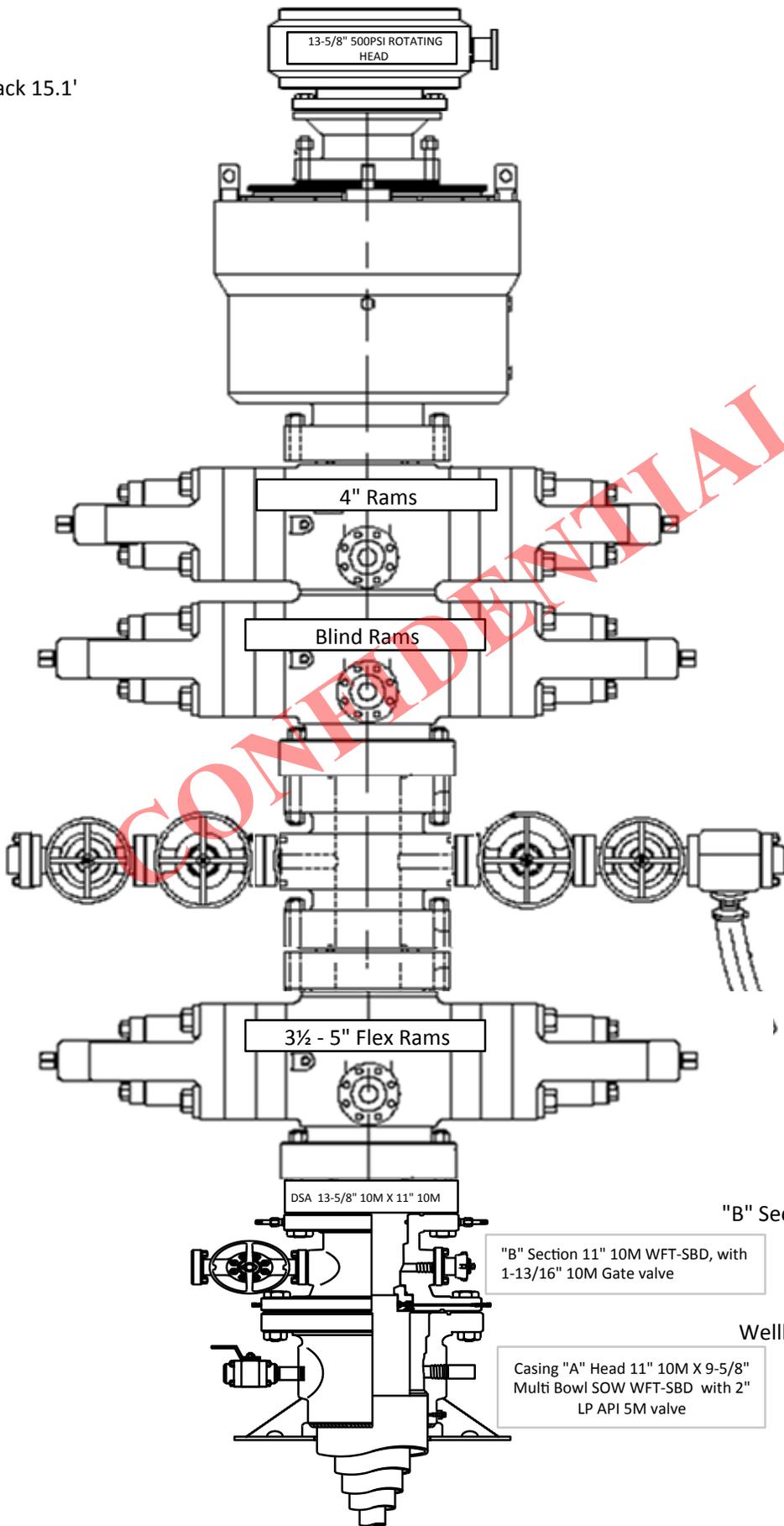
Cameron U  
13-5/8" 10M

25.26'

DSA Top 29.52'

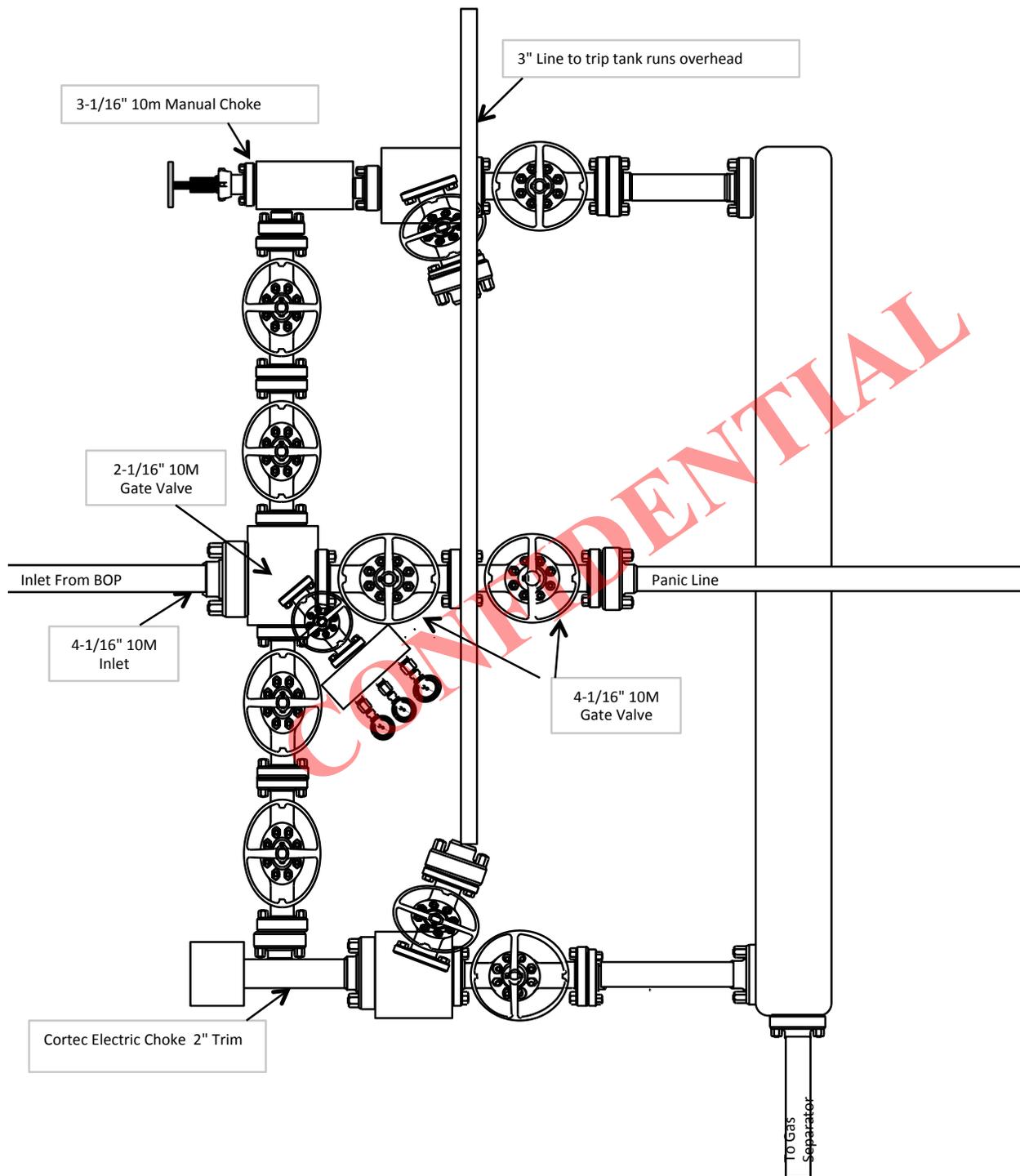
"B" Section Top 30.74'

Wellhead Ground level



# Nabors X-21 10M Choke Monifold Configuration

All valves on the Choke Manifold are 3-1/16" 10M except for those that are identified below.





**HORROCKS 2-35A1E**

**WELL LOCATION: NE ¼ OF THE NE ¼ SECTION 35, T.1S, R.1E. U.S.B.&M.  
UINTAH COUNTY, UTAH**

PROCEED IN AN EASTERLY DIRECTION FROM ROOSEVELT, UTAH ALONG MAIN STREET APPROXIMATELY 7.8 MILES TO THE JUNCTION OF THIS ROAD AND 8500 EAST; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION 4.3 MILES TO THE JUNCTION OF THIS ROAD AND 4000 NORTH; TURN LEFT AND PROCEED IN A WESTERLY DIRECTION 0.6 MILES TO THE JUNCTION OF THIS ROAD AND THE PROPOSED ACCESS ROAD; TURN LEFT AND FOLLOW ROAD FLAGS IN A SOUTHERLY THEN WESTERLY DIRECTION APPROXIMATELY 3,019 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM ROOSEVELT, UTAH TO THE PROPOSED LOCATION IS APPROXIMATELY 13.2 MILES.

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**OUTLAW  
ENGINEERING INC.**

P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321

RECEIVED: April 27, 2016



# Horrocks 2-35A1E

WELL LOCATION: NE 1/4 OF THE NE 1/4 SECTION 35, T.1S, R.1E, U.S.B.&M.  
UINTAH COUNTY, UTAH



Photo: View of location stake

Camera Angle: Northerly



Photo: View from beginning of proposed access

Camera Angle: Southeasterly



**OUTLAW  
ENGINEERING INC.**

P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321

PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

## Location Photos

VERSION:	V3
SURVEYED:	3-28-16

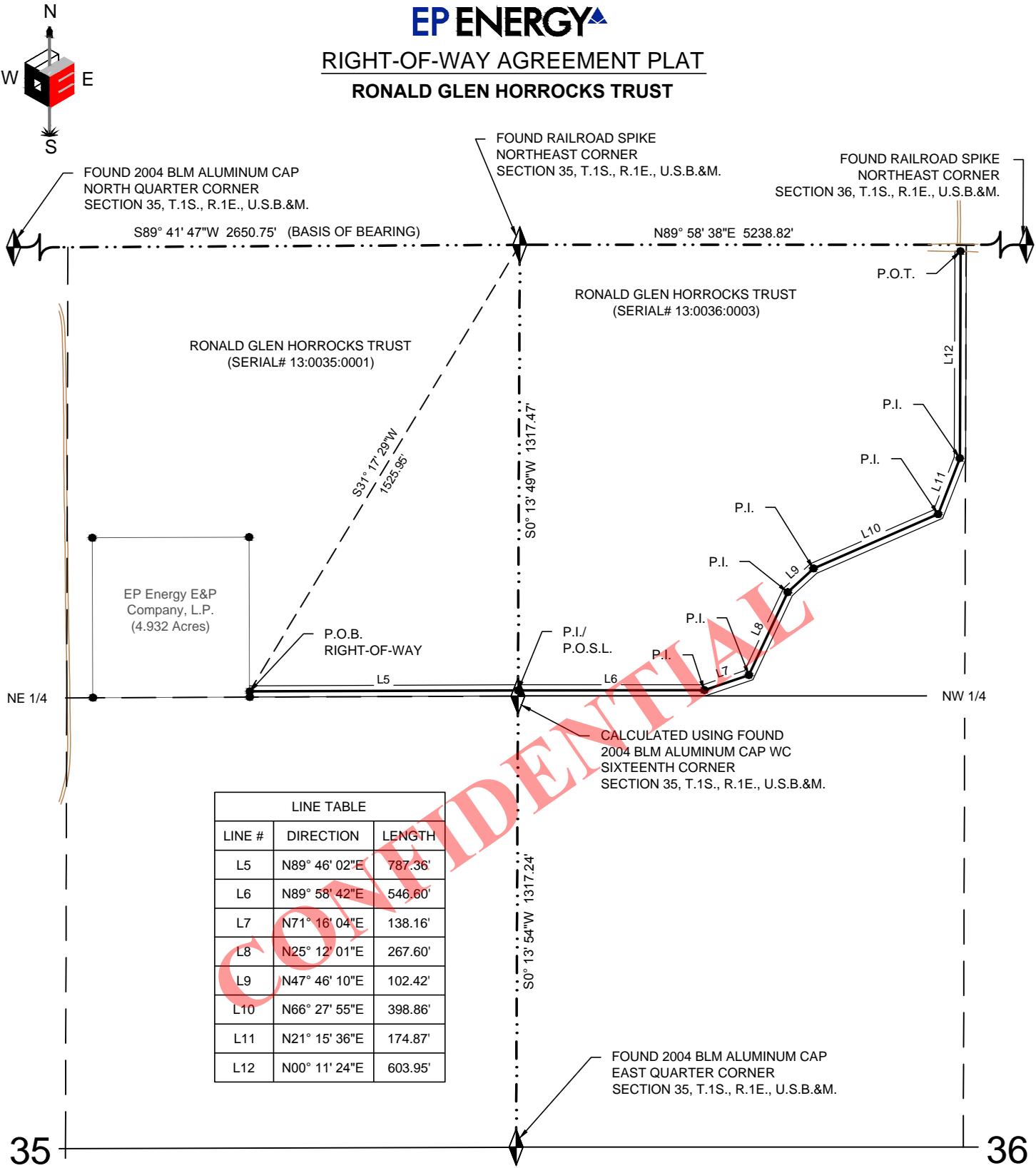


MARCH 28, 2016  
AUTHOR: CMM

PHOTO



**RIGHT-OF-WAY AGREEMENT PLAT**  
**RONALD GLEN HORROCKS TRUST**



LINE TABLE		
LINE #	DIRECTION	LENGTH
L5	N89° 46' 02"E	787.36'
L6	N89° 58' 42"E	546.60'
L7	N71° 16' 04"E	138.16'
L8	N25° 12' 01"E	267.60'
L9	N47° 46' 10"E	102.42'
L10	N66° 27' 55"E	398.86'
L11	N21° 15' 36"E	174.87'
L12	N00° 11' 24"E	603.95'

**CORRIDOR RIGHT-OF-WAY DESCRIPTION**

A 33.00 FOOT WIDE RIGHT-OF-WAY CORRIDOR LOCATED IN SECTIONS 35 & 36, TOWNSHIP 1 SOUTH, RANGE 1 EAST, UTAH SPECIAL BASE AND MERIDIAN. THE SIDE LINES ARE LOCATED 16.5 FEET ON EACH SIDE OF THE CENTERLINE, AND SHALL BE SHORTENED OR ELONGATED TO MEET THE SURFACE USE AREA AND AN EXISTING GRAVEL ROAD. SAID CENTERLINE IS MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT A POINT LOCATED SOUTH 31°17'29" WEST A DISTANCE OF 1525.95 FEET FROM THE NORTHEAST CORNER OF SECTION 35, TOWNSHIP 1 SOUTH, RANGE 1 EAST, UTAH SPECIAL BASE AND MERIDIAN; THENCE NORTH 89°46'02" EAST 787.36 FEET, MORE OR LESS, TO A POINT ON THE EAST LINE OF SAID SECTION 35; THENCE NORTH 89°58'42" EAST 546.60 FEET; THENCE NORTH 71°16'04" EAST 138.16 FEET; THENCE NORTH 25°12'01" EAST 267.60 FEET; THENCE NORTH 47°46'10" EAST 102.42 FEET; THENCE NORTH 66°27'55" EAST 398.86 FEET; THENCE NORTH 21°15'36" EAST 174.87 FEET; THENCE NORTH 0°11'24" EAST 603.95 FEET TO THE POINT OF TERMINUS.

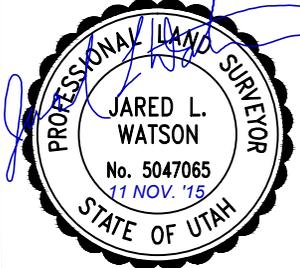
THE BASIS OF BEARING USED FOR THIS SURVEY IS SOUTH 89°41'47" WEST BETWEEN THE NORTHEAST CORNER AND NORTH QUARTER CORNER OF SECTION 35, TOWNSHIP 1 SOUTH, RANGE 1 EAST, UTAH SPECIAL BASE AND MERIDIAN.

**RIGHT-OF-WAY LENGTH**

RONALD GLEN HORROCKS TRUST = 3,019.82 FEET OR 183.02 RODS, MORE OR LESS

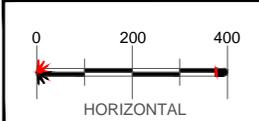
**LEGEND**

- = FOUND SECTION CORNER
- = SECTION LINE
- = QUARTER SECTION LINE
- = SIXTEENTH SECTION LINE
- = PROPOSED CL RIGHT-OF-WAY
- = SURFACE USE AREA
- = EXISTING GRAVEL ROAD



**EP ENERGY E&P COMPANY, L.P.**  
RIGHT-OF-WAY SURVEY ON FEE LANDS FOR  
RONALD GLEN HORROCKS TRUST  
NE 1/4 OF THE NE 1/4 SECTION 35, T. 1 S., R. 1 E., U.S.B.&M.  
NW 1/4 OF THE NW 1/4 SECTION 36, T. 1 S., R. 1 E., U.S.B.&M.  
UINTAH COUNTY, UTAH

**CERTIFICATE**  
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM THE FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
REGISTERED LAND SURVEYOR, UTAH PLS #5047065

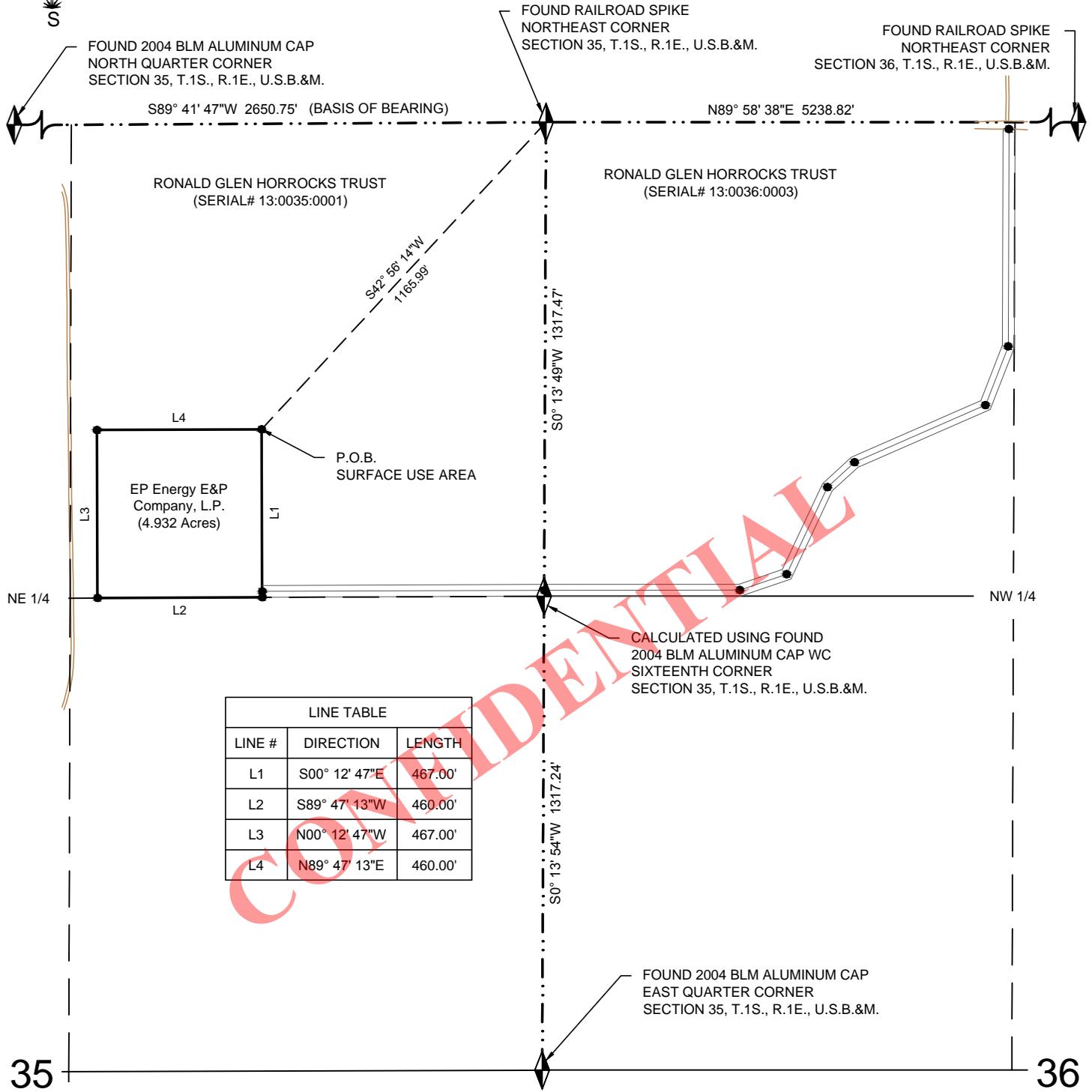


SURVEYED: OCTOBER 8, 2015  
SURVEYED BY: SY  
DRAWN: NOVEMBER 11, 2015  
DRAWN: JLW  
SCALE: 1" = 400'

SHEET NO.  
**1**



**SURFACE USE AGREEMENT PLAT**  
**RONALD GLEN HORROCKS TRUST**



LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S00° 12' 47"E	467.00'
L2	S89° 47' 13"W	460.00'
L3	N00° 12' 47"W	467.00'
L4	N89° 47' 13"E	460.00'

CONFIDENTIAL

**LEGEND**

- = FOUND SECTION CORNER
- = SECTION LINE
- = QUARTER SECTION LINE
- = SIXTEENTH SECTION LINE
- = PROPOSED SURFACE USE AREA
- = PROPOSED CL RIGHT-OF-WAY
- = EXISTING GRAVEL ROAD

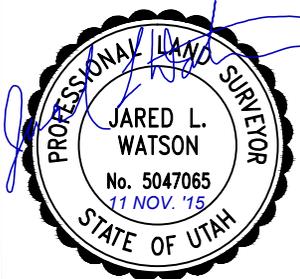
**SURFACE USE AREA DESCRIPTION**

BEGINNING AT AT POINT LOCATED SOUTH 42°56'14" WEST A DISTANCE OF 1165.99 FEET FROM THE NORTHEAST CORNER OF SECTION 35, TOWNSHIP 1 SOUTH, RANGE 1 EAST, UTAH SPECIAL BASE AND MERIDIAN; THENCE SOUTH 0°12'47" EAST 467.00 FEET; THENCE SOUTH 89°47'13"W WEST 460.00 FEET; THENCE NORTH 0°12'47" WEST 467.00 FEET; THENCE NORTH 89°47'13" EAST 460.00 FEET TO THE POINT OF BEGINNING.

THE BASIS OF BEARING USED FOR THIS SURVEY IS SOUTH 89°41'47" WEST BETWEEN THE NORTHEAST CORNER AND NORTH QUARTER CORNER OF SECTION 35, TOWNSHIP 1 SOUTH, RANGE 1 EAST, UTAH SPECIAL BASE AND MERIDIAN.

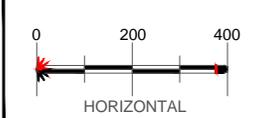
**SURFACE USE AREA**

RONALD GLEN HORROCKS TRUST = 4.932 ACRES, MORE OR LESS



**EP ENERGY E&P COMPANY, L.P.**  
LOCATION SURFACE USE SURVEY ON FEE LANDS FOR  
**RONALD GLEN HORROCKS TRUST**  
NE 1/4 OF THE NE 1/4 SECTION 35, T. 1 S., R. 1 E., U.S.B.&M.  
UINTAH COUNTY, UTAH

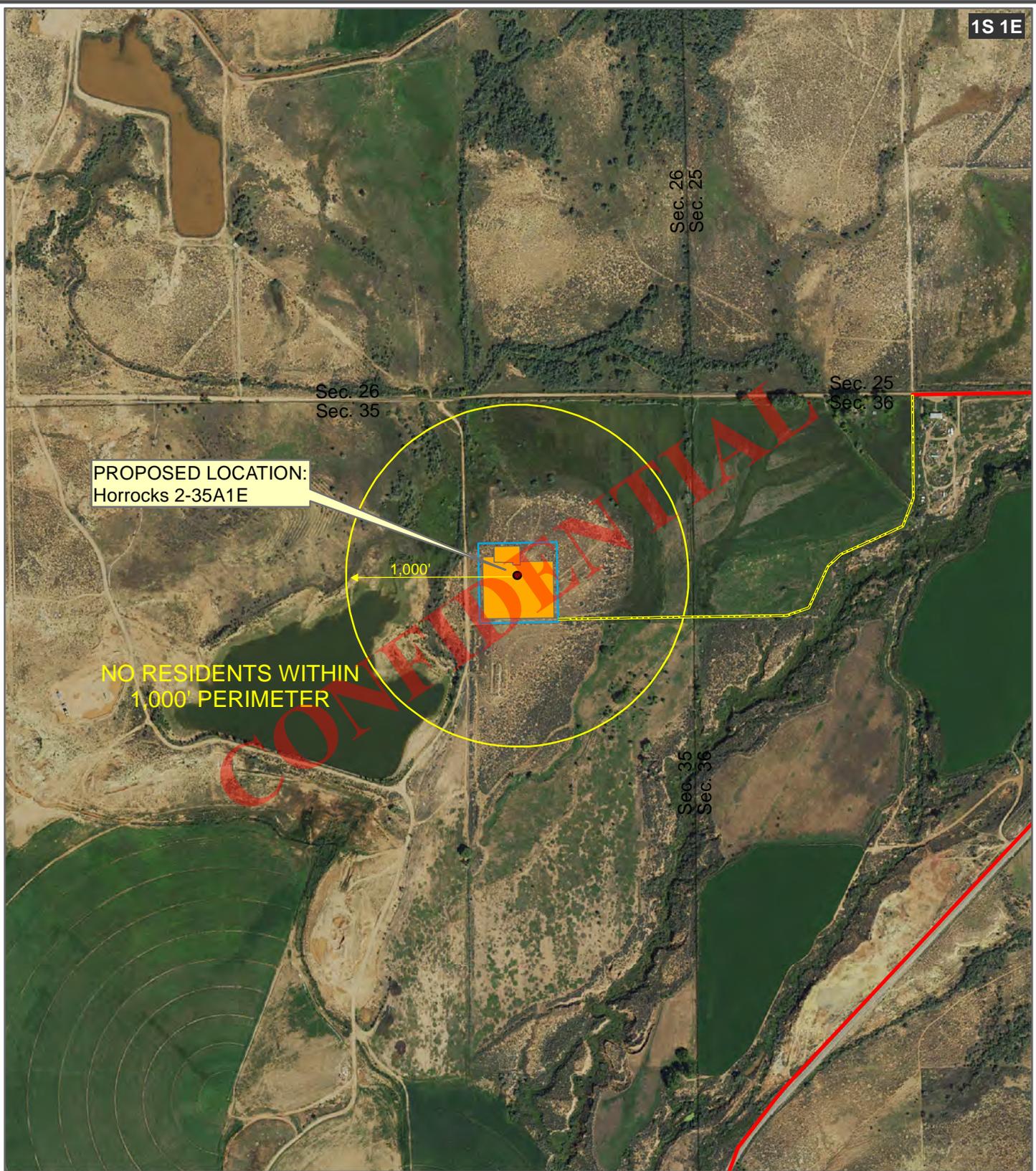
**CERTIFICATE**  
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM THE FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
REGISTERED LAND SURVEYOR, UTAH PLS #5047065



SURVEYED: OCTOBER 8, 2015  
SURVEYED BY: SY  
DRAWN: NOVEMBER 11, 2015  
DRAWN: JLW  
SCALE: 1" = 400'

SHEET NO.  
**1**

1S 1E



PROPOSED LOCATION:  
Horrocks 2-35A1E

1,000'

NO RESIDENTS WITHIN  
1,000' PERIMETER

**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321

PARCEL INFORMATION SHOWN HAS NOT BEEN SURVEYED BY OUTLAW ENGINEERING, INC. AND MAY NOT REFLECT ACTUAL LOCATION OF PROPERTY LINES

**LEGEND**

- Proposed Well Head
- Proposed Access Road
- Existing Access Road
- Residential Housing Buffer
- Proposed Pad
- LOD

Legend color key: Federal (yellow), Private (white), State (light blue), Tribal (orange)

**Horrocks 2-35A1E**

WELL LOCATION: NE 1/4 of the NE 1/4 SECTION 35,  
T.1S, R.1E, U.S.B.&M.  
UINTAH COUNTY, UTAH



**Residential  
Map**

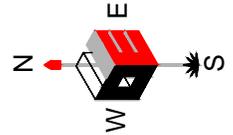
0 200 400 600 800 Feet

VERSION: **V3**  
SURVEYED: **3-28-16**

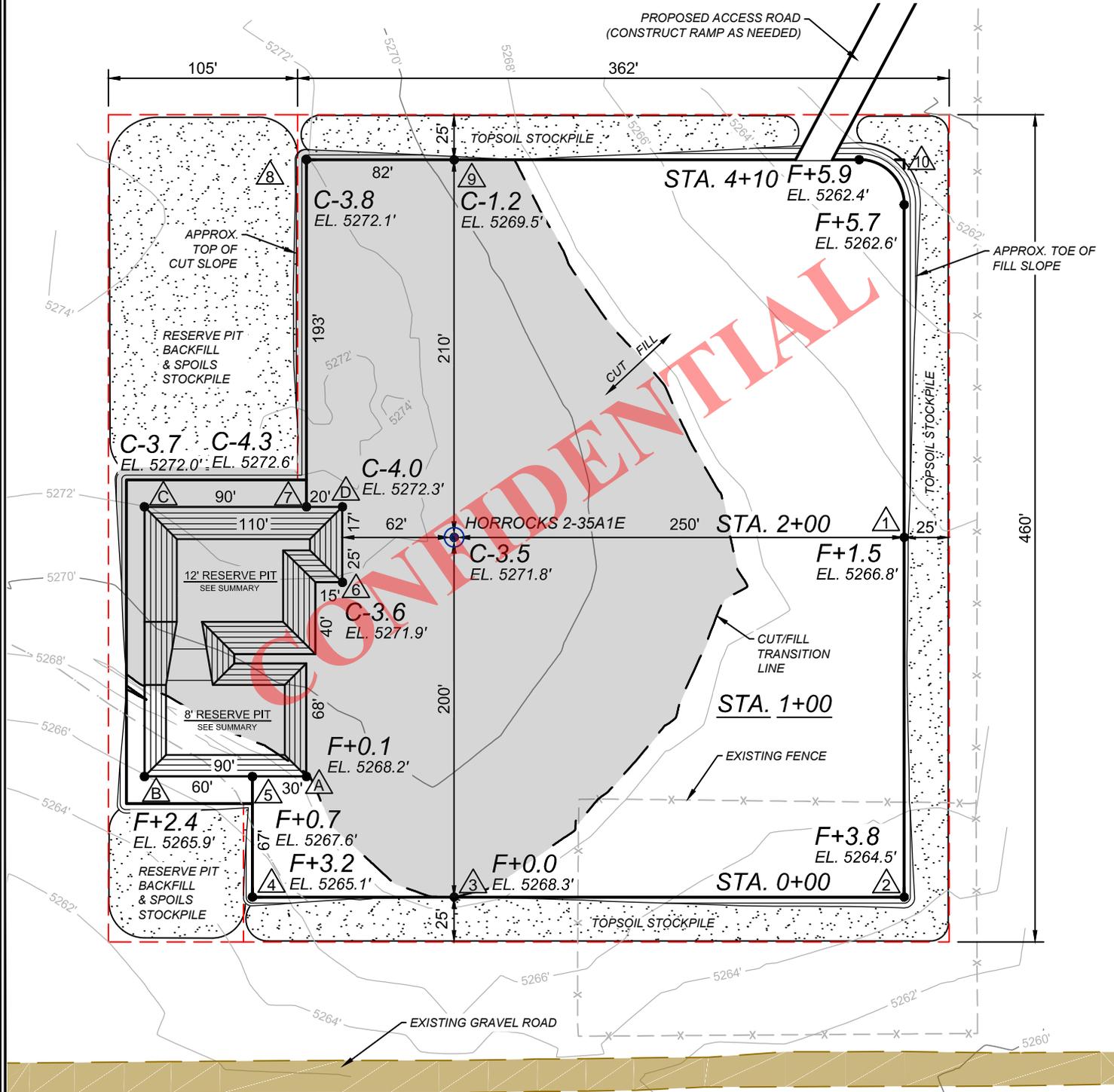
USGS 7.5' Fort Duchesne Quadrangle 2014 NAIP Imagery

MARCH 28, 2016  
SCALE: 1" = 800'  
AUTHOR: CMM

SHEET  
**E**



## PROPOSED LOCATION LAYOUT HORROCKS 2-35A1E



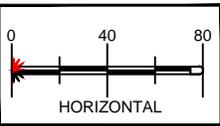
LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	LIMITS OF DISTURBANCE
	EL. 5260.5' EXISTING GRADE
	EXISTING FENCE
	PROPOSED WELL LOCATION
	CORNER NUMBER
	CUT/FILL NUMBER
	EXISTING ROAD

SUMMARY
EXISTING GRADE @ CENTER OF WELL= 5271.8'
FINISH GRADE ELEVATION = 5268.3'
CUT SLOPES = 1.5 : 1
FILL SLOPES = 1.5 : 1
TOTAL WELL PAD AREA = 3.73 ACRES
TOTAL WELL PAD DISTURBANCE AREA = 4.93 ACRES

**PROPOSED LOCATION LAYOUT  
HORROCKS 2-35A1E**

WELL LOCATION: NE 1/4 OF THE NE 1/4 SECTION 35,  
T1S, R1E, U.S.B.&M., UTAH COUNTY, UTAH

**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321

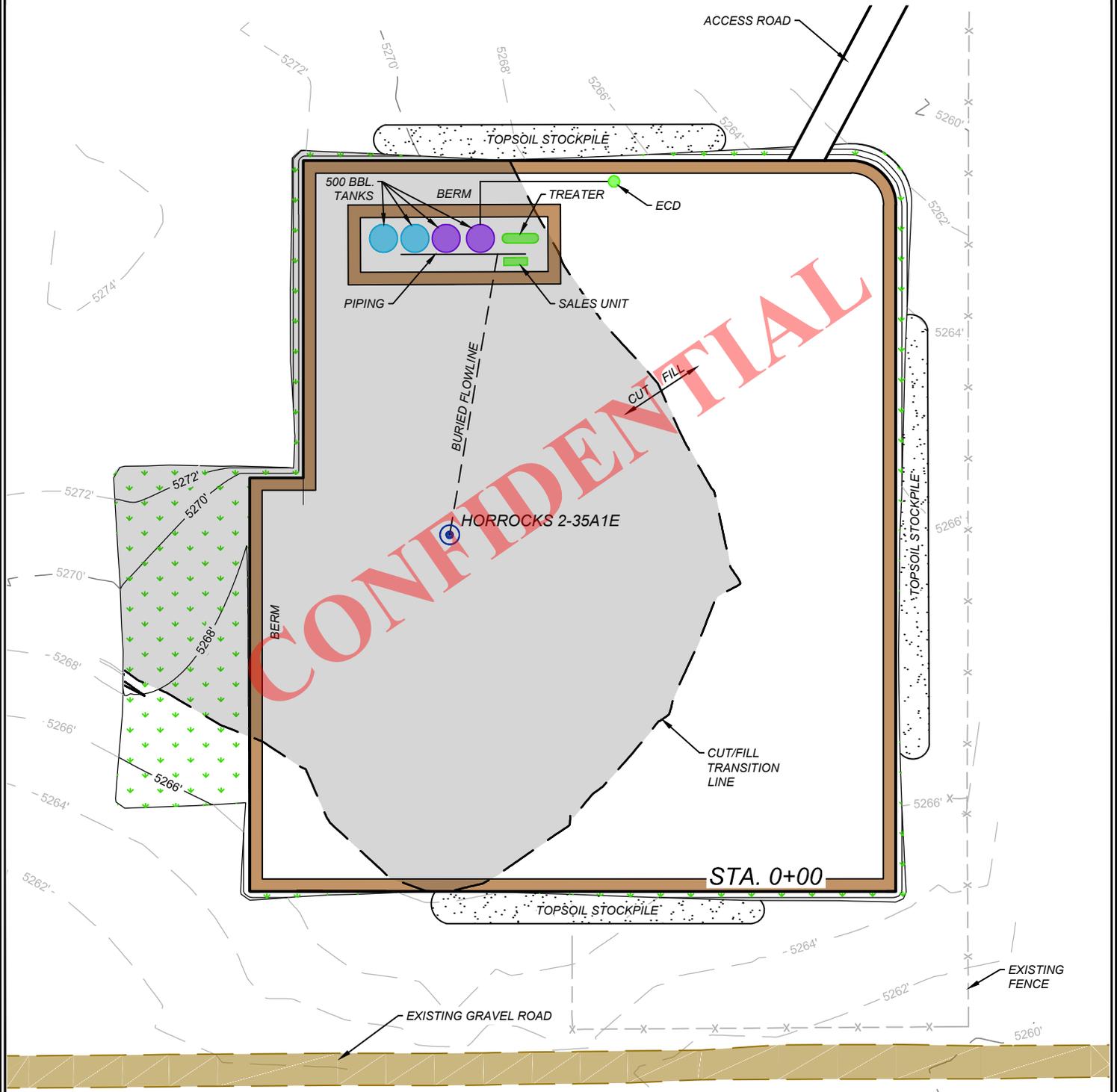
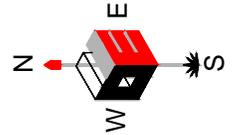


**\*RESERVE PIT\***  
8' & 12' DEEP, SEE ABOVE  
SLOPE 1.5:1  
PIT VOL. = 3,816 CY

<b>PAD/PIT GRADING</b>	MARCH 25, 2016	SHEET NO. <b>2</b>
	SCALE: 1" = 80' DESIGN: MA,RFII DRAWN: RL	



**PRODUCTION FACILITY LAYOUT**  
**HORROCKS 2-35A1E**

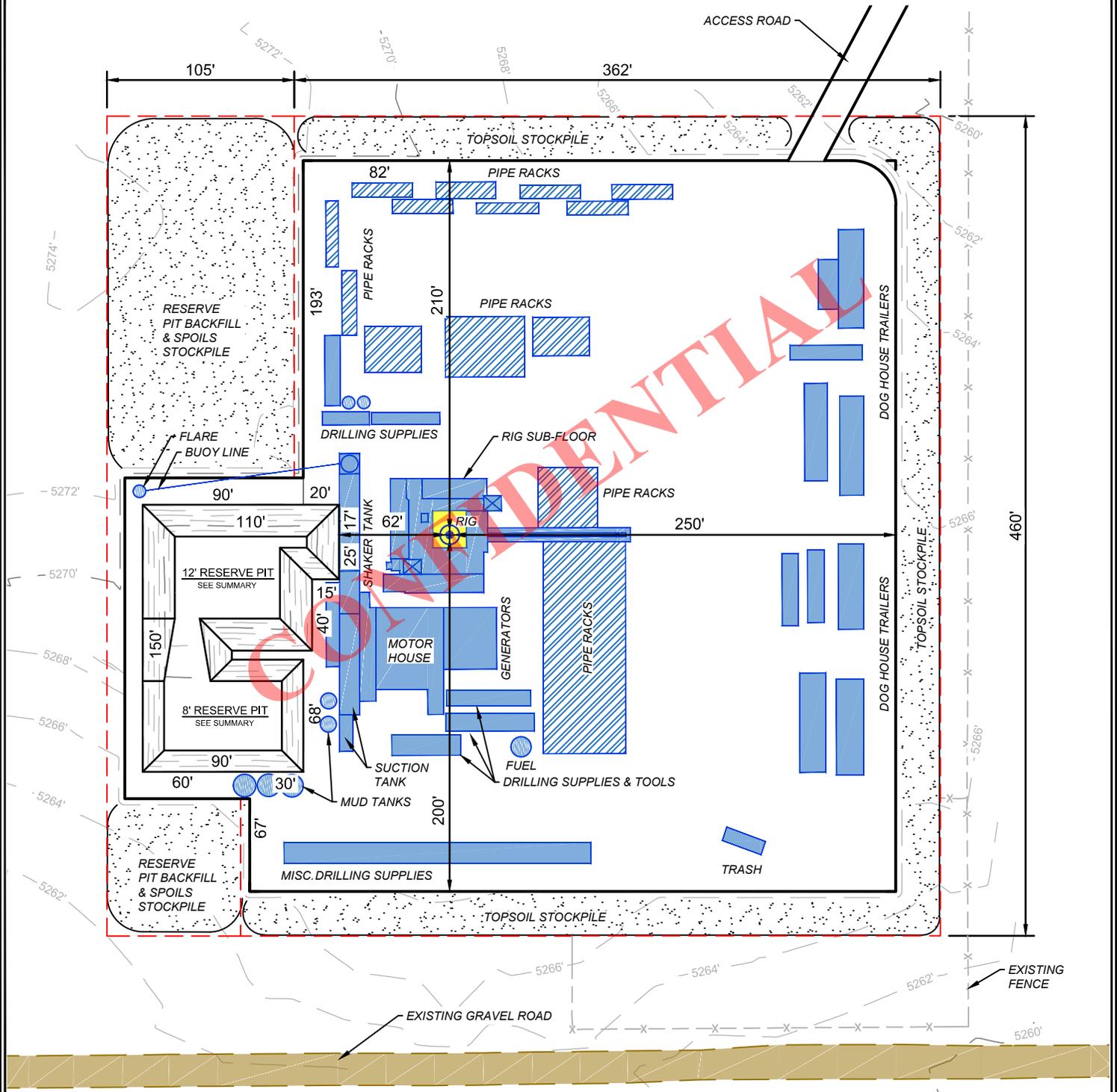
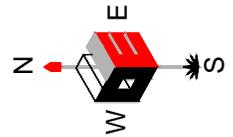


CONFIDENTIAL

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li> EXISTING CONTOURS</li> <li> PROPOSED CONTOURS</li> <li> LIMITS OF DISTURBANCE</li> <li> BERM</li> <li> EXISTING FENCE</li> <li> WELL LOCATION</li> <li> RECLAIMED AREA</li> <li> EXISTING ROAD</li> </ul>	<p><b>SUMMARY</b></p> <p>APPROX UN-RECLAIMED AREA = 3.28 ACRES APPROX RECLAIMED AREA = 0.45 ACRES</p>	<p><b>PRODUCTION FACILITY LAYOUT</b> <b>HORROCKS 2-35A1E</b></p> <p>WELL LOCATION: NE 1/4 OF THE NE 1/4 SECTION 35, T1S, R1E, U.S.B.&amp;M., UINTAH COUNTY, UTAH</p> <p><b>EP ENERGY</b></p>						
<p><b>OUTLAW ENGINEERING INC.</b> P.O. BOX 1800 ROOSEVELT, UTAH 84066 (435) 232-4321</p>	<p>HORIZONTAL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"><b>PRODUCTION LAYOUT</b></td> <td style="width: 33%; text-align: center;">MARCH 25, 2016 SCALE: 1" = 80'</td> <td style="width: 33%; text-align: center;">SHEET NO. <b>5</b></td> </tr> <tr> <td colspan="3" style="text-align: right; font-size: small;">DESIGN: MA,RFII DRAWN: RL</td> </tr> </table>	<b>PRODUCTION LAYOUT</b>	MARCH 25, 2016 SCALE: 1" = 80'	SHEET NO. <b>5</b>	DESIGN: MA,RFII DRAWN: RL		
<b>PRODUCTION LAYOUT</b>	MARCH 25, 2016 SCALE: 1" = 80'	SHEET NO. <b>5</b>						
DESIGN: MA,RFII DRAWN: RL								



# RIG LAYOUT HORROCKS 2-35A1E

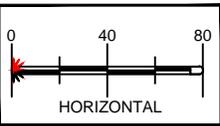


LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	LIMITS OF DISTURBANCE
	DIVERSION DITCH
	EXISTING FENCE
	WELL LOCATION
	EXISTING ROAD
	PIPE RACKS
	BUILDING & EQUIP.

**SUMMARY**  
SEE CROSS SECTION SHEET FOR QUANTITIES

**RIG LAYOUT**  
**HORROCKS 2-35A1E**  
WELL LOCATION: NE 1/4 OF THE NE 1/4 SECTION 35, T1S, R1E, U.S.B.&M., UINTAH COUNTY, UTAH

**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321

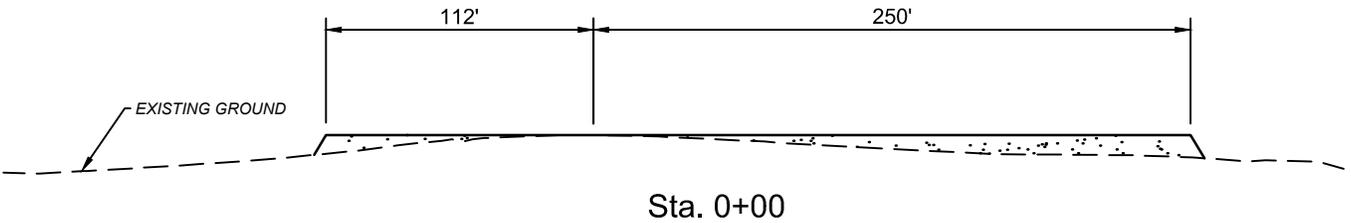
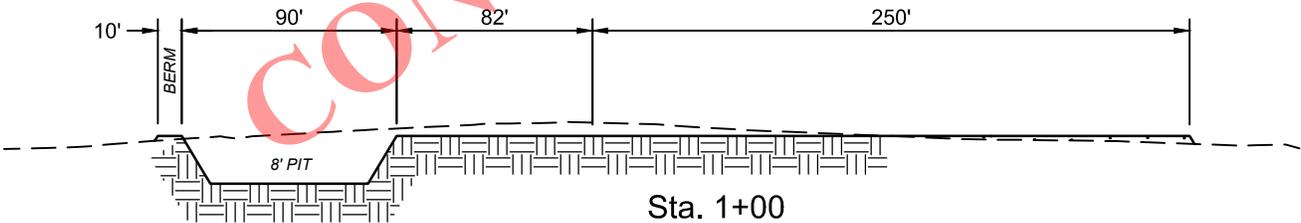
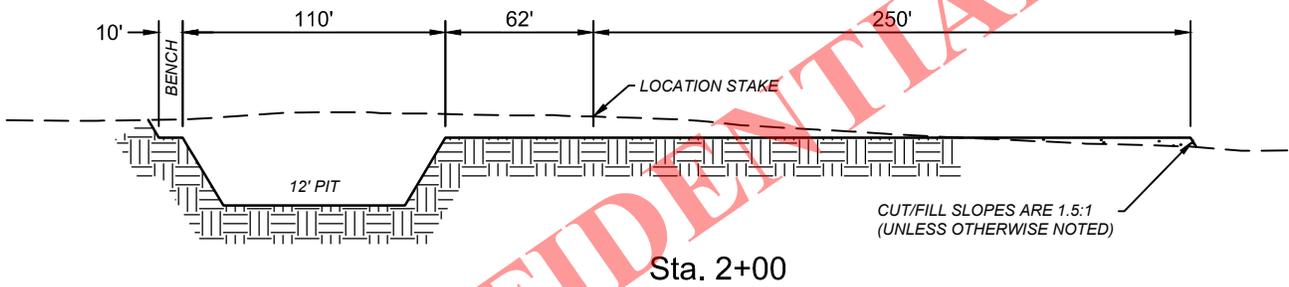
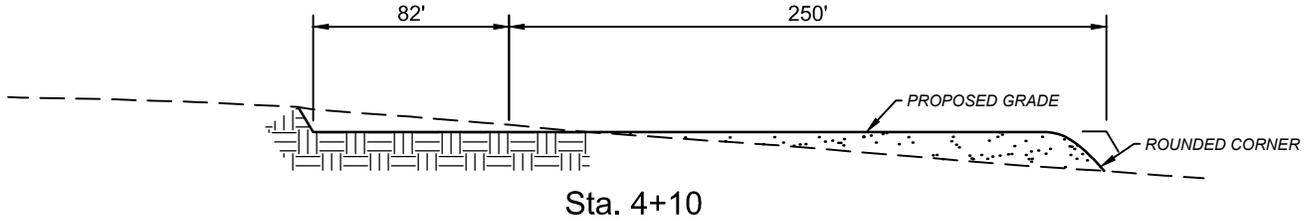


<b>RIG LAYOUT</b>	MARCH 25, 2016	SHEET NO. <b>4</b>
	SCALE: 1" = 80'	
DESIGN: MA,RFII DRAWN: RL		



**CROSS SECTIONS  
HORROCKS 2-35A1E**

X-Section Scale  
1" = 20'  
1" = 80'



**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- CUT
- FILL

**ESTIMATED EARTHWORK QUANTITIES**  
\* NO SHRINK OR SWELL FACTORS HAVE BEEN USED (QUANTITIES EXPRESSED IN CUBIC YARDS)

ITEM	CUT	FILL	EXCESS/IMPORT	6" T.S.*
PAD	5,675	5,675	0	3,024
PIT	3,816	-	0	-

\*(T.S.) = TOPSOIL STRIPPING

**CROSS SECTIONS  
HORROCKS 2-35A1E**

WELL LOCATION: NE 1/4 OF THE NE 1/4 SECTION 35, T1S, R1E, U.S.B.&M., UTAH COUNTY, UTAH

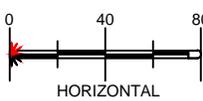


**CROSS SECTIONS**

MARCH 25, 2016  
SCALE: 1" = 80'  
DESIGN: MA,RFII DRAWN: RL

SHEET NO. **3**

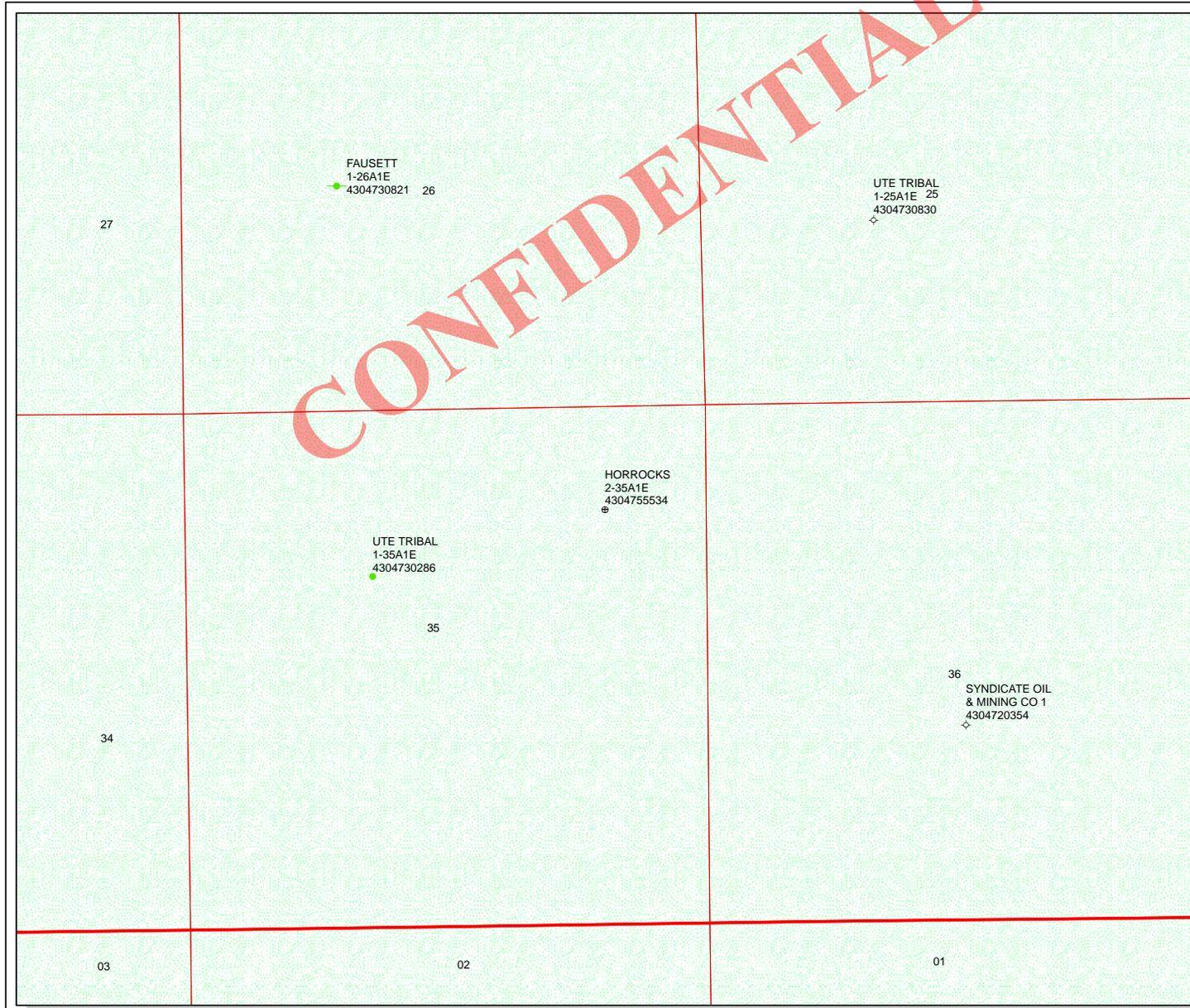
**OUTLAW ENGINEERING INC.**  
P.O. BOX 1800  
ROOSEVELT, UTAH 84066  
(435) 232-4321







CONFIDENTIAL



**API Number: 430475534**

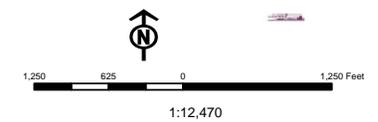
**Well Name: HORROCKS 2-35A1E**

Township: T01.0S Range: R01.0E Section: 35 Meridian: U

Operator: EP ENERGY E&P COMPANY, L.P.

Map Prepared: 4/28/2016  
Map Produced by Diana Mason

Wells Query		Units	
Status		Status	
◆	APD - Approved Permit	▨	ACTIVE
○	DRL - Spudded (Drilling Commenced)	▨	EXPLORATORY
↗	GIW - Gas Injection	▨	GAS STORAGE
★	GS - Gas Storage	▨	NF PP OIL
⊕	LOC - New Location	▨	NF SECONDARY
⊖	OPS - Operation Suspended	▨	PI OIL
⊗	PA - Plugged Abandoned	▨	PP GAS
⊙	PGW - Producing Gas Well	▨	PP GEOTHERML
⊚	POW - Producing Oil Well	▨	PP OIL
⊛	SGW - Shut-in Gas Well	▨	SECONDARY
⊜	SOW - Shut-in Oil Well	▨	TERMINATED
⊝	TA - Temp. Abandoned		
○	TW - Test Well	Fields	
⊞	WDW - Water Disposal	▨	Unknown
⊟	WW - Water Injection Well	▨	ABANDONED
●	WSW - Water Supply Well	▨	ACTIVE
		▨	COMBINED
		▨	INACTIVE
		▨	STORAGE
		▨	TERMINATED



Well Name	EP ENERGY E&P COMPANY, L.P. HORROCKS 2-35A1E 4304755534000			
String	Cond	Surf	I1	Prod
Casing Size(")	13.375	9.625	7.000	5.000
Setting Depth (TVD)	600	4000	9420	13300
Previous Shoe Setting Depth (TVD)	0	600	4000	9420
Max Mud Weight (ppg)	8.3	10.5	10.1	13.7
BOPE Proposed (psi)	1000	10000	10000	10000
Casing Internal Yield (psi)	2730	5750	11220	13940
Operators Max Anticipated Pressure (psi)	9475			13.7

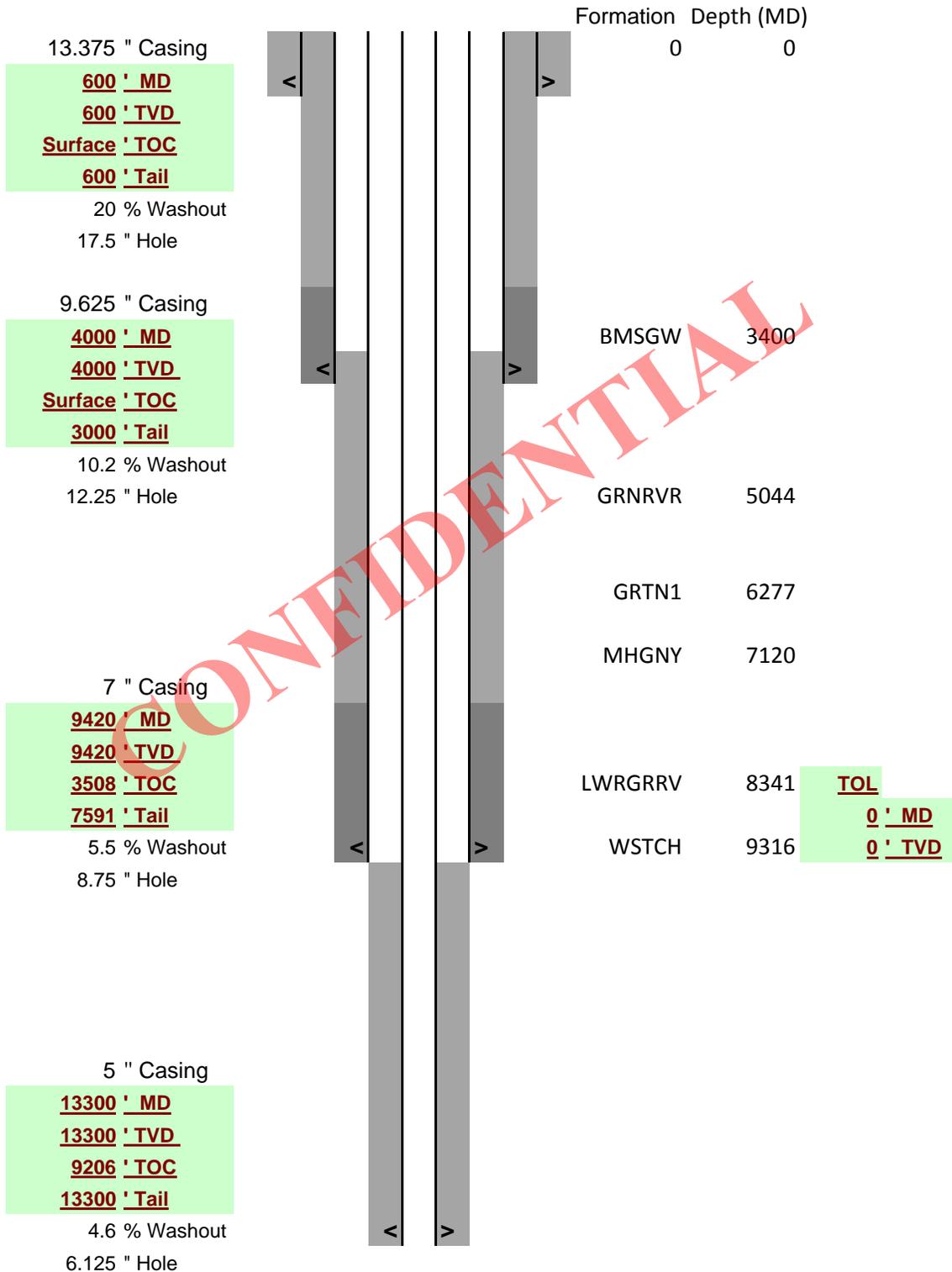
Calculations	Cond String	13.375	"
Max BHP (psi)	.052*Setting Depth*MW=	259	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	187	YES <input type="checkbox"/> rotating head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	127	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	127	NO <input type="checkbox"/> OK <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		600	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	2184	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1704	YES <input type="checkbox"/> 10M BOP w/ rotating head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1304	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1436	NO <input type="checkbox"/> OK <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		4000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		600	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	4947	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3817	YES <input type="checkbox"/> 10M rams, annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2875	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3755	YES <input type="checkbox"/> OK <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		7854	psi
*Max Pressure Allowed @ Previous Casing Shoe=		4000	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	5.000	"
Max BHP (psi)	.052*Setting Depth*MW=	9475	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	7879	YES <input type="checkbox"/> 10M rams, annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	6549	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	8621	YES <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		9758	psi
*Max Pressure Allowed @ Previous Casing Shoe=		9420	psi *Assumes 1psi/ft frac gradient

**EP ENERGY E&P COMPANY, L.P.  
HORROCKS 2-35A1E  
43047555340000**



Davis 1-33A 1E WDW 2.4 mi W, 5432-5854, GRRV

**EP ENERGY E&P COMPANY, L.P.  
HORROCKS 2-35A1E  
43047555340000**

		1.125			1		1.8					
<b>13.375 " Casing</b>	MASP	Collapse Strength (psi)	Collapse Load (psi)	Collapse DF	Burst Strength (psi)	Burst Load (psi)	Burst DF	Tension Strength (kips)	Tension DF	Neutral Point (ft)	Tension Air (kips)	Tension Buoyed (kips)
	187	1130	259	4.37	2730	600	4.55	514	15.72	524	32.7	28.7
	MW (ppg)	Internal Grad. (psi)	Backup Mud (ppg)	Internal Mud (ppg)	Max Shoe Pressure (psi)*	CSG Wt (lbs/ft)	CSG Grade	CSG Collar	Cement Lead (sx)	Lead Yield	Cement Tail (sx)	Tail Yield
	8.3	0.12	0.0	0.0	1434	55	J-55	STC	758	1.15	0	0.00
<b>9.625 " Casing</b>	MASP	Collapse Strength (psi)	Collapse Load (psi)	Collapse DF	Burst Strength (psi)	Burst Load (psi)	Burst DF	Tension Strength (kips)	Tension DF	Neutral Point (ft)	Tension Air (kips)	Tension Buoyed (kips)
	1302	3090	2182	1.42	5750	3750	1.53	737	5.46	3358	160.0	135.0
	MW (ppg)	Internal Grad. (psi)	Backup Mud (ppg)	Internal Mud (ppg)	Max Shoe Pressure (psi)*	CSG Wt (lbs/ft)	CSG Grade	CSG Collar	Cement Lead (sx)	Lead Yield	Cement Tail (sx)	Tail Yield
	10.5	0.22	0.0	0.0	3750	40.0	N-80	LTC	550	2.79	376	1.30
<b>7 " Casing</b>	MASP	Collapse Strength (psi)	Collapse Load (psi)	Collapse DF	Burst Strength (psi)	Burst Load (psi)	Burst DF	Tension Strength (kips)	Tension DF	Neutral Point (ft)	Tension Air (kips)	Tension Buoyed (kips)
	6539	9200	4942	1.86	11220	8612	1.30	797	3.44	7965	273.2	231.4
	MW (ppg)	Internal Grad. (psi)	Backup Mud (ppg)	Internal Mud (ppg)	Max Shoe Pressure (psi)*	CSG Wt (lbs/ft)	CSG Grade	CSG Collar	Cement Lead (sx)	Lead Yield	Cement Tail (sx)	Tail Yield
	10.1	0.22	0.0	0.0	8612	29.0	HCP-110	LTC	435.0	1.81	223.0	1.62
<b>5 " Casing</b>	MASP	Collapse Strength (psi)	Collapse Load (psi)	Collapse DF	Burst Strength (psi)	Burst Load (psi)	Burst DF	Tension Strength (kips)	Tension DF	Neutral Point (ft)	Tension Air (kips)	Tension Buoyed (kips)
	6539	13418	9465	1.42	13940	9465	1.47	495	2.61	10514	239.4	189.5
	MW (ppg)	Internal Grad. (psi)	Backup Mud (ppg)	Internal Mud (ppg)	Max Shoe Pressure (psi)*	CSG Wt (lbs/ft)	CSG Grade	CSG Collar	Cement Lead (sx)	Lead Yield	Cement Tail (sx)	Tail Yield
	13.7	0.22	0.0	0.0	0	18.0	HCP-110	LTC	250.0	1.42	0.0	0.00

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** EP ENERGY E&P COMPANY, L.P.  
**Well Name** HORROCKS 2-35A1E  
**API Number** 43047555340000      **APD No** 11485      **Field/Unit** BLUEBELL  
**Location: 1/4,1/4 NENE**      **Sec** 35      **Tw** 1.0S      **Rng** 1.0E      1041 FNL 1024 FEL  
**GPS Coord (UTM)** 598141 4468064      **Surface Owner** RONALD GLEN HORROCKS TRUST

### Participants

Jeff Crozier - EP Energy; Randy Fredericks - Dirt contractor; Ronnie Horrocks

### Regional/Local Setting & Topography

This well is proposed on fallow pasture above and surrounded by productive center pivot irrigated cropland currently in alfalfa. The soils are sandy loams. There is a pretty good network of drainage and ditches in the surrounding farmlands. There are some manmade damed ponds storing irrigation water both north and west of location. Deep creek is found less than 1/4 mile east and the west channel of the Uintah River is found to the west. The two rivers nearly converge within the section. The access road was staked in an inconvenient and wasteful route cutting the productive farmland in two and disrupting a center pivot sprinkler. I suggested a route to the westwern boundary of the property that is shorter and is in fallow land for most of the way. The surface owner met with us later and mentioned how that was his wish from the start. J. Crozier called later confirming the change will happen.

### Surface Use Plan

**Current Surface Use**  
Agricultural

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.01	Width 400    Length 400	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**      Y

### Environmental Parameters

**Affected Floodplains and/or Wetlands** N

### **Flora / Fauna**

Cultivated farmland within a high desert shrubland ecosystem. Nearby native vegetation consists of sagebrush, globemallow, evening primrose, Atriplex spp., mustard spp, rabbit brush, horsebrush, broom snakeweed, Opuntia spp and spring annuals.

Dominant vegetation;  
fallow cultivars and greasewood

Wildlife;

Adjacent habitat contains forbs that may be suitable browse for deer, antelope, prairie dogs or rabbits, though none were observed.

Disturbed soils onsite do not support habitat for wildlife.

### **Soil Type and Characteristics**

sandy loams

**Erosion Issues** N**Sedimentation Issues** N**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** Y**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** N **Paleo Potential Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N**Reserve Pit****Site-Specific Factors****Site Ranking**

<b>Distance to Groundwater (feet)</b>		20
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	1320 to 5280	5
<b>Distance to Other Wells (feet)</b>	>1320	0
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	TDS>5000 and	10
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>	10 to 20	5
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>		50 1 Sensitivity Level

**Characteristics / Requirements**

Pit to be dug to a depth of 8'. Because of the likely hood of high ground water table, pit underlayment is to be used to protect the liner from potential puncture. Pit should be fenced to prevent entry by deer, other wildlife and domestic animals. Pit to be closed within one year after drilling activities are complete. I would appreciate a double liner?

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y**Other Observations / Comments**

This is in farmland and next to some man made ponds and Deep Creek. I suspect some pretty high ground water here. It is on top of a little knoll type of feature about 10+ feet higher than the surrounding field. The water table in the field is right near the surface. There is constant standing water in a low spot next to the road. I would estimate either hitting ground water or being within 10 feet once the 12 feet of pit is dug. Can we get a felt subliner liner or double lined? Could we maybe do the potholing and go closed loop if water is found at that time? The landowner requested the access road be moved to per my recommendation to the west side of his property to stop interference with a center pivot sprinkler.

API Well Number: 43047555340000

Chris Jensen  
Evaluator

4/27/2016  
Date / Time

**CONFIDENTIAL**

RECEIVED: May 10, 2016

# Application for Permit to Drill Statement of Basis

## Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
11485	43047555340000	LOCKED	OW	P	No
<b>Operator</b>	EP ENERGY E&P COMPANY, L.P.		<b>Surface Owner-APD</b>	RONALD GLEN HORROCKS TRUST	
<b>Well Name</b>	HORROCKS 2-35A1E		<b>Unit</b>		
<b>Field</b>	BLUEBELL		<b>Type of Work</b>	DRILL	
<b>Location</b>	NENE 35 1S 1E U 1041 FNL (UTM) 598140E 4468063N		1024 FEL	GPS Coord	

### Geologic Statement of Basis

EP Energy proposes to set 600 feet of conductor and 4,000 feet of surface casing at this location. The depth to the base of the moderately saline ground water is estimated to be 3,500 feet. A search of Division of Water Rights records indicates that there are 4 water wells within a 10,000 foot radius of the center of Section 35. These wells range in depth from 24 to 960 feet. These wells are all a mile or more south of the proposed location. Listed uses are domestic, irrigation, stock watering, municipal and industrial. This location lies on the Duchesne River Formation. Water may be found in the Duchesne River Formation and alluvium deposited in valley floors. The proposed casing and cement should adequately protect ground water in this area.

Brad Hill  
APD Evaluator

5/10/2016  
Date / Time

### Surface Statement of Basis

Location is proposed in a good location inside the spacing window. Access road enters the pad from the east but, comes from a county road just north. The landowner or its representative was in attendance for the pre-site inspection.

The soil type and topography at present do not combine to pose a significant threat to erosion or sediment/ pollution transport in these regional climate conditions but, groundwater and irrigation water storage are in danger of contamination in the event of a release.

Usual construction standards of the Operator appear to be adequate for the proposed purpose as submitted.

I did not recognize any special flora or animal species or cultural resources on site that the proposed action may harm. Numerous ditching and riparian areas can be found adjacent the site to the north and west. The location was not previously surveyed for cultural and paleontological resources ( as the operator saw fit). I have advised the operator take all measures necessary to comply with NHPA, ESA and MBTA and that actions insure no improper disturbance to resources that may have not been seen during onsite visit. If Cultural or Paleontological resources are found, Operator shall consult with SHPO and comply with requirements. Those resources shall remain undisturbed and remanded to surface owner for curation and scientific study or to remain as he wishes and further construction activities monitored.

The location should be bermed to prevent fluids from entering or leaving the confines of the pad. Fencing around the reserve pit will be necessary to prevent wildlife and livestock from entering. A synthetic liner of 16 mils (minimum) should be utilized in the reserve pit.

Chris Jensen  
Onsite Evaluator

4/27/2016  
Date / Time

**Conditions of Approval / Application for Permit to Drill**

<b>Category</b>	<b>Condition</b>
Pits	DOGM shall be notified when location is built in order to inspect a reserve pit test hole. A determination of reserve pit requirements will be made at that time.
Surface	The well site shall be bermed to prevent fluids from entering or leaving the pad.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

**CONFIDENTIAL**

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 4/27/2016

API NO. ASSIGNED: 43047555340000

WELL NAME: HORROCKS 2-35A1E

OPERATOR: EP ENERGY E&amp;P COMPANY, L.P. (N3850)

PHONE NUMBER: 713 997-5138

CONTACT: Linda Renken

PROPOSED LOCATION: NENE 35 010S 010E

Permit Tech Review: 

SURFACE: 1041 FNL 1024 FEL

Engineering Review: 

BOTTOM: 1041 FNL 1024 FEL

Geology Review: 

COUNTY: UINTAH

LATITUDE: 40.35736

LONGITUDE: -109.84425

UTM SURF EASTINGS: 598140.00

NORTHINGS: 4468063.00

FIELD NAME: BLUEBELL

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

SURFACE OWNER: 4 - Fee

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 400JU0708
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: East Duchesne City Water
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingle Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 139-84
- Effective Date: 12/31/2008
- Siting: 4 WELLS PER 640 ACRE
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhill  
12 - Cement Volume (3) - daynedoucet



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

## Permit To Drill

\*\*\*\*\*

**Well Name:** HORROCKS 2-35A1E

**API Well Number:** 43047555340000

**Lease Number:** Fee

**Surface Owner:** FEE (PRIVATE)

**Approval Date:** 5/10/2016

### Issued to:

EP ENERGY E&P COMPANY, L.P., 1001 Louisiana, Houston, TX 77002

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-84. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

Cement volume for the 7 inch intermediate string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 500' above the surface casing setting depth as indicated in the submitted drilling plan.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

### Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Alexis Huefner OR submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
  - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Alexis Huefner 801-538-5302 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas



Alexis Huefner <alexishuefner@utah.gov>

**24hr Notice Horrocks 2-35A1E / API # 43047555340000**

1 message

LANDRIG009 (Nabors X21) <LANDRIG009@epenergy.com>

Mon, Jun 6, 2016 at 10:51 AM

To: "alexishuefner@utah.gov" <alexishuefner@utah.gov>, "Baker, Brent L" <Brent.Baker@epenergy.com>, Chris Jensen <chrisjensen@utah.gov>, "dennisingram@utah.gov" <dennisingram@utah.gov>, "Mares, Sergio I" <Sergio.Mares@epenergy.com>

35 IS IE

RE: EP ENERGY

HORROCKS 2-35A1E

API # 43047555340000

BLUEBELL FIELD

UINTAH COUNTY

**CONFIDENTIAL**

Leon Ross Drilling spudded 17 1/2" hole at 08:00 HOURS on 06/06/2016. We project running and cementing 13 3/8" Conductor II Casing within 24 hrs.

Regard,

Tony Wilkerson / Perry Evans

EP Energy LLC

Nabors X21

Rig: 713-997-1220

Cell: 435-823-1725

THIS E-MAIL AND ANY MATERIALS TRANSMITTED WITH IT MAY CONTAIN CONFIDENTIAL OR PROPRIETARY MATERIAL FOR THE SOLE USE OF THE INTENDED RECIPIENT. ANY REVIEW, USE, DISTRIBUTION OR DISCLOSURE BY OTHERS IS STRICTLY PROHIBITED. IF YOU ARE NOT THE INTENDED RECIPIENT, OR AUTHORIZED TO RECEIVE THE INFORMATION FROM THE RECIPIENT, PLEASE NOTIFY THE SENDER BY REPLY E-MAIL AND DELETE ALL COPIES OF THIS MESSAGE.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
<b>1. TYPE OF WELL</b> Oil Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> EP ENERGY E&P COMPANY, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 1001 Louisiana , Houston, TX, 77002		<b>8. WELL NAME and NUMBER:</b> HORROCKS 2-35A1E
<b>PHONE NUMBER:</b> 713 997-5138 Ext		<b>9. API NUMBER:</b> 43047555340000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1041 FNL 1024 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 35 Township: 01.0S Range: 01.0E Meridian: U		<b>9. FIELD and POOL or WILDCAT:</b> BLUEBELL
		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/23/2016	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Spudded well on 06/08/2016. See attached Drilling Operations Summary Report.		
		<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          August 01, 2016</b>
<b>NAME (PLEASE PRINT)</b> Linda Renken	<b>PHONE NUMBER</b> 713 997-5138	<b>TITLE</b> Sr. Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 7/29/2016

## CENTRAL DIVISION

ALTAMONT FIELD  
HORROCKS 2-35A1E  
HORROCKS 2-35A1E  
DRILLING LAND

### **Operation Summary Report**

Disclaimer: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

## 1 General

### 1.1 Customer Information

Company	CENTRAL DIVISION
Representative	
Address	

### 1.2 Well Information

Well	HORROCKS 2-35A1E		
Project	ALTAMONT FIELD	Site	HORROCKS 2-35A1E
Rig Name/No.	NABORS DRILLING/X21	Event	DRILLING LAND
Start date	6/6/2016	End date	
Spud Date/Time	6/29/2016	UWI	HORROCKS 2-35A1E
Active datum	KB @5,300.8usft (above Mean Sea Level)		
Afe No./Description	163734/56915 / HORROCKS 2-35A1E		

## 2 Summary

### 2.1 Operation Summary

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
6/9/2016	6:00 6:00	24.00	CASCOND	24		P	692.0	NOTE : ALL DEPTHS ADJUSTED +32.5' FOR NABORS X21 RKB. LEON ROSS DRILLING RIG #35 SET 72.5' 20" CONDUCTOR. SET MOUSE HOLE @ 97.5'. LEON ROSS DRILLING RIG #36 DRILLED 17½" HOLE TO 692'. RAN 15 JTS 13-3/8" 54.5# J-55 ST&C. LANDED FS @ 672' & FC @ 628'. PROPETRO PUMPED 70 BBLs FW, 40 BBLs GEL & 800 SXS (164 BBLs) 15.8 PPG, 1.15 YLD, PREMIUM G CEMENT. DROPPED TOP PLUG. DISPLACED W/ 92 BBLs OF FW @ 4 BPM. BUMPED PLUG AT 1225 HRS, 06/08/2016. FLOATS HELD. HAD 55 BBLs CMT T/ SURFACE. CMT OPERATIONS OBSERVED BY UDOGM (CHRIS JENSEN). RD & RELEASED LEON ROSS DRILLING & PROPETRO.
6/28/2016	6:00 6:00	24.00	MIRU	01		P	692.0	MIRU. 98% MOVED. 55% RU.
6/29/2016	6:00 3:00	21.00	MIRU	01		P	692.0	MIRU. 100% MI. 100% RU. PERFORMED S&E INSPECTION. RIG ON FULL DAYRATE @ 03:00 HRS 06/29/2016.
	3:00 6:00	3.00	CASCOND	28		P	692.0	NU BOPE.
6/30/2016	6:00 8:00	2.00	CASCOND	28		P	692.0	NU BOPE.
	8:00 13:30	5.50	CASCOND	30		P	692.0	RU & TESTED 13-5/8" 10M ANNULAR TO 250 / 2,500 PSI AND REMAINING BOPE, FLOOR VALVES, ETC TO 250 / 5,000 PSI.
	13:30 14:00	0.50	CASCOND	31		P	692.0	TEST 13 3/8" CASING TO 1000 PSI. ( OK )
	14:00 19:00	5.00	CASCOND	14		P	692.0	PU BHA.
	19:00 20:30	1.50	CASCOND	32		P	692.0	DRILL OUT FE & SHOE TRACK.
	20:30 23:30	3.00	DRLSURF	07		P	692.0	DRILLED 692' - 1,162'. SPUD @ 20:30 HRS 6/29/16.
	23:30 0:00	0.50	DRLSURF	12		P	1,162.0	SERVICED RIG & TDU.
	0:00 0:30	0.50	DRLSURF	11		P	1,162.0	CBU & RAN SL SURVEY @ 660' ( 0.41° ) 1,038' ( 2.65° ).
	0:30 3:00	2.50	DRLSURF	07		P	1,162.0	DRILLED 1,162' - 1,445'.
	3:00 3:30	0.50	DRLSURF	11		P	1,445.0	CBU & RAN SL SURVEY @ 1,352' ( 4.85° )
7/1/2016	3:30 5:30	2.00	DRLSURF	07		P	1,445.0	DRILLED 1,445' - 1,728'.
	5:30 6:00	0.50	DRLSURF	12		P	1,728.0	CBU & RUN SL SURVEY @ 1,635' ( 7.39° )
	6:00 7:00	1.00	DRLSURF	15		P	1,728.0	CIRCULATE FOR TRIP.
	7:00 11:30	4.50	DRLSURF	13		P	1,728.0	POOH. LD MUD MOTOR.
	11:30 0:00	12.50	DRLSURF	42		X	1,728.0	WAIT ON DIRECTIONAL TOOLS. STRAP, CALIPER & PROGRAM TOOLS.
	0:00 3:00	3.00	DRLSURF	14		P	1,728.0	PU DIRECTIONAL TOOLS. SURFACE TESTED MWD.
	3:00 4:30	1.50	DRLSURF	13		P	1,728.0	TIH TO 1,716'. INSTALLED ROT HEAD.
	4:30 6:00	1.50	DRLSURF	11		P	1,728.0	RU & RUN VES GYRO.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
7/2/2016	6:00 7:00	1.00	DRLSURF	11		P	1,728.0	RAN GYRO.
	7:00 13:00	6.00	DRLSURF	08		P	1,728.0	DRILLED 1,728' - 2,344'. WATER FLOW @ 1,930'. RAISE MUD WT. TO 10.7 PPG. NO FLOW.
	13:00 13:30	0.50	DRLSURF	12		P	2,344.0	SERVICE RIG & TOP DRIVE.
	13:30 19:00	5.50	DRLSURF	08		P	2,344.0	DRILLED 2,344' - 2,996'.
	19:00 20:00	1.00	DRLSURF	45		N	2,996.0	CLEAN OUT FLUID ENDS ON PUMPS.
	20:00 6:00	10.00	DRLSURF	08		P	2,996.0	DRILLED 2,996' - 3,899'.
7/3/2016	6:00 7:30	1.50	DRLSURF	08		P	3,899.0	DRILLED 3,899' - 4,015' TD SURFACE.
	7:30 8:30	1.00	CASSURF	15		P	4,015.0	C&C.
	8:30 19:00	10.50	CASSURF	13		P	4,015.0	WIPER TRIP. BACKREAM TO 1,460'. POOH & LD DIRECTIONAL TOOLS.
	19:00 21:30	2.50	CASSURF	13		P	4,015.0	MU BIT, BIT SUB & TIH W/ NO PROBLEMS.
	21:30 23:00	1.50	CASSURF	15		P	4,015.0	C&C MUD FOR CSG OPERATIONS. MW 10.7 PPG. NO LOSSES.
	23:00 2:30	3.50	CASSURF	13		P	4,015.0	POOH W/ NO PROBLEMS. LD 8" DC. RD DP ELEVATORS. CLEANED RIG FLOOR.
	2:30 6:00	3.50	CASSURF	24		P	4,015.0	PJSM. RU FRANKS CSG CREW. THREAD LOCKED & PUMPED THROUGH (1) JT SHOE TRACK. STARTED RIH W/ 9 5/8" CSG.
7/4/2016	6:00 12:00	6.00	CASSURF	24		P	4,015.0	RAN FLOAT SHOE, 1 JT 9 5/8 40# LT&C N-80, FLOAT COLLAR, 90 JT 9 5/8 40# LT&C N-80. TOTAL OF 91 JTS CSG. 4,019'. FLOAT SHOE @ 4,015'. FLOAT COLLAR @ 3,967'. WASH LAST 15'.
	12:00 13:30	1.50	CASSURF	15		P	4,015.0	CIRCULATE. NO LOSSES.
	13:30 16:30	3.00	CASSURF	25		P	4,015.0	PJSM. RU & PUMPED 50 BBLS H2O, 675 SKS ( 274 BBLS ) 12 PPG EXTENDACEM CMT @ 2.28 YLD TAILED WITH 390 SKS ( 88 BBLS ) 14.3 PPG HALCEM CMT @ 1.26 YLD. DROPPED PLUG & DISPLACED WITH 301 BBLS 10.7 PPG MUD @ 6 BPM. BUMP PLUG @ 16:21 TO 1,760 PSI. BLED 2 BBLS BACK , FLOATS HELD. 110 BBLS WEIGHTED CMT TO SURFACE. SHUT IN @ 16:30 HRS.
	16:30 22:30	6.00	CASSURF	26		P	4,015.0	SWI. WOC. NO PRESSURE ON WELL.
	22:30 0:00	1.50	CASSURF	29		P	4,015.0	RD CMT HEAD. WFT REMOVED BOP BOLTS. LIFTED STACK.
	0:00 6:00	6.00	CASSURF	27		P	4,015.0	ROUGH CUT CASING. REMOVED CUT-OFF JOINT. CUT OFF & REMOVED 13 3/8" X 13 5/8" 5M HEAD. MADE FINAL CUT ON 9 5/8" CSG. WELDED ON 9 5/8" SOW X 11" 10M MULTI BOWL HEAD. TESTED HEAD 2,000 PSI FOR 10 MINS.
	6:00 8:30	2.50	CASSURF	28		P	4,015.0	NU B-SECTION, DSA, & 13 5/8" BOPE.
7/5/2016	8:30 12:00	3.50	CASSURF	19		P	4,015.0	PJSM. RU & TESTED 13-5/8" 10M ANNULAR TO 250 / 4,000 PSI AND REMAINING BOPE, FLOOR VALVES, ETC TO 250 / 5,000 PSI. HELD EACH TEST 10 MINUTES.
	12:00 12:30	0.50	CASSURF	31		P	4,015.0	TESTED CSG TO 2,500 PSI.
	12:30 14:30	2.00	CASSURF	14		P	4,015.0	INSTALL WEAR BUSHING. PU 8 3/4" DIRECTIONAL BHA.
	14:30 16:00	1.50	CASSURF	13		P	4,015.0	TIH TO 3,962'. TAG CMT.
	16:00 17:00	1.00	CASPRD1	32		P	4,015.0	DRILL OUT CMT, FE & 10'. FC @ 3,967'. FS @ 4,015'.
	17:00 18:00	1.00	DRLINT1	33		P	4,025.0	C&C. PERFORMED FIT TO 15.4# EMW WITH 9.5 PPG MUD @ 1,235 PSI.
	18:00 6:00	12.00	DRLINT1	08		P	4,025.0	DRILLED 4,025' - 5,525'.
	6:00 18:00	12.00	DRLINT1	08		P	5,525.0	DRILLED F/ 5,525' T/ 5,895'. MW 9.5 PPG. NO LOSSES.
7/6/2016	18:00 18:30	0.50	DRLINT1	12		P	5,895.0	SERVICED RIG & TD.
	18:30 6:00	11.50	DRLINT1	08		P	5,895.0	DRILLED F/ 5,895' T/ 6,250'. MW 9.5 PPG. NO LOSSES.
	6:00 6:30	0.50	DRLINT1	08		P	6,250.0	SERVICED RIG & TD.
7/7/2016	6:30 19:00	12.50	DRLINT1	08		P	6,250.0	DRILLED F/ 6,250' T/ 6,650'. STARTED LOSING MUD W/ 9.5 PPG MW. REDUCED PUMP RATE F/ 590 GPM T/ 500 GPM. PUMPED 40 BBL / 35 PPB LCM SWEEP. DRILLED F/ 6,650' T/ 6,668' W/ MINIMAL MUD LOSS. LOST APPROX 75 BBL MUD.
	19:00 20:00	1.00	DRLINT1	15		P	6,668.0	C&C MUD.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	20:00 22:30	2.50	DRLINT1	13		P	6,668.0	TFNB & MTR. ROUTINE BACKREAMED 1ST (2) STANDS. PULLED WET ON ELEVATORS. NO SWABBING. BACKREAMED EVERY 5TH STAND TO FILL HOLE / CLEAN BHA.. PULLED T/ CSG @ 4015' W/ NO PROBLEMS.
	22:30 0:00	1.50	DRLINT1	42		P	6,668.0	REMOVED RH ELEMENT. INSTALLED TRIP NIPPLE. FLOW CHECKED (NO FLOW). PUMPED SLUG. FINISHED POOH T/ BHA.
	0:00 2:00	2.00	DRLINT1	13		P	6,668.0	POOH W/ BHA. LD BIT (1-2-WT-S-X-I-CT-PR) & MTR. PU NEW NABORS 6 3/4" 7/8 LOBE 5 STAGE .29 RPG 1.5 DEG FBH MTR. TESTED MTR & MWD. INSTALLED NEW 8 3/4" SECURITY MM64D PDC BIT. TIH W/ BHA.
	2:00 6:00	4.00	DRLINT1	13		P	6,668.0	TIH T/ 4,015'. PULLED TRIP NIPPLE. INSTALLED RH ELEMENT. TIH T/ 5,700' @ RPT TIME. BROKE CIRC @ 2,000'. CIRC BU @ 4,015'.
7/8/2016	6:00 6:30	0.50	DRLINT1	13		P	6,668.0	FINISHED TIH.
	6:30 18:00	11.50	DRLINT1	08		P	6,668.0	DRILLED F/ 6,668' T/ 7,455'. MW 9.5 PPG. LOST MUD F/ 6,800' T/ 7,050'. PUMPED 35 PPB LCM PILLS TO CONTROL MUD LOSSES. LOST 200 BBL MUD.
	18:00 18:30	0.50	DRLINT1	12		P	7,455.0	SERVICED RIG & TD.
	18:30 6:00	11.50	DRLINT1	08		P	7,455.0	DRILLED F/ 7,455' T/ 7,850'. MW 9.5 PPG. LOST MUD F/ 7,550' T/ 7,700'. PUMPED 35 PPB LCM PILLS TO CONTROL MUD LOSSES. LOST 170 BBL MUD.
7/9/2016	6:00 6:30	0.50	DRLINT1	12		P	7,850.0	SERVICED RIG & TD.
	6:30 6:00	23.50	DRLINT1	08		P	7,850.0	DRILLED F/ 7,850' T/ 9,000'. MW 9.5 PPG. PUMPED 35 PPB LCM PILLS TO CONTROL MUD LOSSES. LOST 540 BBL MUD.
7/10/2016	6:00 6:30	0.50	DRLINT1	12		P	9,000.0	SERVICED RIG & TD.
	6:30 23:00	16.50	DRLINT1	08		P	9,000.0	DRILLED F/ 9,000' T/ 9,430' ICP. MW 9.5+ PPG. PUMPED 35 PPB LCM PILLS TO CONTROL MUD LOSSES. FLOW CHECKED @ 9,350'. FLOWED BACK APPROX 25 BBL BEFORE FLOW DECLINED T/ 0. FC GAS 2431 UNITS (ML) / 6500 UNITS (RIG WATCH). INCREASED MW F/ 9.5+ T/ 9.8 PPG WHILE DRILLING FINAL 50'.
	23:00 1:00	2.00	DRLINT1	15		P	9,430.0	FLOW CHECKED. FLOWED BACK APPROX 15 BBL BEFORE FLOW DECLINED T/ 0. CIRC BU W/ 9.8 PPG MUD @ 300 GPM. HAD NO GAS INCREASE FROM FLOW CHECK.
	1:00 6:00	5.00	DRLINT1	13		P	9,430.0	WIPER TRIP. ROUTINE BACKREAMED 1ST STAND. PULLED WET ON ELEVATORS. MINIMAL SWABBING. BACKREAMED EVERY 5TH STAND TO FILL HOLE / CLEAN BHA. BACKREAMED TIGHT HOLE F/ 7,575' T/ 7,525' & F/ 6,715' T/ 6,690'. PUMPED SLUG. PULLED T/ CSG @ 4015' W/ NO OTHER PROBLEMS. STARTED TIH.
7/11/2016	6:00 8:30	2.50	CASINT1	13		P	9,430.0	TIH AT 70 FPM. NEAR FULL RETURNS. BROKE CIRC @ 5,600' & 7,450'. HOLE TIGHT F/ 6,700' T/ 6,815'.
	8:30 11:30	3.00	CASINT1	15		P	9,430.0	C&C MUD @ 3, THEN 4 BPM FOR LOGGING / CSG OPERATIONS. LOST MUD AT 5 BPM. TRIP GAS 140 UNITS (MUD LOGGER) W/ MC 9.8 TO 9.7 PPG.
	11:30 18:00	6.50	CASINT1	14		P	9,430.0	LD 5" DP & BHA. HOLE FILL WAS 0.5 BBL > CALCULATED HOLE FILL. REMOVED RH RUBBER.
	18:00 22:00	4.00	CASINT1	14		P	9,430.0	LD DC, DIRECTIONAL TOOLS, & BIT (1, 2, WT, S, X, I, CT, TD). CLEARED RIG FLOOR OF TOOLS.
	22:00 5:00	7.00	EVLINT1	22		P	9,430.0	PJSM. RU HES LOGGING UNIT. LOGGED W/ QUAD-COMBO 9,430' - 4,015'. RD HES LOGGING UNIT. DECREASED MW IN PITS 9.8 PPG TO 9.5 PPG.
	5:00 5:30	0.50	CASINT1	42		P	9,430.0	RETRIEVED WEAR BUSHING.
	5:30 6:00	0.50	CASINT1	24		P	9,430.0	PJSM. START RU FRANKS CSG CREW, TORQUE TURN, 10' BAIL EXTENSIONS, & TAWG TOOL.

7/12/2016

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	6:00 21:30	15.50	CASINT1	24		P	9,430.0	FINISHED RU FRANK'S CSG CREW, TORQUE TURN, 10' BAIL EXTENSIONS & TAWG TOOL. MADE UP & TESTED ONE JT SHOE TRACK. STAGED IN HOLE W/ 7", 29#, HCP-110, LTC CSG. BROKE CIRC @ 1,000' INTERVALS. CIRC BU @ 2,000' INTERVALS W/ 9.5 PPG MUD @ 3 BPM. MINIMAL MUD LOSS. TAGGED BOTTOM @ 9,430'. LD TAG JTS. SPACED OUT W/ LANDING JT. LANDED SHOE @ 9,420', FC @ 9,378' & MARKER JT @ 8,297'.
	21:30 23:00	1.50	CASINT1	15		P	9,430.0	RD TAWG TOOL. RU HES CMT HEAD. SLOWLY RAMPED UP PUMP RATE F/ 100 GPM T/ 200 GPM. CIRC BU W/ MINIMAL MUD LOSS. MAX BU GAS 400 UNITS (RIGWATCH) W/ MC F/ 9.5 PPG T/ 9.4 PPG. RD CSG CREW & TORQUE TURN. PJSM W/ HES ON CMT OPERATIONS.
	23:00 2:30	3.50	CASINT1	25		P	9,430.0	TESTED LINES TO 6,500 PSI. PUMPED (40) BBL WTR SPACER, 390 SKS (141) BBL 12.5 PPG 2.02 YIELD LEAD CMT & 200 SKS (64.5) BBL 13 PPG 1.81 YIELD TAIL CMT. DISPLACED W/ (330) BBL 9.5 PPG MUD & (18) BBL WTR @ 6 BPM. FINAL RATE 2 BPM / 1,100 PSI. BUMPED PLUG T/ 1,600 PSI. BLED BACK (2) BBL. FLOATS HELD. LOST APPROX 25 BBL WHILE CEMENTING. CALC TOC @ 3,325'. RD HES CEMENTERS.
	2:30 5:00	2.50	CASINT1	27		P	9,430.0	WASHED OUT WELL HEAD & HANGER W/ 20 BBL FW. LANDED CSG ON HANGER W/ 200M #. REMOVED LANDING JOINT. RD CASING ELEVATORS & BALE EXTENSIONS. INSTALLED 4" XT39 SAVER SUB. RU 4" DP ELEVATORS. INSTALLED PACKOFF W/ SETTING TOOL. SET LOCK DOWN SCREWS. TESTED PACKOFF T/ 7M PSI FOR 10 MINUTES.
	5:00 6:00	1.00	CASINT1	30		P	9,430.0	PJSM. RU WEATHERFORD TESTERS. INSTALLED TEST PLUG. STARTED TESTING BOPE T/ 250 PSI / 10M PSI.
7/13/2016	6:00 10:00	4.00	CASINT1	30		P	9,430.0	INSTALLED TEST PLUG. WEATHERFORD PRESSURED TO 10M, BLIND RAM DOOR SEAL LEAKED. OPENED DOOR, REPLACED BONNET DOOR SEAL. TESTED BLIND RAMS, UPPER & LOWER PIPE RAMS, TD VALVES, TIW VALVE & DART VALVE T/ 250 PSI / 10M PSI. TESTED ANNULAR / T/ 250 PSI / 5M PSI. HELD EACH TEST F/ 10 MIN. PULLED TEST PLUG. ROUSTABOUTS DRIFTED 4" DP WITH 2.375" DRIFT.
	10:00 11:00	1.00	CASINT1	31		P	9,430.0	TESTED CSG T/ 2500 PSI F/ 30 MIN. REMOVED TEST PLUG.
	11:00 20:00	9.00	CASINT1	14		P	9,430.0	PUMU 6 1/8" SECURITY MM64D BIT, 6" PACKED HOLE ASSEMBLY, 4" XT39 DCs & 4" XT39 DP FROM RACKS. TIH T/ 8,000'. WEATHERFORD TESTED CHOKE MANIFOLD 250 PSI / 10M PSI.
	20:00 21:00	1.00	CASINT1	17		P	9,430.0	DISPLACED HOLE W/ 11.0 PPG MUD WHILE SLIPPING & CUTTING DRILL LINE.
	21:00 21:30	0.50	CASINT1	42		P	9,430.0	PULLED TRIP NIPPLE. INSTALLED RH ELEMENT.
	21:30 22:30	1.00	CASINT1	14		P	9,430.0	FINISHED PUMU 4" XT39 DP FROM RACKS. TAGGED CMT @ 9,370'.
	22:30 23:30	1.00	CASINT1	72		P	9,430.0	DRILLED CMT & FE T/ 9,420'. W&R RAT HOLE T/ 9430'.
	23:30 0:30	1.00	CASINT1	33		P	9,430.0	CIRC. TESTED SHOE T/ 15.4 PPG EMW (2300 PSI / 10.7 PPG MUD).
	0:30 1:00	0.50	CASINT1	12		P	9,430.0	SERVICED RIG & TD.
	1:00 6:00	5.00	DRLPRD	07		P	9,430.0	DRILLED 9,430' - 9,575'.
7/14/2016	6:00 18:30	12.50	DRLPRD	07		P	9,575.0	DRILLED F/ 9,575' T/ 9,990'. MW 11.0 PPG. NO MUD LOSS.
	18:30 19:00	0.50	DRLPRD	12		P	9,990.0	SERVICED RIG & TD. CIRC FOR SURVEY.
	19:00 20:00	1.00	DRLPRD	11		P	9,990.0	RAN SLICKLINE SURVEY @ 9,965' / 1.63°. SURVEY GAS 90 UNITS (ML) W/ 11.0 PPG MW.
	20:00 6:00	10.00	DRLPRD	07		P	9,990.0	DRILLED F/ 9,990' T/ 10,225'. MW 11.2 PPG. NO MUD LOSS.
7/15/2016	6:00 17:30	11.50	DRLPRD	07		P	10,225.0	DRILLED F/ 10,225' T/ 10,488'. MW 11.4 PPG. NO MUD LOST.
	17:30 18:00	0.50	DRLPRD	12		P	10,488.0	SERVICED RIG & TD.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	18:00 6:00	12.00	DRLPRD	07		P	10,488.0	DRILLED F/ 10,488' T/ 10,775'. MW 11.7 PPG. NO MUD LOST.
7/16/2016	6:00 17:30	11.50	DRLPRD	07		P	10,775.0	DRILLED F/ 10,775' F/ 11,060'. NO MUD LOST. MW 11.8 PPG.
	17:30 18:00	0.50	DRLPRD	12		P	11,060.0	SERVICED RIG & TD.
	18:00 0:30	6.50	DRLPRD	07		P	11,060.0	DRILLED F/ 11,060' T/ 11,195'. NO MUD LOST. MW 11.9 PPG. AVERAGE ROP DECLINED BELOW 20 FPH.
	0:30 1:00	0.50	DRLPRD	42		P	11,195.0	DROPPED SURVEY TOOL. FLOW CHECKED (NO FLOW). MW 11.9 PPG.
	1:00 2:00	1.00	DRLPRD	13		P	11,195.0	TFNB. BACKREAMED THE FIRST STAND (ROUTINE). POOH 19 STANDS DP W/ NO PROBLEMS INTO CSG @ 9420'.
	2:00 2:30	0.50	DRLPRD	42		P	11,195.0	FLOW CHECK (NO FLOW). PULLED RH ELEMENT. INSTALLED TRIP NIPPLE. PUMPED SLUG.
	2:30 6:00	3.50	DRLPRD	13		P	11,195.0	POOH.
7/17/2016	6:00 7:00	1.00	DRLPRD	13		P	11,195.0	FINISHED TOOH. SURVEY RECOVERED FROM 11,150' = 2.98". FUNCTION TESTED BOPE.
	7:00 14:30	7.50	DRLPRD	13		P	11,195.0	TIH WITH BIT #5 & PHA. TIH W/ 10 STANDS 4" DP W/ FRESH HARD BAND. TIH @ 80 FPM. BROKE CIRC @ 2,800' INTERVALS. NO MUD LOST. TRIP GAS 70 UNITS (ML) / 20 UNITS (RIG WATCH).
	14:30 6:00	15.50	DRLPRD	07		P	11,195.0	DRILLED 11,195' - 11,615'. MW 12.0 PPG. NO MUD LOST.
7/18/2016	6:00 17:30	11.50	DRLPRD	07		P	11,615.0	DRILLED F/ 11,615' T/ 12,055'. MW 12.3 PPG. NO MUD LOST.
	17:30 18:00	0.50	DRLPRD	12		P	12,055.0	SERVICED RIG & TD.
	18:00 6:00	12.00	DRLPRD	07		P	12,055.0	DRILLED F/ 12,055' T/ 12,350'. MW 12.3 PPG. NO MUD LOST.
7/19/2016	6:00 17:00	11.00	DRLPRD	07		P	12,350.0	DRILLED F/ 12,350' T/ 12,651'. MW 12.5 PPG. NO MUD LOST.
	17:00 17:30	0.50	DRLPRD	12		P	12,651.0	SERVICED RIG & TDU.
	17:30 6:00	12.50	DRLPRD	07		P	12,651.0	DRILLED F/ 12,651' T/ 12,851'. MW 13 PPG. NO MUD LOST.
7/20/2016	6:00 13:00	7.00	DRLPRD	13		P	12,851.0	TOOH. HOLE SLICK. SUFFICIENT FILL UPS.
	13:00 20:30	7.50	DRLPRD	13		P	12,851.0	TIH WITH BIT #6 & PHA AT 80 FPM. BROKE CIRC @ 2,200' INTERVALS. NO MUD LOST. TRIP GAS 1,117 UNITS (ML) / 607 UNITS (RIG WATCH).
	20:30 21:00	0.50	DRLPRD	12		P	12,851.0	SERVICED RIG & TDU.
	21:00 6:00	9.00	DRLPRD	07		P	12,851.0	DRILLED F/ 12,851' T/ 13,065'. MW 13 PPG. NO MUD LOST.
7/21/2016	6:00 8:00	2.00	DRLINT1	07		P	13,065.0	DRILLED 13,065' - 13,123'. 13 PPG TD MW.
	8:00 10:30	2.50	EVLPRD	15		P	13,123.0	SIMULATE CONN & CBU. MAX GAS 375 UNITS (ML) / 5,800 UNITS (RIG WATCH). 2/10 MC, NO FLARE.
	10:30 12:00	1.50	EVLPRD	13		P	13,123.0	WIPER TRIP TO 12,080'. HOLE SLICK, PROPER FILL.
	12:00 16:00	4.00	EVLPRD	15		P	13,123.0	CBU @ 176 GPM. MAX GAS 3,441 UNITS (ML) / 4,900 (RIG WATCH). 6/10 MC, NO FLARE. C&C MUD TO 13.2 PPG. FC, WELL STATIC.
	16:00 0:30	8.50	EVLPRD	13		P	13,123.0	POOH & LD BHA. FC @ 11,271', 9,420' & BHA, WELL STATIC.
	0:30 1:00	0.50	EVLPRD	12		P	13,123.0	SERVICE RIG & TD.
	1:00 6:00	5.00	EVLPRD	22		P	13,123.0	RU & RUN WEATHERFORD QUAD COMBO.
7/22/2016	6:00 14:30	8.50	EVLPRD	22		P	13,123.0	RAN WEATHERFORD SLIM QUAD COMBO TO 13,123'. LOG UP TO 7" SHOE @ 9,425'. PULL TO SURFACE & RD.
	14:30 19:30	5.00	CASPRD1	24		P	13,123.0	PJSM. RU & RAN 89 JTS 5" 18# HCP-110 STL LINER, 3 MARKERS. MU VERSAFLEX HANGER.
	19:30 20:30	1.00	CASPRD1	15		P	13,123.0	CIRC BU @ 2.5 BPM. RD CSG CREW.
	20:30 21:00	0.50	CASPRD1	42		P	13,123.0	INSTALLED RH ELEMENT.
	21:00 1:30	4.50	CASPRD1	24		P	13,123.0	TIH W/ 5" LINER ON 4" DP @ 95 FPM TO 9,420'. BREAK CIRC EVERY 1,000', CBU EVERY 2,000'. CBU @ 7" SHOE.
	1:30 6:00	4.50	CASPRD1	24		P	13,123.0	TIH @ 80 FPM WITH 5" LINER ON 4" DP TO 11,325'. BREAK CIRC EVERY 1,000' & CBU EVERY 2,000'.

7/23/2016

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	6:00 13:00	7.00	CASPRD1	24		P	13,123.0	TIH @ 80 FPM WITH 5" LINER ON 4" DP. CIRC & WORK THROUGH RESISTANCE FROM 11,331' - 11,520' & 12,250'. BREAK CIRC EVERY 500' & CBU EVERY 1,000'. TAG BTM WITH 20K. SPACE OUT.
	13:00 16:30	3.50	CASPRD1	15		P	13,123.0	CIRC 2X BU @ 2.5 BPM, MAX GAS 5,219 UNITS (RIG WATCH). NO FLARE, NO GAIN, 1PPG MC. FINAL CIRC PRESSURE 680 PSI @ 2.5 BPM. NO LOSSES.
	16:30 19:30	3.00	CASPRD1	25		P	13,123.0	RU HES & TESTED LINES TO 9,500 PSI. PUMPED 30 BBLS 12.8 PPG TUNED SPACER & 355 SKS ( 92.3 BBLS) 14.2 PPG WITH 1.46 YIELD EXPANDACEM CMT @ 25% EXCESS. WASHED LINES. DROPPED DP DART. PUMPED 10 BBL FW, 40 BBLS 10 PPG BRINE, 30 BBLS FW, 81.3 BBLS 12.6 PPG MUD. BUMP PLUG @ 19:20 HRS WITH 3,851 PSI. PRESSURE PRIOR TO LAND 3,420 PSI. NO LOSSES. BLEED OFF PRESSURE TO 0, 1.5 BBLS BACK. FLOATS HELD.
	19:30 20:00	0.50	CASPRD1	25		P	13,123.0	DROP BALL & RUPTURE DISC @ 5,360 PSI. PUMPED 50.3 BBLS, PRESSURED TO 6,470 PSI, EXPANDED HANGER. PULL TESTED LINER WITH 50K OVERPULL. SAT DOWN 40K, RELEASED SETTING TOOL FROM LINER HANGER. LANDED FS @ 13,119', FC @ 13,074', LC @ 13,032'. TOL @ 9,221'. 190' OF LAP. TOTAL LINER 3,898'. MARKER JT TOP @ 12,135', 11,120', 10,111'.
	20:00 21:00	1.00	CASPRD1	15		P	13,123.0	PULLED UP TO TOL. OBSERVED 3 OVERPULL OF 2K THROUGH CLAD SECTION. CIRC 1.5 TIMES ANNULAR VOLUME. 30 BBLS SPACER & 1 BBLS WEIGHTED CEMENT TO SURFACE. FC, WELL STATIC. POSITIVE TEST TOL TO 1,000 PSI FOR 10MIN, GOOD TEST.
	21:00 0:00	3.00	CASPRD1	15		P	13,123.0	DISPLACE HOLE WITH 9.8 PPG BRINE. FC, WELL STATIC. RD CEMENT HEAD & LINES.
	0:00 6:00	6.00	CASPRD1	14		P	13,123.0	LDDP.
7/24/2016	6:00 10:30	4.50	CASPRD1	13		P	13,123.0	LDDP & LINER SETTING TOOL.
	10:30 12:30	2.00	CASPRD1	29		P	13,123.0	ND BOPE.
	12:30 15:00	2.50	CASPRD1	27		P	13,123.0	NU TBG HEAD & FRAC VALVE. TESTED HEAD TO 10,000 PSI FOR 30 MIN. RIG RELEASED @ 17:30 HRS 07/23/16.
	15:00 17:30	2.50	CASPRD1	36		P	13,123.0	CLEAN MUD PITS.
	17:30 6:00	12.50	RDMO	02		P	13,123.0	RIG DOWN. 40% RIGGED DOWN.