

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> AFU 65-28-32
<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> UNDESIGNATED
<b>4. TYPE OF WELL</b> Gas Well      Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> ASHLEY FOREST
<b>6. NAME OF OPERATOR</b> VANTAGE ENERGY UINTA LLC		<b>7. OPERATOR PHONE</b> 303 386-8600
<b>8. ADDRESS OF OPERATOR</b> 116 Inverness Drive East, Ste 107, Englewood, CO, 80112		<b>9. OPERATOR E-MAIL</b> john.moran@vantageenergy.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU77333	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>
<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"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1859 FSL 1494 FWL	NESW	28	6.0 S	5.0 W	U
Top of Uppermost Producing Zone	1859 FSL 1494 FWL	NESW	28	6.0 S	5.0 W	U
At Total Depth	1859 FSL 1494 FWL	NESW	28	6.0 S	5.0 W	U

<b>21. COUNTY</b> DUCHESNE	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 1494	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 2549
<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 6650	<b>26. PROPOSED DEPTH</b> MD: 11575 TVD: 11575	
<b>27. ELEVATION - GROUND LEVEL</b> 8560	<b>28. BOND NUMBER</b> UTB000288	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 49-1501

**Hole, Casing, and Cement Information**

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
COND	24	16	0 - 50	0.0	No Pipe Used	0.0	No Used	0	0.0	0.0
SURF	12.25	9.625	0 - 1500	36.0	J-55 ST&C	0.0	Premium Lite High Strength	216	2.9	11.0
							50/50 Poz	205	1.61	14.2
PROD	7.875	4.5	0 - 11575	11.6	HCP-110 LT&C	10.0	Type V	543	3.82	11.0
							50/50 Poz	490	1.26	14.2

**ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input 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> David F. Banko	<b>TITLE</b> Permit Agent	<b>PHONE</b> 303 820-4480
<b>SIGNATURE</b>	<b>DATE</b> 03/27/2012	<b>EMAIL</b> david@banko1.com
<b>API NUMBER ASSIGNED</b> 43013513240000	<b>APPROVAL</b>   Permit Manager	

Vantage Energy Uinta LLC  
**AFU 65-28-32**  
1,859' FSL 1,494' FWL (NE/4 SW/4)  
Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

**NINE POINT DRILLING PROGRAM**

(All drilling procedures will comply with BLM *Onshore Oil and Gas Orders 1 and 2*)

**Vantage Energy Uinta LLC respectfully requests that all information regarding this well be kept CONFIDENTIAL.**

This Application for Permit to Drill (APD) is being filed under the APD process as stated per Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents.

***THIS APD ALSO SERVES AS THE NOTICE OF STAKING PER OSO #1.***

This document was prepared using language and requirements consistent with those previously approved by BLM/USFS. This APD process has included the following:

- Consultation with the Surface Management Agency, United State Forest Service (USFS) to initiate the National Environmental Policy Act (NEPA) process for this specific wellsite along with other nearby proposed wellsites in September 8, 2008.
- Meeting with USFS at the wellsite on October 15, 2008, to review the topography, access and site specific surface use issues. Preliminary wellsite staking was initiated at this time.
- Authorization to conduct an archaeological survey was received from USFS on October 27, 2008, an archaeological survey was conducted shortly thereafter.
- Preliminary wellsite staking was completed on October 15, 2008. The wellsite was surveyed and staked at a location as preliminarily agreed to with USFS at 750' FNL 1,804' FWL (NE/4 NE/4) of Sec. 5 T6S R3W on December 9, 2008, by Uintah Engineering & Land Surveying (Uintah), surveyor, on a site that is geologically and topographically acceptable.
- A wellsite review and NEPA planning meeting was held at the USFS office in Vernal, Utah on January 22, 2009. Attending were USFS, BLM, Petros Environmental (NEPA Contractor) and Vantage.
- The survey plats were finalized after the January 22, 2009 meeting and are as attached.

We understand that an onsite meeting with USFS/BLM representatives, and Vantage will be scheduled, at which time the specific concerns of USFS/BLM and Vantage will be discussed. Best efforts have been made to address specific concerns of the USFS.

Please contact Mr. John Moran, Senior Drilling Engineer, with Vantage at 303-386-8600, or Mr. David Banko, Banko, Permit Agent if there are any questions or concerns regarding this Drilling Program.

**a) GEOLOGIC MARKERS**

Anticipated tops of geologic markers are indicated in **Table 1**

**Table 1 Estimated Tops of Geologic Markers**

Formation	Vertical Depth	Measured Depth	Subsea Depth	Description
Green River	Surface	Surface	8,560'	Sandstone/siltstone/shale
Garden Gulch	3,272'		5,300'	Sand and Siltstone
Douglas Creek	4,202'		4,370'	Sandstone/siltstone/shale
Castle Peak	5,092'		3,480'	Sandstone/siltstone/shale
Uteland Butte	5,597'		2,975'	Carbonate/shale/sandstone
Wasatch	5,762'		2,810'	Shale/sandstone
Price River	9,972'		-1,400'	Shale/Sandstone
Blue Castle	11,570'		-2,998'	Sandstone
Total Depth	11,575'		-3,003'	TD +/- 5' into Blue Castle

Surface Elevation: 8,560' (Ground) 8,572' (Est. KB). Proposed Total Depth: 11,575'

#### b) DEPTHS OF WATER AND MINERAL-BEARING ZONES

Potential water-bearing zones in the vicinity include the Wasatch and Green River formations (Robson and Banta, 1995. *Ground Water Atlas of the United States Segment 2*, Hydrologic Investigations Atlas 730-C, U.S. Geological Survey, Reston, VA). A review of data from the Utah Division of Water Rights indicated no permitted water wells within three miles of the proposed location. Utah Division of Oil, Gas, and Mining surface casing depth requirements will protect potential aquifers in the area.

The depths to potential water and/or mineral-bearing zones are indicated in **Table 2**.

**Table 2: Principal Anticipated Water and Mineral-bearing Zones**

Formation	Measured Depth	Subsea	Potential Contents
Green River	Surface	8,560'	Water
Garden Gulch	3,272'	5,300'	Oil/Gas
Douglas Creek	4,202'	4,370'	Oil/Gas
Castle Peak	5,092'	3,480'	Oil/Gas
Uteland Butte	5,597'	2,975'	Oil/Gas
Wasatch	5,762'	2,810'	Oil/Gas
Price River	9,972'	-1,400'	Oil/Gas
Blue Castle	11,570'	-2,998'	Oil/Gas
Total Depth	11,575	-3,003'	Oil/Gas/Water

#### c) MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT

The maximum anticipated surface pressure for this well is calculated to be **2,871 psi**. Therefore, rules for a 3,000 psi rated BOP and choke manifold system are applicable. A diagram of the proposed 3,000 psi rated BOP stack configuration is shown in **Fig. 1**.

BOPs and choke manifold will be installed and pressure tested before drilling out from under surface casing (subsequent pressure tests will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOPs will be pressure tested at least once every 30 days. The annular preventer, pipe rams, and blind rams will be activated on each trip and Operator will conduct weekly BOP drills with the rig crew.

Ram type preventers and related pressure control equipment will be pressure tested to rated working pressure of the stack assembly if a test plug is used. If a plug is not used, the stack assembly will be tested to the rated working pressure of the stack assembly or to 70% of the minimum internal yield of the casing, whichever is less. **Please see variance request at end of program for this section.**

Annular type preventers will be pressure tested to 50% of their rated working pressure. A Sundry Notice (Form 3160~5), along with a copy of BOP test report, shall be submitted to the USFS/BLM within 5 working days following the test. All casings strings will be pressure tested to 0.22psi/ft or 1,500psi, whichever is greater, not to exceed 70% of internal yield. **Please see variance request at end of program for this section.**

Casing shoe will be tested by drilling out from below the shoe and testing to the maximum expected mud weight as discussed in the mud program specifications below. Both manual and remote closing mechanisms will be installed on the BOP stack and will be readily available to the driller.

#### Statement on Accumulator System and Location of Hydraulic Controls

The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with *Onshore Oil and Gas Order No. 2 (OSO #2)* for 3,000 psi systems. Irregardless of the rig selected, the rig's accumulator system shall have sufficient capacity to close all BOPs and retain 200 psi above precharge. The proposed pressure control equipment will meet or exceed standards specified in the Order OSO #2.

#### **d) CASING PROGRAM**

Casing of quality equal to or better than that indicated in **Tables 3** and **4** will be used for this well. Actual casing used will be dependent on availability.

**Table 3 Proposed Casing Program**

Depth (MD)	Hole Diameter	Casing Diameter	Casing Weight and Grade
0 – ± 50'	24"	16"	Optional Conductor – Only if Required
0 – 1,500'	12-1/4"	9-5/8"	36# J55 ST&C, API New Pipe
0 – 11,575'	7-7/8"	4-1/2"	11.6# HCP-110 LT&C, API New Pipe

**Table 4: Proposed Casing Specifications and Design Safety Factors**

Size	Collapse (psi)	Burst (psi)	Body Strength (1,000 lbs.)	Joint Strength (1,000 lbs.)	Thread	*Safety Factors		
						Burst Design (1.2)	Collapse Design (1.0)	Tension Design (1.4)
16"	NA – 0.129" wall structural and to seal shallow gravels to allow air drilling surface hole				Weld	NA	NA	NA
9-5/8" 36# J55	2,020	3,520	564	394	ST&C	1.42	6.27	4.17
4-1/2" 11.6# HCP-110	8,650	10,690	367	279	LT&C	1.25	1.51	1.63

**\*Safety Factor Calculation Assumptions:****Surface Casing:**

**Burst Load:** Assumes greater of MASP (maximum anticipated surface pressure) exposure during a worse case kick scenario while drilling at total depth, with mud/gas mixture whose gradient is 0.22 psi/ft. OR, minimum required casing test pressure.

## MASP

$$\begin{aligned} \text{Load} &= (\text{Formation Gradient} - 0.22 \text{ psi/ft}) * \text{Total Depth, TVD} \\ &= (0.468 \text{ psi/ft} - 0.22 \text{ psi/ft}) * 11,575 \text{ ft.} \\ &= 2,871 \text{ psi} \end{aligned}$$

## TEST PRESSURE

$$\text{Load} = \text{Greater of } 1500 \text{ psig or } 0.70 * 3520 = 2464 \text{ psig or MASP} = 2871 \text{ psig}$$

$$\text{SF Burst} = 3,520 \text{ psi} / 2,871 \text{ psi} = 1.22$$

**Collapse Load:** Assumes worse case loading of evacuated casing during cementing process.

Cement density = 12.2 ppg (wtd avg)

$$\begin{aligned} \text{Load} &= 12.2 \text{ ppg} * 0.052 * 1500 \text{ ft} \\ &= 952 \text{ psi} \end{aligned}$$

$$\text{SF Collapse} = 2020 \text{ psi} / 952 \text{ psi} = 2.12$$

**Tension Load:** Assumes air weight at total depth + 100,000 lbs overpull design factor.

$$\begin{aligned} \text{Load} &= (36 \text{ lbs/ft} * 1500 \text{ ft}) + 100,000 \text{ lbs overpull} \\ &= 154,000 \text{ lbs} \end{aligned}$$

$$\text{SF Tension} = 394,000 \text{ lbs} / 154,000 \text{ lbs} = 2.55$$

**Test Pressure =**

**Production Casing**

**Burst Load:** Assumes maximum load applied during the hydraulic fracture stimulations. It is Vantage Energy's policy not to exceed 80% rating of the production casing during the stimulation treatment. The 80% rating factor will also be the casing test pressure.

$$\begin{aligned}\text{Load} &= 10690 \text{ psi} * 0.80 \\ &= 8552 \text{ psi}\end{aligned}$$

$$\text{SF Burst} = 10690 \text{ psi} / 8552 \text{ psi} = 1.25$$

**Collapse Load:** Assumes worse case loading applied during the production cycle, with evacuated casing, and normally pressured formation gradient applied externally.

$$\begin{aligned}\text{Load} &= 0.433 \text{ psi/ft} * 11575 \text{ ft} \\ &= 5012 \text{ psi}\end{aligned}$$

$$\text{SF Collapse} = 8650 \text{ psi} / 5012 \text{ psi} = 1.72$$

**Tension Load:** Assumes buoyed weight of casing at total depth + 80,000 lbs overpull design factor.

$$\begin{aligned}\text{Load} &= [11.6 \text{ lbs/ft} * 11575 \text{ ft} * ((65.5 - 10.0) / 65.5)] + 80,000 \text{ lbs} \\ &= 113,771 \text{ lbs} + 80,000 \text{ lbs} \\ &= 193,771 \text{ lbs}\end{aligned}$$

$$\text{SF Tension} = 279,000 \text{ lbs} / 193,771 \text{ lbs} = 1.44$$

## e) CEMENT PROGRAM

Table 5: Proposed Cement Program

Depth	Hole Diameter	Casing Diameter	Cement
0' – ± 50'	24"	16"	Optional structural conductor if required: Grout with approximately 4 cubic yards of redi-mix back to surface (includes 100% excess)  <b>TOC: Surface (Top-off per visual observation)</b>
0' – 1500'	12 1/4"	9 5/8"	<b><u>Lead System (1,000' – Surface)</u></b> 216 sks "Lite" slurry + ¼ lb/sk celloflake.  Density: 11.0 ppg Yield: 2.90 cuft/sk Water: 15.45 gal/sk Excess: 100%  <b><u>Tail System (1,500' – 1,000') + 40' Shoe Joint</u></b> 205 sks 50:50 (Class G: Poz) + 2% gel + 2% CaCl <sub>2</sub> Density: 14.2 ppg Yield: 1.61 cuft/sk Water: 5.75 gal/sk Excess: 100%  <b>TOC: Surface (Top-off per visual observation)</b>
0' - 11,575'	7 7/8"	4 1/2"	<b><u>Lead System (9,500' – 2,500')</u></b> 543 sks Type "V" + 16% Gel + 10 lbs/sk gilsonite + 3% Salt + ¼ lb/sk celloflake  Density: 11.0 ppg Yield: 3.82 cuft/sk Water: 23.0 gal/sk *Excess: 30%  <b><u>Tail System (11,575' – 9,500') + 40' Shoe Joint</u></b> 490 sks 50:50 (Class G:Poz) + 2% gel + 10% salt + ¼ lb/sk celloflake  Density: 14.2 ppg Yield: 1.26 cuft/sk Water: 5.75 gal/sk *Excess: 30%

\*Note: The production hole cement volume will be determined by the caliper log, using caliper volume + 15% excess factor.

**f) MUD PROGRAM**

The mud program for the proposed well is indicated in **Table 6**.

**Table 6 Proposed Mud Program**

Interval (feet)	Mud Weight (lbs/gallon)	Viscosity (secs/qt)	Fluid Loss (ccs/30 min)	Mud Type
0 – ± 50'	NA	NA	NA	NA
Set optional 14" conductor with bucket rig				
50' - 1500'±	NA	NA	N/C	Air/Mist
Run/cement 9 5/8" surface casing				
1500'± - TD	8.6 – 10.0	28 - 42	< 10	KCL Water / PHPA / DAP
Run Logs – Run/cement 4 1/2" production casing				

Surface Hole Comments: Spud with “spudder rig” and air drill surface hole misting as may be required to assist with cuttings removal. Report any water encountered to the appropriate agencies. **Please see variance requests for this section.**

Production Hole Comments: Dump spud mud to reserve pit. Drill out surface casing with fresh water adding 6 ppb DAP (Diammonium Phosphate) for shale inhibition and corrosion control. Circulate the reserve pit and flocculate out drill solids. Use pre-hydrated gel and PHPA polymer mud sweeps to assist with hole cleaning. At approximately 3,600' “mud up” and “close in” the fluid system to a 2-3% KCL base fluid. Use PHPA PAC and lignite for filtration control. Maintain fluid system through potential production zones to TD. Should seepage losses be experienced, control with LCM sweeps consisting of calcium carbonate, sawdust, cedar fiber, or mica.

Sufficient mud materials will be maintained on location to adequately maintain mud properties and contain any well kicks. Monitoring equipment will be installed on site to detect changes in mud volume.

**g) LOGGING, CORING, AND TESTING PROGRAM**

The proposed logging program is indicated in **Table 7**.

**Table 7 Proposed Logging Program**

Log Suites	Depth Range	Remarks
DIL-SP-LD-CN-GR	Surface Casing to TD + GR to surface	Standard "triple combo" equivalent with resistivity-spontaneous potential, litho-density, compensated neutron, gamma ray, and caliper
Dipole Sonic	± 9,700' to TD	Optional – Operator's discretion Rock property data
Rotary Sidewall Cores	± 9,972' to TD	Optional – Operator's discretion PP/Lithology data (perm-porosity)

No coring or drill stem tests are planned. Mud logging unit will be operational from 200 feet above the Douglas Creek through total depth. Cuttings will be sampled every 20-30 feet.

Prospective zones from the Douglas Creek formation through total depth will be perforated, tested, and potentially acid-washed. It is anticipated that multi-stage hydraulic fracture stimulations of the reservoir will be required.

#### **h) ANTICIPATED PRESSURES AND HAZARDS**

No abnormal pressures are anticipated. Pressure gradient in the Green River and Wasatch sequence is expected to be sub-normal pressured to less than 0.44 psi/ft, and then transition to slightly over pressure in the Price River sequence.

Estimated BHP Douglas Creek (4,202')	1,849 psi
Estimated BHP Wasatch (5,762')	2,535 psi
Estimated BHP Total Depth (11,575')	5,417 psi
Hydrostatic head of gas/mud	0.22 psi/ft.
<b>Maximum design surface pressure</b>	<b>0.468 – 0.22 psi/ft x 11,575 ft = 2,871 psi</b>

No H2S zones are anticipated. No abnormal lost circulation zones are anticipated.

#### **i) DIRECTIONAL PROGRAM**

This is a vertical well. Natural drift will prevail.

#### **j) OTHER INFORMATION**

##### Contact Information and Personnel

##### Mailing Address

Vantage Energy Uinta LLC  
116 Inverness Drive, Suite 107  
Englewood, CO 80112

Main Number: 303-386-8600  
Fax Number: 303-386-8700

##### Drilling Operations: John Moran

Office Direct: 303-386-8610  
Fax Direct: 303-386-8710  
Mobile: 303-249-2234  
E-Mail: John.Moran@VantageEnergy.com

Completion/Production Operations: Ed Long

Office Direct: 303-386-8639

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Mobile: 720-635-2125

E-Mail: Ed.Long@VantageEnergy.com

Geologist: Andrea Steinle

Office Direct: 303-386-8632

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Mobile: 303-408-0994

E-Mail: Andrea.Steinle@VantageEnergy.com

Landman: Michael Holland

Office Direct: 303-386-8638

Fax Direct: 303-386-8738

Mobile: 303-396-3443

E-Mail: Michael.Holland@VantageEnergy.com

**START DATE AND DURATION OF ACTIVITIES**

Anticipated start date

The drilling operations will commence as soon as possible following contracting of drilling rig and in compliance with restrictions imposed by lease stipulations and/or Conditions of Approval. It is therefore anticipated the access upgrade work and location work would commence on or about August 1, 2012, with a target spud date of August 15, 2012. It is anticipated the drilling phase will require 25 days.

Completion

The well pad will be of sufficient size to accommodate all required completion equipment and activities. It is anticipated select intervals will be perforated, stimulated and adequately tested for the presence of commercial hydrocarbons prior to moving uphole to the next prospective test interval. As such, it is anticipated the completion phase will require 45 - 60 days.

The total project duration is therefore estimated to be **70 - 85 days**, and therefore anticipated to be concluded on or about November 10, 2012.

A string of 2 3/8 inch 4.7 lb/ft. N-80 tubing would be run as the production tubing. A Sundry Notice will be submitted should there be any changes to the proposed completion program.

**VARIANCE REQUESTS**

1. Operator requests a variance to *Onshore Oil and Gas Order 2, Item E*, regulations for air/gas drilling operations. Operator plans to drill the surface hole to a depth of 1500', with a "spud rig", in a separate operation from the drilling rig. No hydrocarbons are present in the surface hole section and therefore, "gas" drilling is not applicable to this hole section. Therefore, for the purpose only of drilling the surface hole with an air rig, Operator requests the following four (4) variances from the order that states "...the following equipment shall be in place and operational

during air/gas drilling: (1) properly lubricated and maintained rotating head; (2) blooie line discharge one hundred feet (100') from wellbore; (3) automatic igniter or continuous pilot light on the blooie line; and (4) compressor located...a minimum of 100 feet (100') from the wellbore".

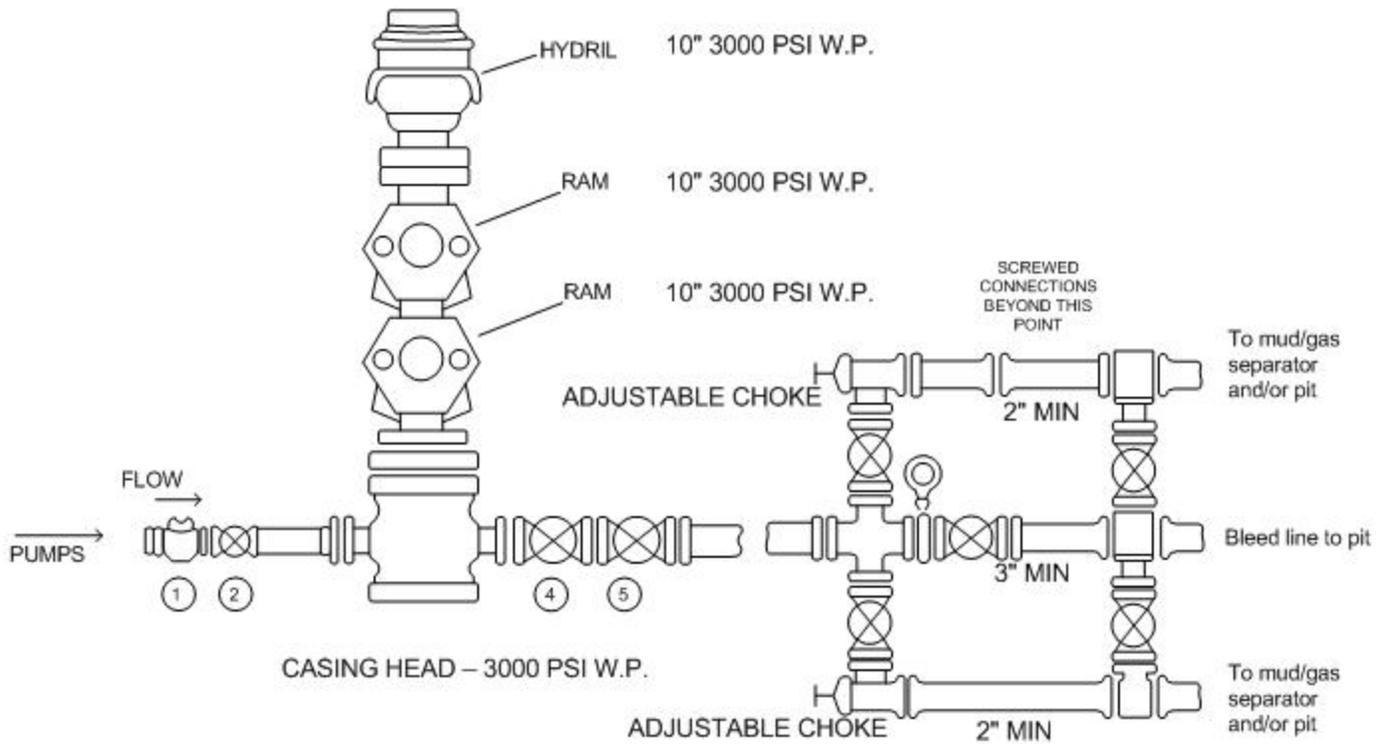
- a. Operator requests approval to use a diverter bowl rather than a rotating head as specified in the Order. The diverter bowl forces air and cuttings to the reserve pit and is only used to drill the surface hole (to a total depth of 1500'). The surface hole section is non-hydrocarbon bearing, and therefore formation pressures will not require a pressure rated rotating head. Should water flows be encountered, they will be reported to the appropriate agencies.
- b. Operator requests approval to use a blooie line with a discharge length of less than the required one hundred feet (100') from the wellbore in order to minimize the well pad size, and to direct the cuttings into the reserve pit. The wellbore is to be located approximately thirty-five feet (35') from the reserve pit which is to be seventy feet (70') wide. Therefore, a one hundred foot (100') blooie line would blow cuttings across the reserve pit. The requested length of blooie line to drill the surface hole is thirty-five feet (35'). This is the distance necessary to reach the edge of the reserve pit, and to therefore direct cuttings into the reserve pit in a safe and efficient manner.
- c. Operator requests approval to operate without an automatic igniter or continuous pilot light on the blooie line. The surface hole section is non-hydrocarbon bearing and therefore does not require a continuous ignition source.

Operator requests approval to use a trailer mounted air compressor located less than one hundred feet (100') from the wellbore in order to minimize the location size. The compressor will be located fifty feet (50') from the wellbore in an opposite direction of the blooie line. The compressor has the following safety features: (1) shut-off valve on the trailer located approximately fifteen feet (15') from the air rig; (2) pressure relief valve on the compressor; and (3) spark arrestors on the motors. The compressor will only be used for the drilling of the surface hole, which is non-hydrocarbon bearing.

# MINIMUM BOP Requirements

3000 PSI W.P.

FILL LINE ABOVE THE UPPERMOST PREVENTER



**KILL LINE**

- Valve #1 – Flanged check valve  
Full working pressure of BOP
- Valve #2 – Flanged, minimum 2" bore  
Full working pressure of BOP

**CHOKE LINE**

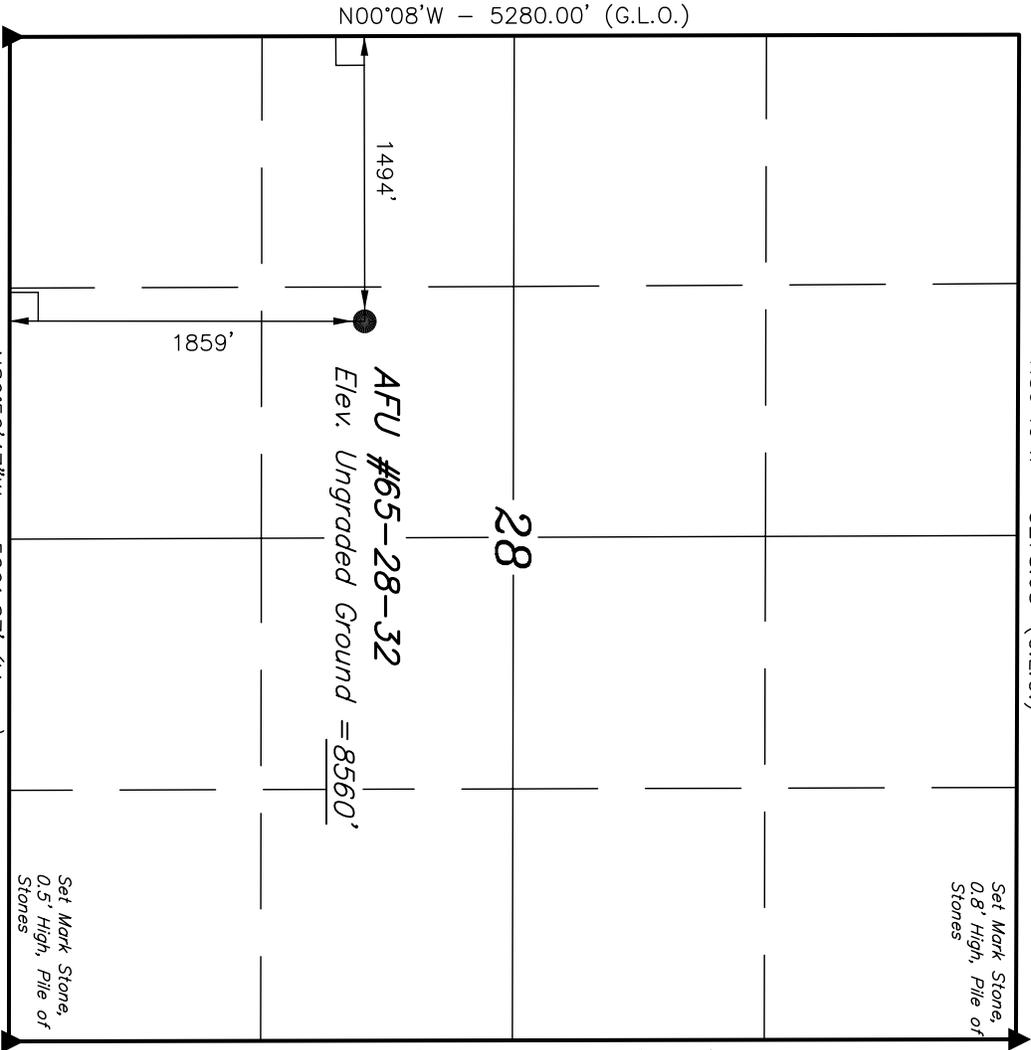
- Valves #4 & 5 – Flanged minimum 3" bore  
Full working pressure of BOP
- (Note: An HCR can be used instead of Valve # 5)

**GENERAL RULES AND RECOMMENDATIONS**

All lines to manifold are to be at right angles (90 deg.). No 45 deg. angles are to be used.  
Blind flanges are to be used for blanking.  
All studs and nuts are to be installed on all flanges.

**T6S, R5W, U.S.B.&M.**

N89°49'W - 5278.68' (G.L.O.)



Set Mark Stone,  
0.6' High, Pile of  
Stones

Set Mark Stone,  
0.8' High, Pile of  
Stones

Set Mark Stone,  
0.5' High, Pile of  
Stones

S00°07'05"E - 5271.07' (Meas.)

- LEGEND:**
- = 90° SYMBOL
  - = PROPOSED WELL HEAD.
  - ▲ = SECTION CORNERS LOCATED.
- (NAD 83)  
 LATITUDE = 39°55'43.26" (39.928683)  
 LONGITUDE = 110°27'24.30" (110.456750)  
 (NAD 27)  
 LATITUDE = 39°55'43.40" (39.928722)  
 LONGITUDE = 110°27'21.74" (110.456039)

**Vantage Energy Uinta LLC**

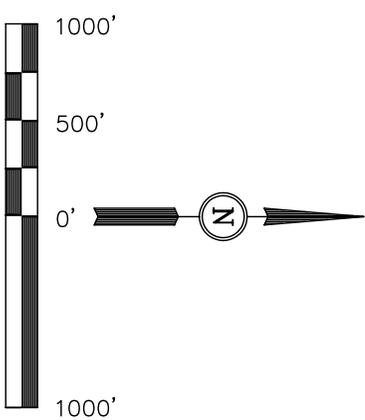
Well location, AFU #65-28-32, located as shown in the NE 1/4 SW 1/4 of Section 28, T6S, R5W, U.S.B.&M., Duchesne County, Utah.

**BASIS OF ELEVATION**

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M. TAKEN FROM THE DUCHESSNE SE QUADRANGLE, UTAH, DUCHESSNE COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

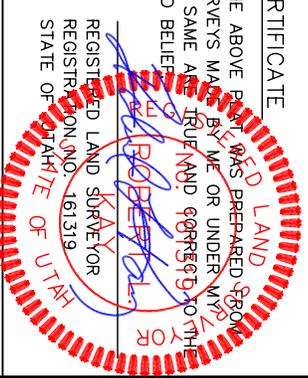
**BASIS OF BEARINGS**

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



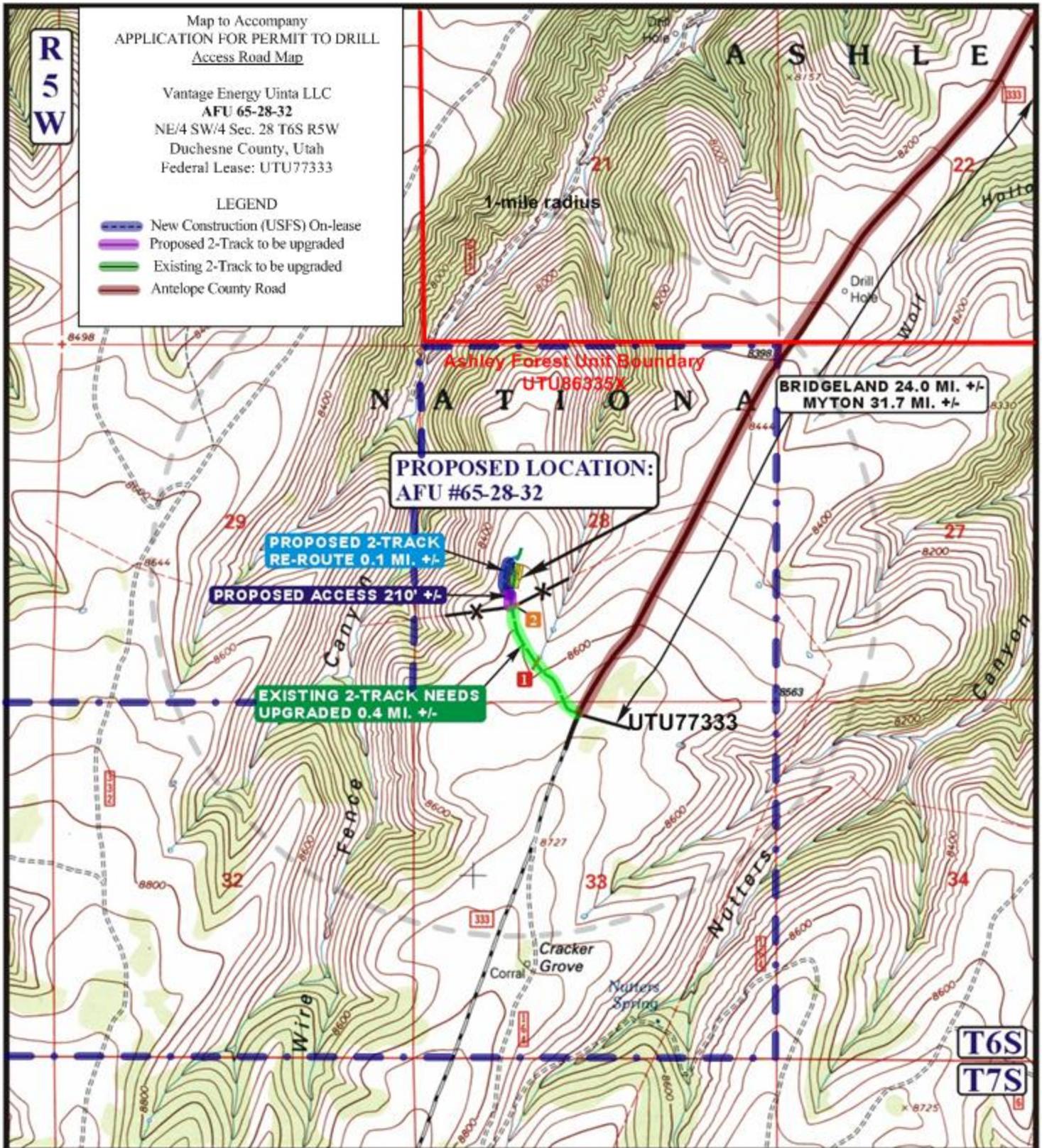
**CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM 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.



**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

SCALE	1" = 1000'	DATE SURVEYED:	08-20-08	DATE DRAWN:	10-31-08
PARTY	M.A. N.F. S.P.	REFERENCES	G.L.O. PLAT		
WEATHER	COOL	FILE	Vantage Energy Uinta LLC		



Map to Accompany  
**APPLICATION FOR PERMIT TO DRILL**  
 Access Road Map

Vantage Energy Uinta LLC  
**AFU 65-28-32**  
 NE/4 SW/4 Sec. 28 T6S R5W  
 Duchesne County, Utah  
 Federal Lease: UTU77333

**LEGEND**

- New Construction (USFS) On-lease
- Proposed 2-Track to be upgraded
- Existing 2-Track to be upgraded
- Antelope County Road

**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD
- x x x x x EXISTING FENCE LINE
- 1 LOW WATER CROSSING REQUIRED
- 2 CATTLE GUARD REQUIRED

**U&L S** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



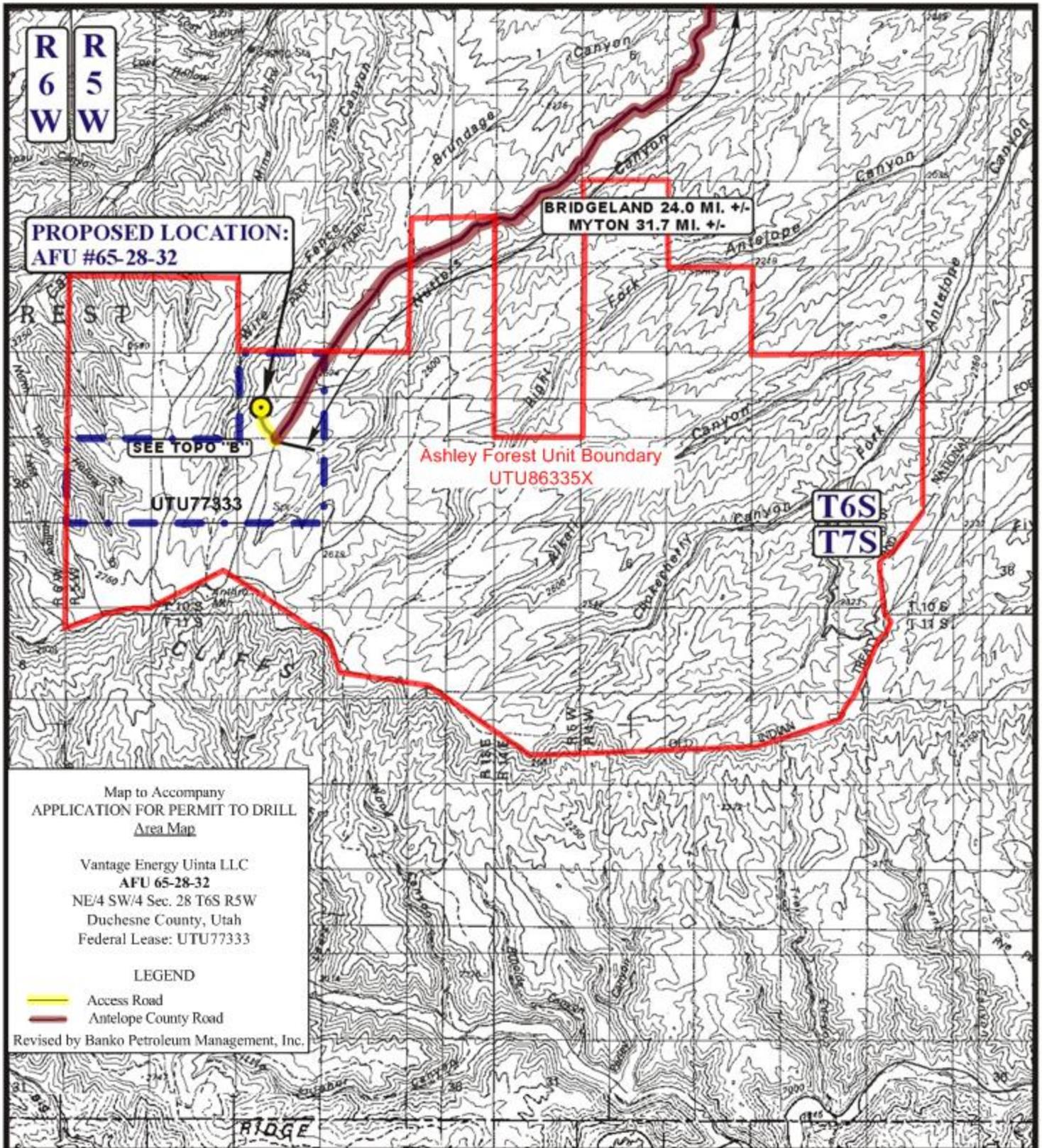
Vantage Energy Uinta LLC

**AFU #65-28-32**  
**SECTION 28, T6S, R5W, U.S.B.&M.**  
**1859' FSL 1494' FWL**

**TOPOGRAPHIC MAP** **10 31 08**  
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: Z.L. REVISED: 00-00-00

**B**  
**TOPO**



Map to Accompany  
APPLICATION FOR PERMIT TO DRILL  
Area Map

Vantage Energy Uinta LLC  
AFU 65-28-32  
NE/4 SW/4 Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

LEGEND

- Access Road
- Antelope County Road

Revised by Banko Petroleum Management, Inc.

LEGEND:

- PROPOSED LOCATION



Vantage Energy Uinta LLC

AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL

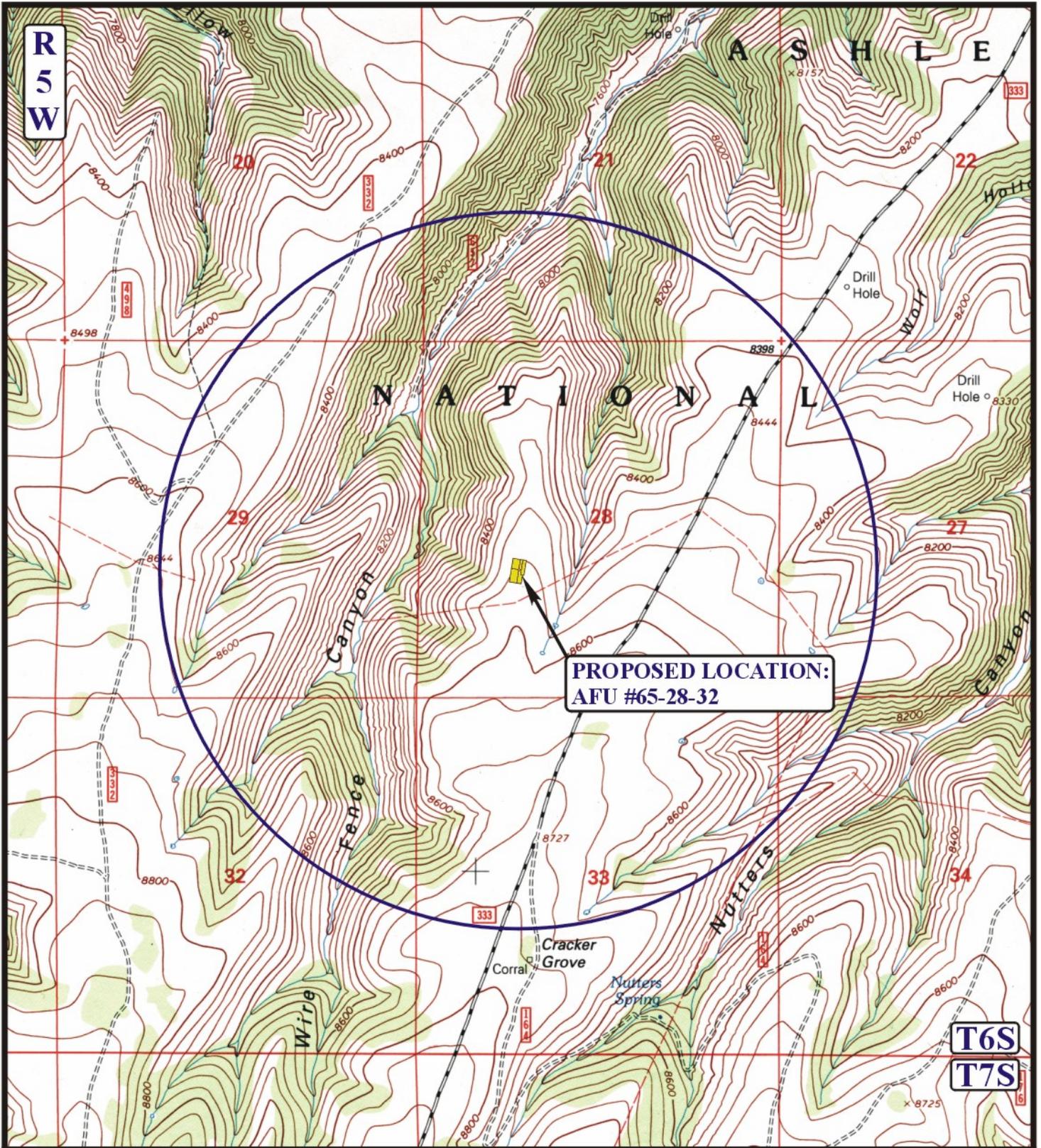


Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC MAP  
10 31 08  
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: Z.L. REVISED: 00-00-00





**PROPOSED LOCATION:  
AFU #65-28-32**

**LEGEND:**

- |                   |                         |
|-------------------|-------------------------|
| ⊗ DISPOSAL WELLS  | ⊗ WATER WELLS           |
| ● PRODUCING WELLS | ● ABANDONED WELLS       |
| ● SHUT IN WELLS   | ● TEMPORARILY ABANDONED |



**Vantage Energy Uinta LLC**

**AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL**



**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC  
MAP**

**10 31 08**  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: Z.L. REVISED: 00-00-00



Vantage Energy Uinta LLC  
**AFU 65-28-32**  
1,859' FSL 1,494' FWL (NE/4 SW/4)  
Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

**SURFACE USE PLAN OF OPERATIONS**

**Vantage Energy Uinta LLC respectfully requests that all information regarding this well be kept CONFIDENTIAL.**

This Application for Permit to Drill (APD) is being filed under the APD process as stated per Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents.

***THIS APD ALSO SERVES AS THE NOTICE OF STAKING PER OSO #1.***

This document was prepared using language and requirements consistent with those previously approved by BLM/USFS. This APD process has included the following:

- Consultation with the Surface Management Agency, United State Forest Service (USFS) to initiate the National Environmental Policy Act (NEPA) process for this specific wellsite along with other nearby proposed wellsites in September 8, 2008.
- Meeting with USFS at the wellsite on October 15, 2008, to review the topography, access and site specific surface use issues. Preliminary wellsite staking was initiated at this time.
- Authorization to conduct an archaeological survey was received from USFS on October 27, 2008, an archaeological survey was conducted shortly thereafter.
- Preliminary wellsite staking was completed on October 15, 2008. The wellsite was surveyed and staked at a location as preliminarily agreed to with USFS at 750' FNL 1,804' FWL (NE/4 NE/4) of Sec. 5 T6S R3W on December 9, 2008, by Uintah Engineering & Land Surveying (Uintah), surveyor, on a site that is geologically and topographically acceptable.
- A wellsite review and NEPA planning meeting was held at the USFS office in Vernal, Utah on January 22, 2009. Attending were USFS, BLM, Petros Environmental (NEPA Contractor) and Vantage.
- The survey plats were finalized after the January 22, 2009 meeting and are as attached.

We understand that an onsite meeting with USFS/BLM representatives, and Vantage will be scheduled, at which time the specific concerns of USFS/BLM and Vantage will be discussed. Best efforts have been made to address specific concerns of the USFS.

Please contact David Banko at 303-820-4480 to arrange an onsite meeting.

**WELL LOCATION AND INTRODUCTION**

The wellsite was preliminarily surveyed and staked at 660' FNL 660' FWL (NW/4 NW/4) of Sec. 33 on August 20, 2008, by Uintah Engineering & Land Surveying (Uintah), surveyor. Per a pre-staking meeting between USFS and Vantage on October 15, 2008, the wellsite was moved to 1,859' FSL 1,494' FWL (NE/4 SW/4) of Sec. 28 T6S R5W on a site that was geologically and topographically acceptable.

This location was reviewed and confirmed at the meeting between USFS, BLM and Vantage on January 22, 2009.

DIRECTIONS TO LOCATION:

From the intersection of State Highway 80 and Antelope Canyon Road southeast of Bridgeland, Utah, travel southerly  $\pm 34$  miles to an existing gravel resource road. Turn right and travel northwesterly for  $\pm 0.4$  miles to the staked proposed access road. Continue on proposed access road for  $\pm 210'$  (0.04 miles) to the proposed location.

1) EXISTING ROADS

*This APD will serve as a request for USFS/BLM to initiate a Right-of-Way (ROW) application for access roads and water haul routes, if necessary. This ROW can continue up to the wellhead. Width of ROW requested is 40 feet.*

- A. The well is an exploratory well.
- B. Existing roads with 2.00 mile consists of a County maintained dirt and gravel surfaced road within 0.4 miles of the location and a two-track trail to within 0.04 miles of the location, which will provide access to the proposed location.
- C. The existing 2-track road may be upgraded to meet standards of the anticipated traffic flow and all-weather road requirements. The existing 2-track road will be upgraded to the minimum degree needed. Upgrading may include ditching, drainage, graveling, crowning, capping the roadbed as necessary to provide a well constructed safe road; however, because this is an exploratory well, improvements to the access road will consist of the minimum construction needed for safe travel. Prior to any upgrading, the road will be cleared of any snow cover and allowed to dry completely. Upgrading will not be allowed during muddy conditions. Should mud holes develop, they will be filled in and detours around them avoided.
- D. The existing roads will be maintained and repaired as necessary.

2) PLANNED ACCESS ROADS

*This APD will serve as a request for USFS/BLM to initiate a ROW application for access roads and water haul routes. Please contact us if authorized federal access ROW to this location is not in order, or if USFS/BLM has additional requirements.*

$\pm 210'$  (0.04 miles) – Total new road construction, Sec. 28 – USFS, on lease

- A. Running surface width to be  $\pm 14'$  -  $\pm 16'$ , total disturbed width to be no more than 40'. Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions that at present. A regular maintenance plan will include, but not be limited to blading, ditching, and surfacing.
- B. Borrow ditches to be backsloped 3:1 or shallower. Weather permitting, the access road will be mowed and the borrow ditch material will be pulled over the top of the mowed area.
- C. Maximum grade will not exceed BLM standards.
- D. No culverts are anticipated.
- E. Surfacing material, if necessary, to consist of native material from borrow ditches, topsoil will be buried in road crown.
- F. No major road cuts are necessary.

- G. Fence cuts, gates, and cattleguards will be required. There is an existing range fence which crosses the proposed access road adjacent to the wellsite. The fence will be cut and a 24' heavy-duty cattleguard will be installed. A 10' steel gate will also be installed in the fence line, adjacent to the cattleguard. Additional disturbance to the existing fence is not anticipated.
- H. Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113 and shall be constructed under the direction of a qualified construction supervisor(s). The qualified construction supervisor shall be an engineer, company superintendent or other representative who is competent and knowledgeable in oilfield road and drillsite construction, and able to speak for the operator. The dirt contractor, or drilling/completion foremen whose primary expertise is not in construction, do not qualify as construction supervisors.
- I. One (1) low water crossing will be installed in the existing 2-track access route. This 2-track trail will be upgraded and will provide access to the proposed location.

3) LOCATION OF EXISTING WELLS WITHIN A TWO MILE RADIUS

Abandoned wells – See Table 8 and attached TOPO Map “C”.

LOCATION OF EXISTING FACILITIES OPERATED BY VANTAGE

T6S R5W Sec 26 SW/4SW/4 Shut-In.

7) NEW PRODUCTION FACILITIES PROPOSED

- A. USFS/BLM will be contacted prior to construction of production facilities. A Sundry Notice (SN) will be filed if requested by BLM.
- B. Dimension of Proposed Facility of the pad is ±350' long and ±211' wide, containing ±1.7 acres, with a total well site disturbance of ±2.212 acres. The well access road is ±210' long with a 30' right-of-way, disturbing ±0.145 acre. An additional ±528' will be disturbed due to access road re-route disturbance. New surface disturbance associated with access road, access road re-route and the well pad is estimated to be ±2.812 acres. No pipelines or surface facilities are proposed. See attached plats and Topo Map B.
- C. Traveled portion of production site will be gravel surfaced upon completion of production facility installation and prior to production. Site preparation for production will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area. Construction and maintenance will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- D. All above ground permanent structures will be painted to blend with the surrounding landscape. The color used will be as agreed upon with USFS/BLM. To reduce the view of production facilities from visibility corridors and private residences, facilities will not be placed in visually exposed locations (such as ridgelines and hilltops). The tallest structure will be no greater than 22' in height.

- E. Production facilities may vary according to actual reservoir discovered and will be engineered upon completion of well tests. Production facilities will be clustered and placed away from cut/fill slopes to allow the maximum recontouring of cut/fill slopes.
- F. If well is a producer, all production facilities will be authorized by a SN.
- G. No facilities will be constructed off location.
- H. Pursuant to Onshore Order No. 7 (OSO #7), this is a request for authorization for reserve pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by BLM and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method will be submitted along with any necessary water analyses, in compliance with OSO #7 as soon as possible, but no later than 45 days after the date of first production. Any method of disposal, which has not been approved prior to the end of the authorized 90-day period, will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by BLM.

I.

7) LOCATION AND TYPE OF WATER SUPPLY

- A. Water supply will be from the Ouray Municipal Water Plant at Ouray, Utah, and/or Target Trucking Inc.'s water source in the SW/SW, Sec. 35, T9S, R22E, Uintah County, than (State Water Right No. 49-1501). Water will be hauled by a licensed trucking company.
- B. If drilling the conductor or surface hole indicates the existence of water bearing zones, Operator will consider drilling a water well on the location to provide a more viable water source. Drilling a water well would reduce truck travel to the well site. No additional disturbance will result from drilling a water well. If a water well is drilled, it would be properly permitted with the Utah Division of Water Rights.

6) SOURCE OF CONSTRUCTION MATERIALS

- A. All construction material for these location sites and access roads shall be of native borrow and soil material accumulated during the construction of the location sites and access road. Surface disturbance will be minimized to the extent feasible.
- B. All construction materials will come from federal land.
- C. No mineral materials will be required.

7) WASTE DISPOSAL

- A. Drill cuttings will be buried in reserve pit when dry.
- B. Drilling fluid will be evaporated and then buried in the reserve pit when dry. A "Closed Mud System" may be used if technically feasible and available at the time of drilling operations. If so, water may be hauled to and used at another drillsite in the area.
- C. Completion fluids will be flowed to the reserve pit and allowed to evaporate.
- D. Reserve pit layout is illustrated on Figures 1 and 2
- E. Reserve pit will be lined with a synthetic liner 12 mil or thicker. The reserve pit liner shall be made of any manmade synthetic material of sufficient size and qualities to sustain a hydraulic conductivity no greater than  $1 \times 10^{-7}$  cm/sec after installation and which is sufficiently reinforced to withstand normal wear and tear associated with the installation and pit use thereof. The liner shall be chemically compatible with all substances that may be put into the pit.

- F. Reserve pit will be fenced on three sides during drilling operations, and on fourth side at time of rig release. Pit will remain fenced until backfilled.
  - G. Flare pit for air drilling will (if used) be located minimum 100' from wellbore.
  - H. Produced fluid will be contained in test tanks during completion and testing.
  - I. Sewage disposal facilities will be in accordance with State and Local Regulations.
  - J. Garbage and other waste - solid waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a UDEQ approved Sanitary Landfill upon completion of operations.
  - K. Trash will be contained in trash cage at all times.
  - L. Upon release of the drilling rig, rathole and mousehole will be filled. Debris and equipment not required for production will be removed.
- 8) ANCILLARY FACILITIES  
No ancillary facilities are proposed.
- 9) WELLSITE LAYOUT
- A) See attached drillsite plat and cut/fill diagram.
  - B) Roads and well production equipment, such as tanks, treaters, separators, vents, electrical boxes, and equipment associated with pipeline operation, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment may be moved so proper recontouring and revegetation can occur.
  - C) 6" of topsoil will be removed prior to location construction from the reserve pit area and/or any other disturbed areas. Topsoil will be stockpiled adjacent to the wellsite within the maximum disturbed area shown on the wellsite plat.
  - D) Topsoil and spoils pile will be clearly separated as shown on Figure 1.
  - E) Erosion control measures will be applied pursuant to Vantage's General Permit to Discharge Stormwater under the Utah Pollutant Discharge Elimination System and accompanying Stormwater Pollution Prevention Plan.
  - F) A "Closed Mud System" may be used if technically feasible and available at the time of drilling operations. If so, the reserve pit will be reduced in size.
- 10) PIPELINES AND FLOWLINES  
*A separate Right-of-Way (ROW) application for the pipeline route will be submitted separately after consultation with the USFS.*
- 11) PLANS FOR RECLAMATION OF THE SURFACE:
- A) Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
  - B) Earthwork for interim and final reclamation must be completed within six (6) months of well completion or plugging (weather permitting).
  - C) In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate shown and covered 0.25 to 0.5 inches deep with a harrow or drag bar or will be broadcast-seeded into imprints, such as fresh dozer cleat marks.

- D) No seeding will occur from May 15 to September 15. Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding will be conducted after the frost leaves the ground and no later than May 15.
- E) Annual or noxious weeds shall be controlled on all disturbed areas as directed by the Field Office Manager. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation. Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) will be submitted to the USFS/BLM for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed and insect control measures with state and/or local management agencies.
- F) Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.
- G) Reclamation monitoring will be documented in a reclamation report and submitted to the AO. The report will document compliance with all aspects of the reclamation objectives and standards, identify whether the reclamation objectives and standards are likely to be achieved in the near future without additional actions, and identify actions that have been or will be taken to meet the objectives and standards. The report will also include acreage figures for: Initial Disturbed Acres; Successful Interim Reclaimed Acres; Successful Final Reclaimed Acres. Reports will not be submitted for sites approved by the AO in writing as having met interim or final reclamation standards. Any time 30% or more of a reclaimed area is redisturbed, monitoring will be reinitiated.
- H) The AO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

#### INTERIM RESTORATION (Production)

- A) Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area, back sloping and contouring all cut/fill slopes. These areas will be re-seeded.
- B) Wellpad size will be reduced to minimum size necessary to conduct safe operations. Cut/fills will be reduced to 3:1 or shallower.
- C) Reserve pits will be closed and backfilled as soon as the pit contents are dry enough to do so, or no later than the end of the next full summer following rig release, whichever comes first, to allow sufficient time for the pit contents to dry. Reserve pits remaining open after this period will require written authorization of the AO. Immediately upon well completion, any hydrocarbons or trash in the reserve and flare pits will be removed. Pits will be allowed to dry, be pumped dry, or solidified in-situ prior to backfilling.
- D) Following completion activities, pit liners will be removed or removed to the solids level and disposed of at an approved landfill, or treated to prevent their reemergence to the surface and interference with long-term successful revegetation. If it was necessary to line the pit with a synthetic liner, the pit will not be trenched (cut) or filled (squeezed) while containing fluids. When dry, the pit will be backfilled with a minimum of five (5) feet of soil material. In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.
- E) The portions of the cleared well site not needed for operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that

- blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after recontouring to allow for maximum interim reclamation.
- F) Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including road cut/fills and to within a few feet of the production facilities, unless an all-weather, surfaced, access route or small “teardrop” turnaround is needed on the well pad.
- G) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by USFS/BLM (shown below) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut/fill slopes.
- H) To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over recontoured cut/fill slopes.
- I) A proposed seed mixture for this location is:  
 4.80#/acre PLS – Sand bluestem (Elida, Garden)  
 0.20#/acre PLS – Sand lovegrass (Bend)  
 1.35#/acre PLS – Switchgrass (Granvillo or Blackwolf)  
 1.30#/acre PLS – Prairie sandreed (Goshen)  
1.60#/acre PLS – Western Wheatgrass (Arriba or Barton)  
 9.25#/acre PLS – TOTAL
- J) Reclamation will be considered successful if the following criteria are met:  
 · 70 percent of predisturbance cover  
 · 90 percent dominate species\*  
 · Erosion features equal to or less than surrounding area  
 The vegetation will consist of species included in the seed mix and/or occurring in the surrounding natural vegetation.

FINAL RESTORATION (P & A – Removal of equipment)

- A) Flowlines on location will be removed before site reclamation and all flowlines between the wellsite and production facilities will remain in place and will be filled with water.
- B) If necessary to ensure timely revegetation, the pad will be fenced to USFS standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the BLM Gold Book, 4<sup>th</sup> Edition, or will be fenced with operational electric fencing.
- C) Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.
- D) A proposed seed mixture for this location is:  
 4.80#/acre PLS – Sand bluestem (Elida, Garden)  
 0.20#/acre PLS – Sand lovegrass (Bend)  
 1.35#/acre PLS – Switchgrass (Granvillo or Blackwolf)  
 1.30#/acre PLS – Prairie sandreed (Goshen)  
1.60#/acre PLS – Western Wheatgrass (Arriba or Barton)  
 9.25#/acre PLS – TOTAL

- E) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by USFS (shown above) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut/fill slopes.
- F) Distribute topsoil, if any remains, evenly over the location, and seed according to the above seed mixture. If needed the access road and location shall be ripped or disked prior to seeding. Perennial vegetation must be established. Additional work shall be required in case of seeding failures, etc.
- G) All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Resalvaged topsoil will be spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over recontoured cut/fill slopes.

12) General Information

- A) Project area is situated in the undulated uplands of the western part of the Uintah Basin.
- B) Topographic and geologic features - moderate relief area, moderately drained, sand-clay deposition, surrounded by steep uplands with highly eroded drainages.
- C) Soil characteristics – clay loam.
- D) Flora consists of: Sagebrush and shortgrasses. Please refer to archaeological report and botany report to be included in the NEPA document.
- E) Fauna – none observed. Please refer to the wildlife report to be included in the NEPA document.
- F) Concurrent surface use - grazing and hunting.
- G) Mineral Lessor:  
Bureau of Land Management, Vernal Field Office  
170 South 500 East, Vernal, UT 84078  
Phone: 435-781-4400; Fax: 435-781-4410
- H) Surface Management Agency:  
U.S. Forest Service, Duchesne Ranger District  
85 W. Main St., Duchesne, UT 84021  
Phone: 435-738-2482; Fax: 435-781-5215
- I) Proximity of water, occupied dwellings or other features: ±1,500' (0.28 miles) to the northwest; flowing into Wire Fence Canyon Creek.
- J) Archaeological, cultural and historical information for the new construction on federal lands will be submitted separately by Montgomery Archaeological Consultants.
- K) If any fossils are discovered during construction, the operator shall cease construction immediately and notify the AO so as to determine the significance of the discovery.
- L) A Class III (100% pedestrian) cultural resource inventory shall be completed prior to disturbance by a qualified professional archaeologist in the following areas: Well location. A report of the inventory will be submitted and approved by the BLM with stipulations as appropriate in order to comply with EO 11593 and Section 106 of the National Historic Preservation Act of 1966. See Section "General Information – K" above.

- M) The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the AO. The AO will inform the operator as to the work needed to determine the following:
- Whether the materials appear eligible for the National Register of Historic Places;
  - The mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and,
  - A timeframe for the AO to complete an expedited review to acquire the State Historic Preservation Officer's concurrence that the findings of the AO are correct and that mitigation is appropriate.
- N) Vantage maintains a file, per 29 CFR 1910.1200(g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be transported across these lands may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous substances, EHS, and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

Vantage Energy Uinta LLC  
**AFU 65-28-32**  
1,859' FSL 1,494' FWL (NE/4 SW/4)  
Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

APPLICATION FOR PERMIT TO DRILL  
OPERATOR CERTIFICATION

LESSEE'S OR OPERATOR'S REPRESENTATIVE:

Operator

Vantage Energy Uinta LLC  
116 Inverness Drive East, Suite 107  
Englewood, CO 80112  
Phone: 303-386-8600

Banko Petroleum Management, Inc.  
385 Inverness Parkway, Suite 420  
Englewood, Colorado 80112-5849  
Phone: 303-820-4480  
Fax: 303-820-4124

Mark Rothenberg – Senior Project Engineer  
John Moran – Senior Drilling Engineer

\*+ David Banko – Consulting Petro Engineer  
*david@banko1.com*  
Keith Dana – Range Mgmt. Consultant  
Cell: 307-389-8227  
*krlcdana@fascination.com*

Field Office:

Vantage Energy Uinta LLC  
116 Inverness Drive East, Suite 107  
Englewood, CO 80112  
Phone: 303-386-8600

- \* Contact to arrange onsite meeting.
- + For any questions or comments regarding this permit.

OPERATOR CERTIFICATION:

I hereby certify that Vantage Energy Uinta LLC and its contractors and sub-contractors are responsible for the operations conducted under this application subject to the terms and conditions of the mineral lease. Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Vantage Energy Uinta LLC under their nationwide bond, BLM Bond No. UTB000288.

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

March 23, 2012

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Kimberly J. Rodell  
Permit Agent for Vantage Energy Uinta LLC

TABLE 8  
Vantage Energy Uinta LLC  
**AFU 65-28-32**  
(NE/4 SW/4) Sec. 28 T6S R5W  
Duchesne County, Utah  
Wells within a 2-Mile Radius

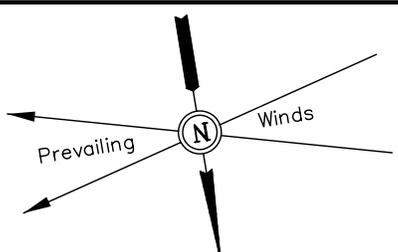
API Well Number	Operator	Well Name	Well Status	Well Type	Coalbed	Field Name	Surface	Mineral	County	Qtr/Qtr	Section	Township Range	FNL/FSL		FEL/FWL		Elev. GR	TD
					Methane Well?		Ownership	Lease										
43-013-30341	HUSKY OIL COMPANY	FEDERAL 4-21	Location Abandoned	Oil Well	No	SOWERS CANYON	Federal	Federal	DUCHESNE	NWNW	21	6S-5W	658	N	660	W	8291	
43-013-30496	BHP PETROLEUM (AMERICAS)	WIRE FENCE CYN 21-1	Plugged and Abandoned	Gas Well	No	SOWERS CANYON	Federal	Federal	DUCHESNE	NWNE	21	6S-5W	944	N	1592	E	7510	5061
43-013-30425	ORPHAN-NO RESPONSIBLE OPERATOR	WOLF HOLLOW 22-1	Shut-In	Gas Well	No	SOWERS CANYON	Federal	Federal	DUCHESNE	SWSW	22	6S-5W	990	S	1190	W	8338	5183
43-013-32595	VANTAGE ENERGY UINTA LLC	ASHLEY FED 2	Shut-In	Gas Well	No	WILDCAT	Federal	Federal	DUCHESNE	SWSW	26	6S-5W	660	S	740	W	8389	
43-013-10417	GULF OIL CORPORATION	FIVE MILE DRAW U FED 2	Plugged and Abandoned	Unknown	No	SOWERS CANYON	Federal	Federal	DUCHESNE	NWNE	27	6S-5W	660	N	2130	E		6200
43-013-32597	SAMSON RESOURCES COMPANY	ASHLEY FED 1	Returned APD (Unapproved)	Gas Well	No	WILDCAT	Federal	Federal	DUCHESNE	SWSW	29	6S-5W	520	S	724	W	8704	

Vantage Energy Uinta LLC

LOCATION LAYOUT FOR

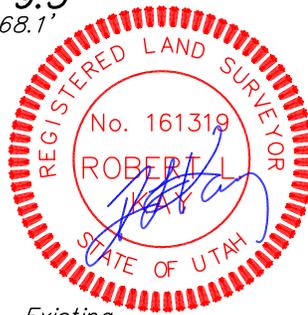
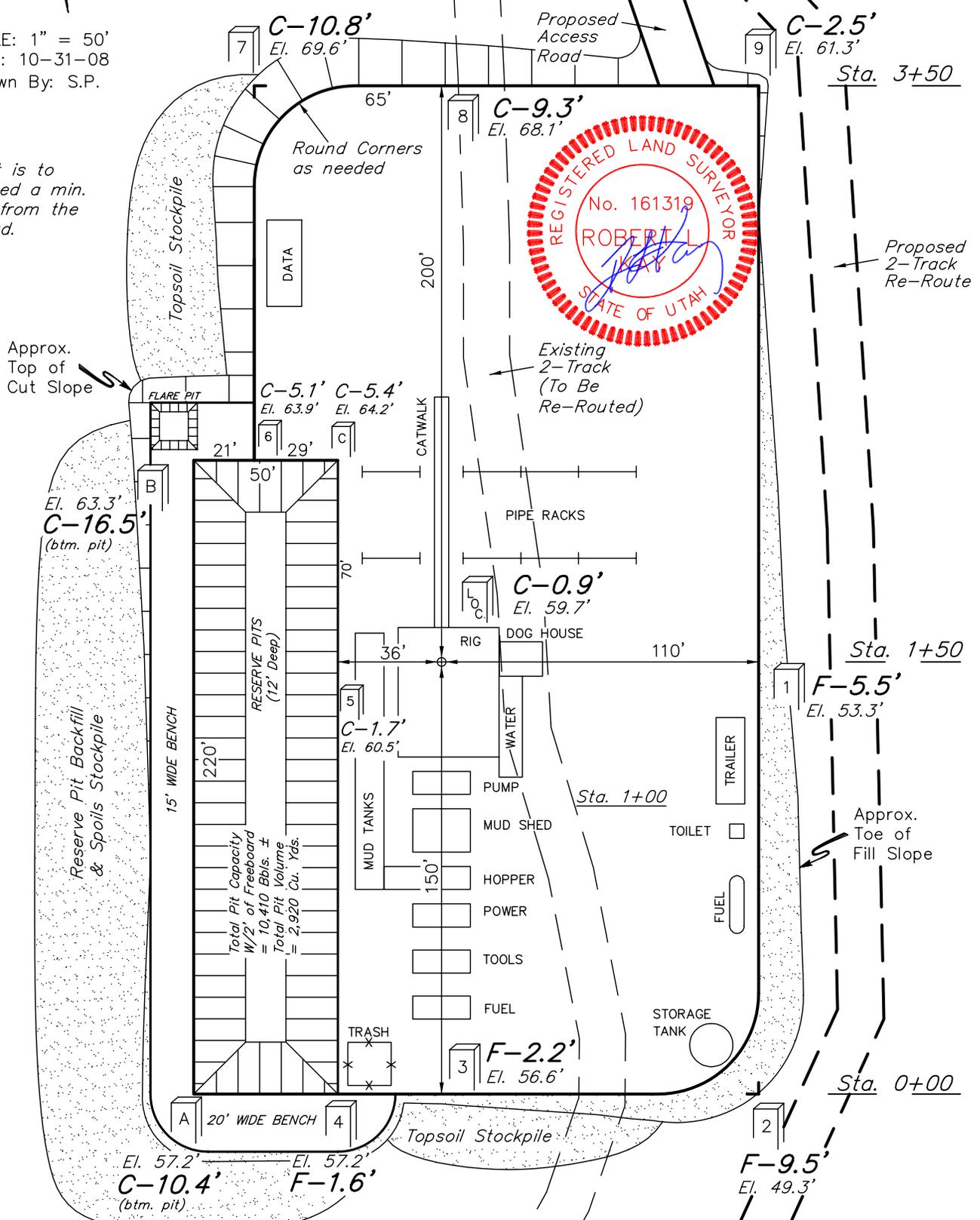
AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL

FIGURE #1



SCALE: 1" = 50'  
DATE: 10-31-08  
Drawn By: S.P.

NOTE:  
Flare Pit is to be located a min. of 100' from the Well Head.



Elev. Ungraded Ground at Location Stake = 8559.7'  
Elev. Graded Ground at Location Stake = 8558.8'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

RECEIVED: March 26, 2012

Vantage Energy Uinta LLC

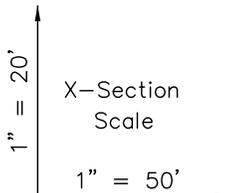
TYPICAL CROSS SECTIONS FOR

AFU #65-28-32

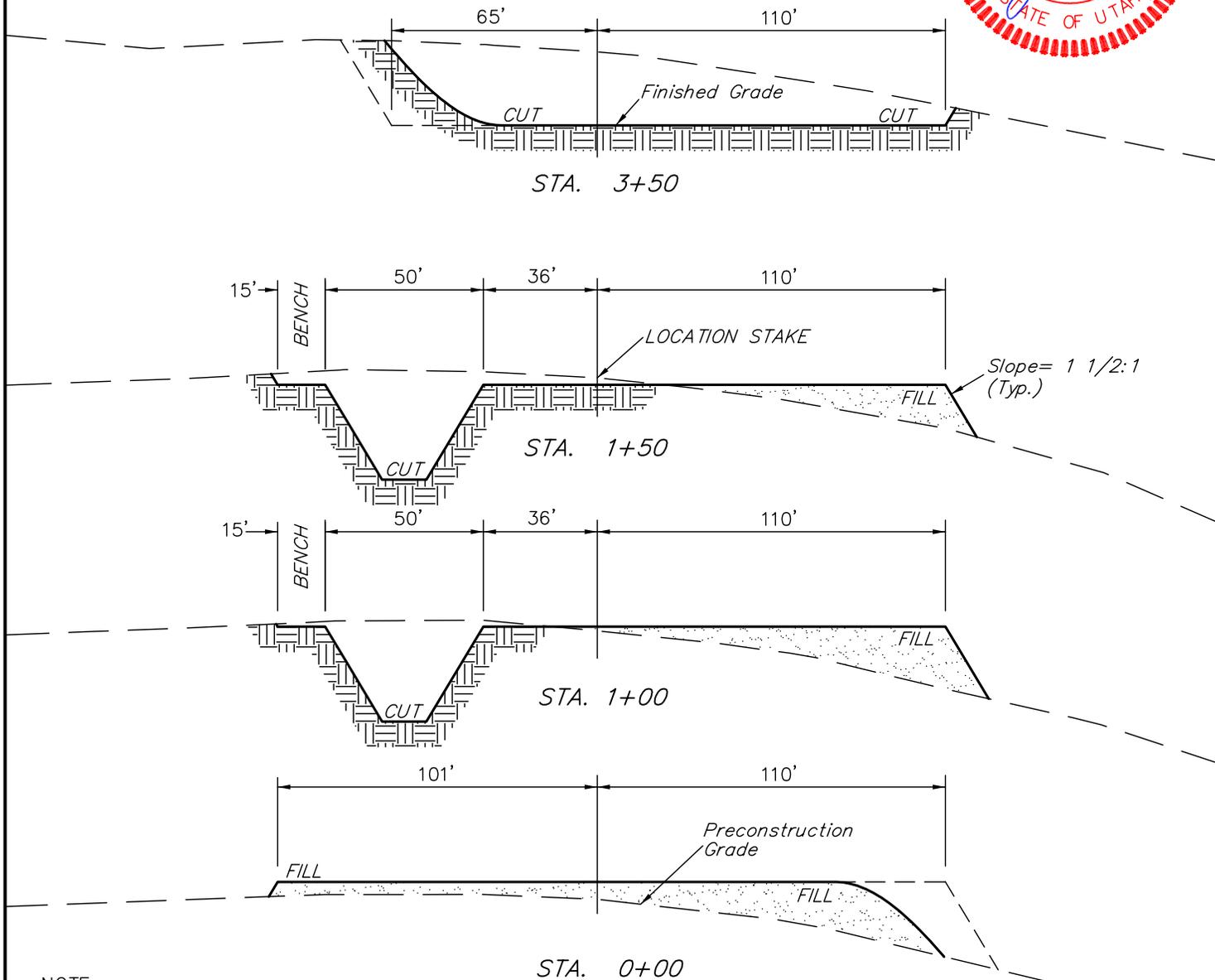
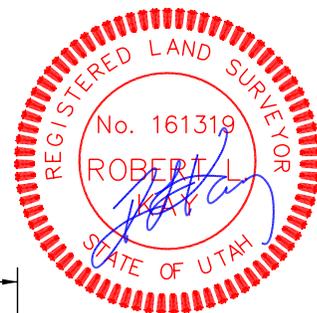
SECTION 28, T6S, R5W, U.S.B.&M.

1859' FSL 1494' FWL

FIGURE #2



DATE: 10-31-08  
Drawn By: S.P.



NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ± 2.212 ACRES  
ACCESS ROAD DISTURBANCE = ± 0.145 ACRES  
ACCESS ROAD RE-ROUTE DISTURBANCE = ± 0.455 ACRES  
TOTAL = ± 2.812 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 1,540 Cu. Yds.  
Remaining Location = 8,020 Cu. Yds.  
TOTAL CUT = 9,560 CU.YDS.  
FILL = 4,370 CU.YDS.

EXCESS MATERIAL = 5,190 Cu. Yds.  
Topsoil & Pit Backfill (1/2 Pit Vol.) = 3,000 Cu. Yds.  
EXCESS UNBALANCE (After Interim Rehabilitation) = 2,190 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

Vantage Energy Uinta LLC  
PRODUCTION FACILITY LAYOUT FOR

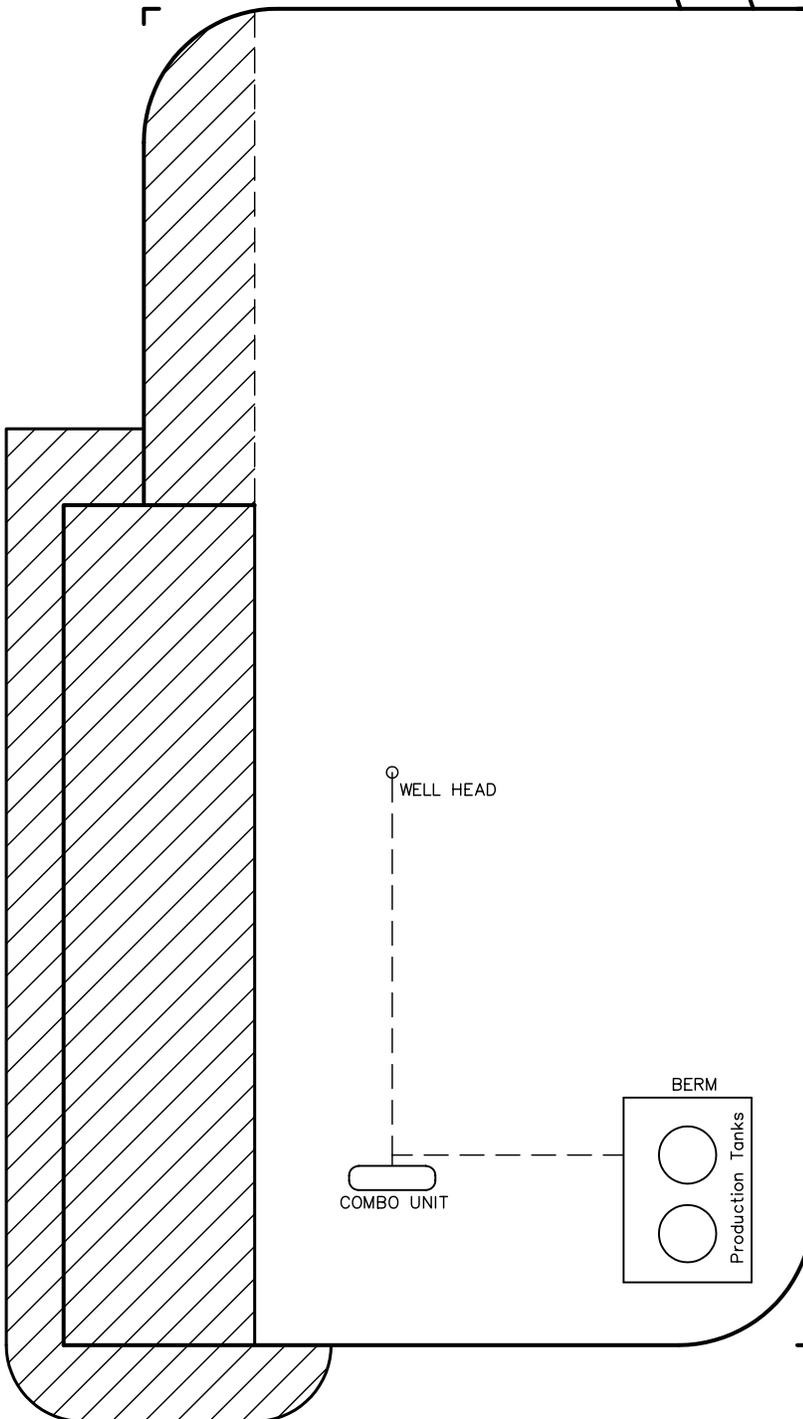
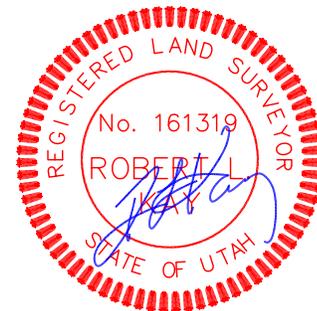
FIGURE #3

AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL

Access Road



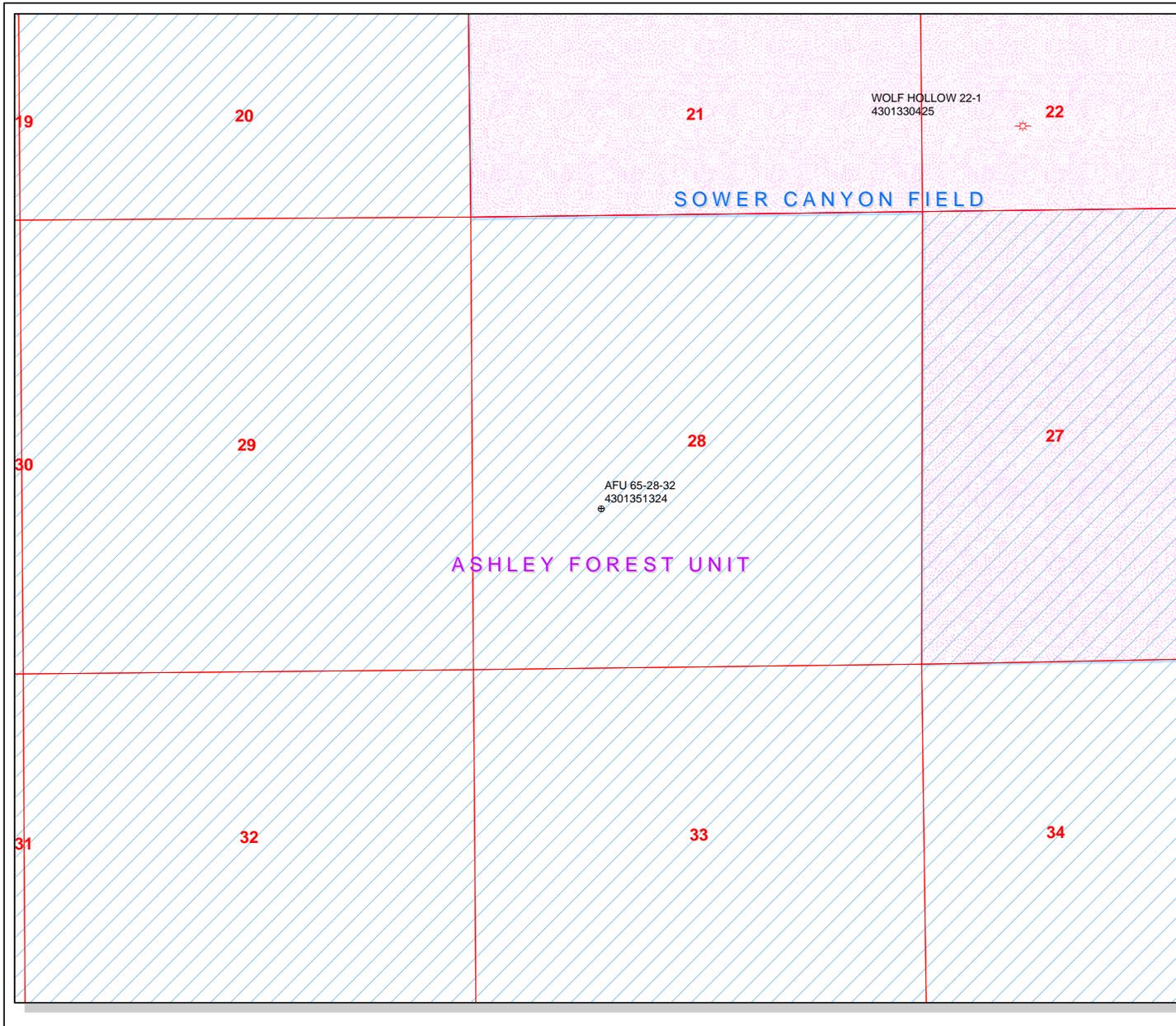
SCALE: 1" = 50'  
DATE: 10-31-08  
Drawn By: S.P.



 RE-HABED AREA

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

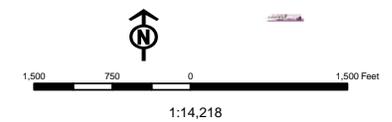
RECEIVED: March 26, 2012



**API Number: 4301351324**  
**Well Name: AFU 65-28-32**  
**Township T0.6 . Range R0.5 . Section 28**  
**Meridian: UBM**  
 Operator: VANTAGE ENERGY UINTA LLC

Map Prepared:  
 Map Produced by Diana Mason

- | Units STATUS | Wells Query Status                  |
|--------------|-------------------------------------|
| ACTIVE       | APD - Approved Permit               |
| EXPLORATORY  | DRIL - Spudded (Drilling Commenced) |
| GAS STORAGE  | GIW - Gas Injection                 |
| NF PP OIL    | GS - Gas Storage                    |
| NF SECONDARY | LA - Location Abandoned             |
| PI OIL       | LOC - New Location                  |
| PP GAS       | OPS - Operation Suspended           |
| PP GEOTHERM  | PA - Plugged Abandoned              |
| PP OIL       | PGW - Producing Gas Well            |
| SECONDARY    | POW - Producing Oil Well            |
| TERMINATED   | RET - Returned APD                  |
|              | SGW - Shut-in Gas Well              |
|              | SOW - Shut-in Oil Well              |
|              | TA - Temp. Abandoned                |
|              | TW - Test Well                      |
|              | WDW - Water Disposal                |
|              | WW - Water Injection Well           |
|              | WSW - Water Supply Well             |



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

**IN REPLY REFER TO:**

**3160**

**(UT-922)**

March 30, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Ashley Forest Unit,  
Duchesne County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Ashley Forest Unit, Duchesne County, Utah.

API#	WELL NAME	LOCATION
(Proposed PZ MESA VERDE)		
43-013-51324	AFU 65-28-32	Sec 28 T06S R05W 1859 FSL 1494 FWL
43-013-51325	AFU 64-18-41	Sec 18 T06S R04W 0104 FSL 0470 FWL BHL Sec 18 T06S R04W 0660 FSL 0660 FWL
43-013-51327	AFU 64-19-11	Sec 18 T06S R04W 0100 FSL 0479 FWL BHL Sec 19 T06S R04W 0660 FNL 0660 FWL

This office has no objection to permitting the wells at this time. For additional information please refer to our memo dated March 2, 2009.

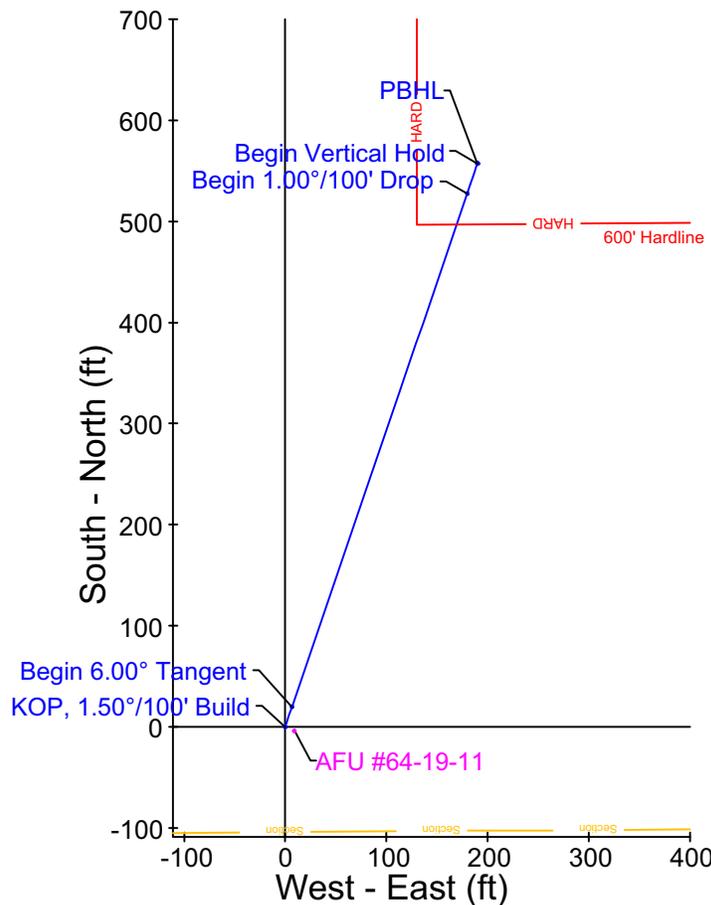
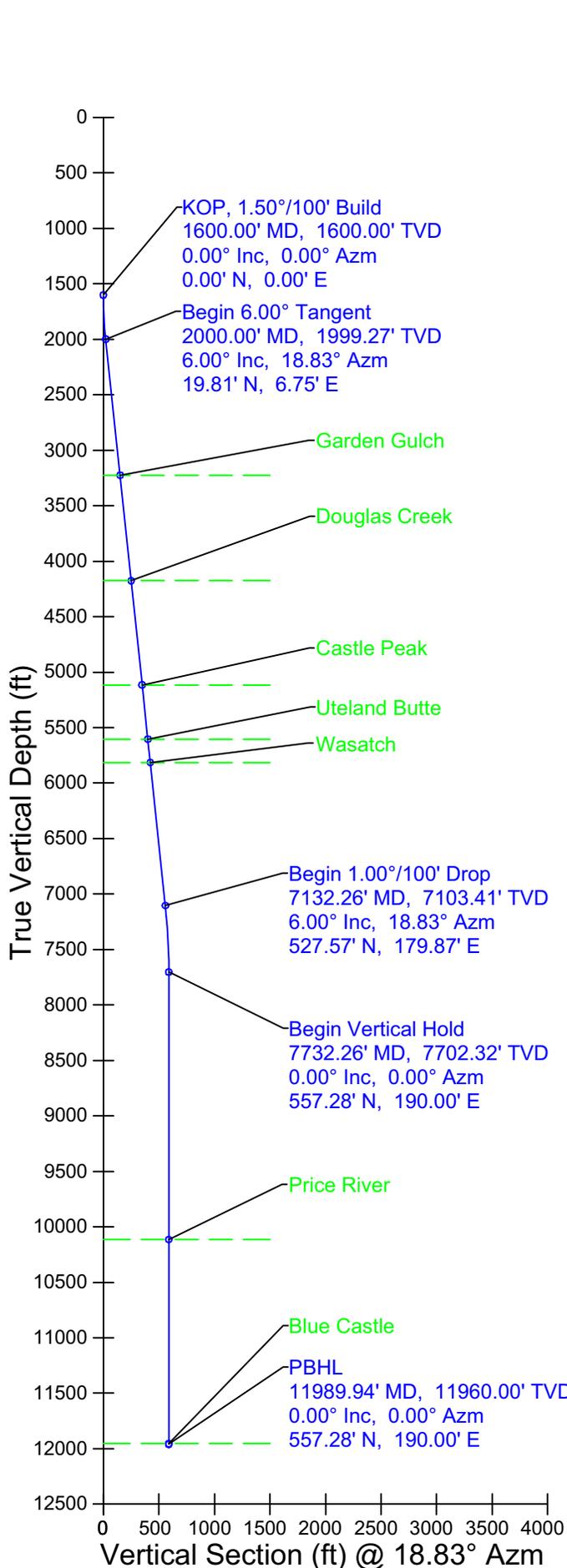
Michael L. Coulthard

Digitally signed by Michael L. Coulthard  
DN: cn=Michael L. Coulthard, o=Bureau of Land  
Management, ou=Branch of Minerals,  
email=Michael\_Coulthard@blm.gov, c=US  
Date: 2012.03.30 10:17:56 -06'00'

bcc: File - Ashley Forest Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:3-30-12

RECEIVED: March 30, 2012





**VANTAGE ENERGY**

Company: Vantage Energy  
 Well: AFU #64-18-41  
 Location: Duchesne County  
 State: Utah  
 Rig:  
 Correction:  
 North: Referenced to True North

---

Subject: Prop Rev 0  
 File Name: P09072r0.dwg  
 Date: 02/24/2009  
 Drawn By: Bianca LaCombe

---

Planning: (936) 442-2455  
 Fax: (936) 441-6620  
 Operations: (936) 441-6630  
 Fax: (936) 539-1075

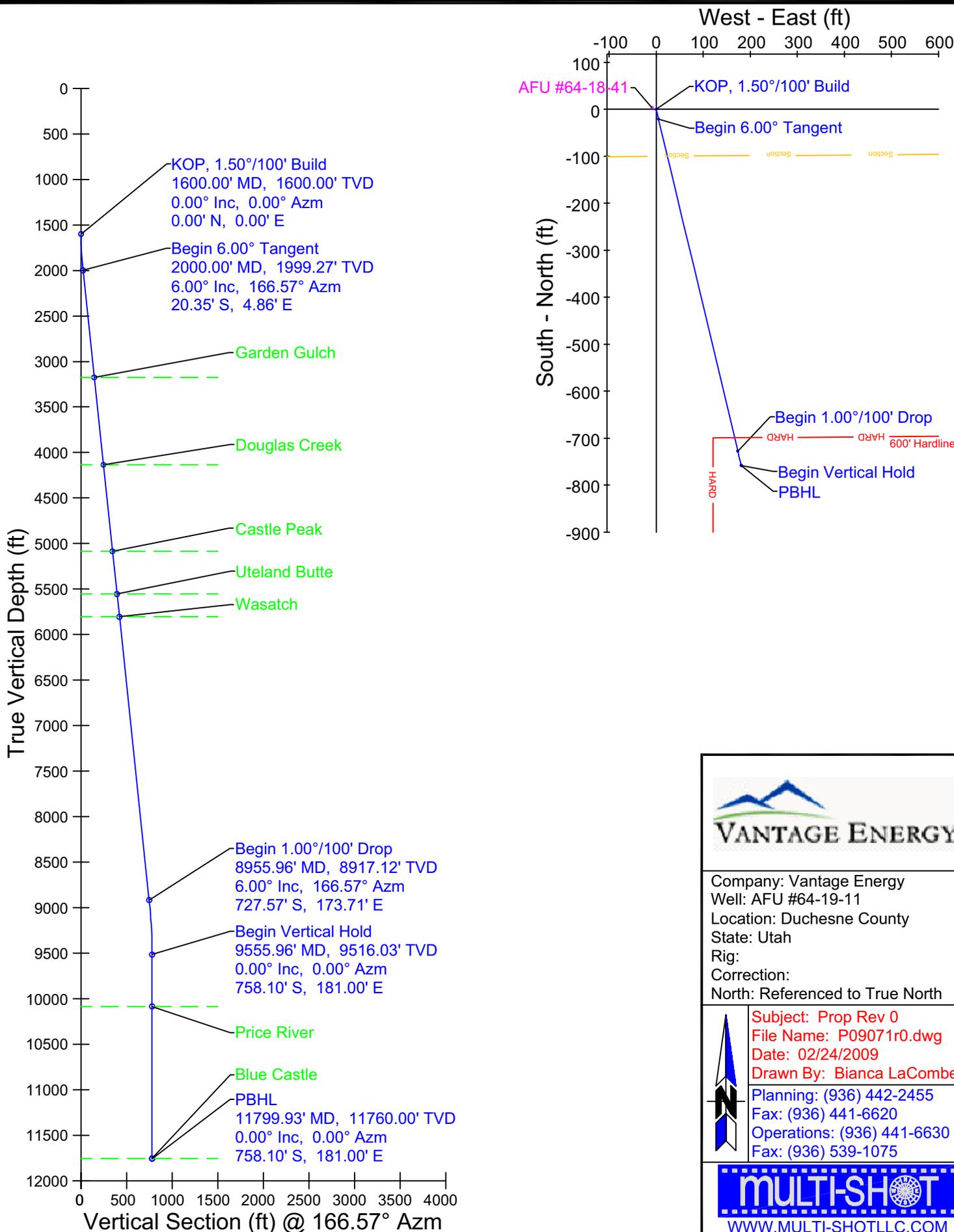
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**MULTI-SHOT**

WWW.MULTI-SHOTLLC.COM

The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Multi-Shot, LLC are at the sole risk and responsibility of the customer. Multi-Shot, LLC is not responsible for the accuracy of this schematic or the information contained herein.





**VANTAGE ENERGY**

Company: Vantage Energy  
 Well: AFU #64-19-11  
 Location: Duchesne County  
 State: Utah  
 Rig:  
 Correction:  
 North: Referenced to True North

---

**Subject: Prop Rev 0**  
**File Name: P09071r0.dwg**  
**Date: 02/24/2009**  
**Drawn By: Bianca LaCombe**

---

Planning: (936) 442-2455  
 Fax: (936) 441-6620  
 Operations: (936) 441-6630  
 Fax: (936) 539-1075

---



**MULTI-SHOT**  
 WWW.MULTI-SHOTLLC.COM

The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Multi-Shot, LLC are at the sole risk and responsibility of the customer. Multi-Shot, LLC is not responsible for the accuracy of this schematic or the information contained herein.



DIVISION OF OIL, GAS & MINING  
1594 W. N. Temple STE 1210  
Salt Lake City, UT 84114-5801  
Attn: Ms. Diana Mason

April 5, 2012

Dear Ms. Mason:

In reference to the State Oil and Gas Conservation rule R649-3-3, Vantage Energy Uinta LLC ("Vantage"), requests an exception location for the AFU #65-28-32 well. The exception is requested as a result of topographic considerations resulting in the well being located at a surface location of 1,494' FWL, 1,859' FSL of Section 28, Township 6 South, Range 5 West, U.S.B. & W., Duchesne County, Utah.

Ownership is consistent within 460' of the proposed location. Vantage makes this request on behalf of the working interest owners in its authority as Unit Operator of the Ashley Forest Federal Unit (UTU-86335X).

Thank you for your attention to this matter. If you have questions or if I may be of further assistance, please call me at 303-386-8638.

Sincerely,  
VANTAGE ENERGY UINTA LLC

Michael Holland  
Senior Landman

Cc: mth, jm, su, wm, Dave Banko, Kim Rodell, Andrea Goss

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 3/27/2012

API NO. ASSIGNED: 43013513240000

WELL NAME: AFU 65-28-32

OPERATOR: VANTAGE ENERGY UINTA LLC (N3295)

PHONE NUMBER: 303 820-4480

CONTACT: David F. Banko

PROPOSED LOCATION: NESW 28 060S 050W

Permit Tech Review: 

SURFACE: 1859 FSL 1494 FWL

Engineering Review: 

BOTTOM: 1859 FSL 1494 FWL

Geology Review: 

COUNTY: DUCHESNE

LATITUDE: 39.92873

LONGITUDE: -110.45652

UTM SURF EASTINGS: 546440.00

NORTHINGS: 4419988.00

FIELD NAME: UNDESIGNATED

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU77333

PROPOSED PRODUCING FORMATION(S): MESA VERDE

SURFACE OWNER: 1 - Federal

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: FEDERAL - UTB000288
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 49-1501
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit: ASHLEY FOREST
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: R649-3-3
- Effective Date:
- Siting:
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 1 - Exception Location - dmason  
4 - Federal Approval - dmason  
23 - Spacing - dmason



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*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:** AFU 65-28-32  
**API Well Number:** 43013513240000  
**Lease Number:** UTU77333  
**Surface Owner:** FEDERAL  
**Approval Date:** 4/5/2012

### Issued to:

VANTAGE ENERGY UINTA LLC, 116 Inverness Drive East, Ste 107, Englewood , CO 80112

### 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 R649-3-3. The expected producing formation or pool is the MESA VERDE 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

### Exception Location:

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

### 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:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an

area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

**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 Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at <http://oilgas.ogm.utah.gov>

**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

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  <b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU77333
<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>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7.UNIT or CA AGREEMENT NAME:</b> ASHLEY FOREST
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> AFU 65-28-32
<b>2. NAME OF OPERATOR:</b> VANTAGE ENERGY UINTA LLC	<b>9. API NUMBER:</b> 43013513240000
<b>3. ADDRESS OF OPERATOR:</b> 116 Inverness Drive East, Ste 107 , Englewood , CO, 80112	<b>PHONE NUMBER:</b> 303 386-8600 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1859 FSL 1494 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 28 Township: 06.0S Range: 05.0W Meridian: U	<b>9. FIELD and POOL or WILDCAT:</b> UNDESIGNATED  <b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 3/28/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<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 checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Vantage Energy Uinta LLC is requesting an extension to the Application for Permit to Drill for the above referenced well for the maximum amount of time possible. Thank you.

**Approved by the Utah Division of Oil, Gas and Mining**  
  
**Date:** April 01, 2013  
**By:**

<b>NAME (PLEASE PRINT)</b> Andrea Gross	<b>PHONE NUMBER</b> 303 941-0506	<b>TITLE</b> Project Coordinator
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/28/2013	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43013513240000**

API: 43013513240000

Well Name: AFU 65-28-32

Location: 1859 FSL 1494 FWL QTR NESW SEC 28 TWP 060S RNG 050W MER U

Company Permit Issued to: VANTAGE ENERGY UINTA LLC

Date Original Permit Issued: 4/5/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
  
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
  
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
  
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
  
- Has the approved source of water for drilling changed?  Yes  No
  
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
  
- Is bonding still in place, which covers this proposed well?  Yes  No

Signature: Andrea Gross

Date: 3/28/2013

Title: Project Coordinator Representing: VANTAGE ENERGY UINTA LLC

Vantage Energy Uinta LLC  
**AFU 65-28-32**  
1,859' FSL 1,494' FWL (NE/4 SW/4)  
Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

**NINE POINT DRILLING PROGRAM**

(All drilling procedures will comply with BLM *Onshore Oil and Gas Orders 1 and 2*)

**Vantage Energy Uinta LLC respectfully requests that all information regarding this well be kept CONFIDENTIAL.**

This Application for Permit to Drill (APD) is being filed under the APD process as stated per Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents.

***THIS APD ALSO SERVES AS THE NOTICE OF STAKING PER OSO #1.***

This document was prepared using language and requirements consistent with those previously approved by BLM/USFS. This APD process has included the following:

- Consultation with the Surface Management Agency, United State Forest Service (USFS) to initiate the National Environmental Policy Act (NEPA) process for this specific wellsite along with other nearby proposed wellsites in September 8, 2008.
- Meeting with USFS at the wellsite on October 15, 2008, to review the topography, access and site specific surface use issues. Preliminary wellsite staking was initiated at this time.
- Authorization to conduct an archaeological survey was received from USFS on October 27, 2008, an archaeological survey was conducted shortly thereafter.
- Preliminary wellsite staking was completed on October 15, 2008. The wellsite was surveyed and staked at a location as preliminarily agreed to with USFS at 750' FNL 1,804' FWL (NE/4 NE/4) of Sec. 5 T6S R3W on December 9, 2008, by Uintah Engineering & Land Surveying (Uintah), surveyor, on a site that is geologically and topographically acceptable.
- A wellsite review and NEPA planning meeting was held at the USFS office in Vernal, Utah on January 22, 2009. Attending were USFS, BLM, Petros Environmental (NEPA Contractor) and Vantage.
- The survey plats were finalized after the January 22, 2009 meeting and are as attached.

We understand that an onsite meeting with USFS/BLM representatives, and Vantage will be scheduled, at which time the specific concerns of USFS/BLM and Vantage will be discussed. Best efforts have been made to address specific concerns of the USFS.

Please contact Mr. John Moran, Senior Drilling Engineer, with Vantage at 303-386-8600, or Mr. David Banko, Banko, Permit Agent if there are any questions or concerns regarding this Drilling Program.

**a) GEOLOGIC MARKERS**

Anticipated tops of geologic markers are indicated in **Table 1**

**Table 1 Estimated Tops of Geologic Markers**

Formation	Vertical Depth	Measured Depth	Subsea Depth	Description
Green River	Surface	Surface	8,560'	Sandstone/siltstone/shale
Garden Gulch	3,272'		5,300'	Sand and Siltstone
Douglas Creek	4,202'		4,370'	Sandstone/siltstone/shale
Castle Peak	5,092'		3,480'	Sandstone/siltstone/shale
Uteland Butte	5,597'		2,975'	Carbonate/shale/sandstone
Wasatch	5,762'		2,810'	Shale/sandstone
Price River	9,972'		-1,400'	Shale/Sandstone
Blue Castle	11,570'		-2,998'	Sandstone
Total Depth	11,575'		-3,003'	TD +/- 5' into Blue Castle

Surface Elevation: 8,560' (Ground) 8,572' (Est. KB). Proposed Total Depth: 11,575'

#### b) DEPTHS OF WATER AND MINERAL-BEARING ZONES

Potential water-bearing zones in the vicinity include the Wasatch and Green River formations (Robson and Banta, 1995. *Ground Water Atlas of the United States Segment 2*, Hydrologic Investigations Atlas 730-C, U.S. Geological Survey, Reston, VA). A review of data from the Utah Division of Water Rights indicated no permitted water wells within three miles of the proposed location. Utah Division of Oil, Gas, and Mining surface casing depth requirements will protect potential aquifers in the area.

The depths to potential water and/or mineral-bearing zones are indicated in **Table 2**.

**Table 2: Principal Anticipated Water and Mineral-bearing Zones**

Formation	Measured Depth	Subsea	Potential Contents
Green River	Surface	8,560'	Water
Garden Gulch	3,272'	5,300'	Oil/Gas
Douglas Creek	4,202'	4,370'	Oil/Gas
Castle Peak	5,092'	3,480'	Oil/Gas
Uteland Butte	5,597'	2,975'	Oil/Gas
Wasatch	5,762'	2,810'	Oil/Gas
Price River	9,972'	-1,400'	Oil/Gas
Blue Castle	11,570'	-2,998'	Oil/Gas
Total Depth	11,575	-3,003'	Oil/Gas/Water

#### c) MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT

The maximum anticipated surface pressure for this well is calculated to be **2,871 psi**. Therefore, rules for a 3,000 psi rated BOP and choke manifold system are applicable. A diagram of the proposed 3,000 psi rated BOP stack configuration is shown in **Fig. 1**.

BOPs and choke manifold will be installed and pressure tested before drilling out from under surface casing (subsequent pressure tests will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOPs will be pressure tested at least once every 30 days. The annular preventer, pipe rams, and blind rams will be activated on each trip and Operator will conduct weekly BOP drills with the rig crew.

Ram type preventers and related pressure control equipment will be pressure tested to rated working pressure of the stack assembly if a test plug is used. If a plug is not used, the stack assembly will be tested to the rated working pressure of the stack assembly or to 70% of the minimum internal yield of the casing, whichever is less. **Please see variance request at end of program for this section.**

Annular type preventers will be pressure tested to 50% of their rated working pressure. A Sundry Notice (Form 3160~5), along with a copy of BOP test report, shall be submitted to the USFS/BLM within 5 working days following the test. All casings strings will be pressure tested to 0.22psi/ft or 1,500psi, whichever is greater, not to exceed 70% of internal yield. **Please see variance request at end of program for this section.**

Casing shoe will be tested by drilling out from below the shoe and testing to the maximum expected mud weight as discussed in the mud program specifications below. Both manual and remote closing mechanisms will be installed on the BOP stack and will be readily available to the driller.

#### Statement on Accumulator System and Location of Hydraulic Controls

The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with *Onshore Oil and Gas Order No. 2 (OSO #2)* for 3,000 psi systems. Irregardless of the rig selected, the rig's accumulator system shall have sufficient capacity to close all BOPs and retain 200 psi above precharge. The proposed pressure control equipment will meet or exceed standards specified in the Order OSO #2.

#### **d) CASING PROGRAM**

Casing of quality equal to or better than that indicated in **Tables 3** and **4** will be used for this well. Actual casing used will be dependent on availability.

**Table 3 Proposed Casing Program**

Depth (MD)	Hole Diameter	Casing Diameter	Casing Weight and Grade
0 – ± 50'	24"	16"	Optional Conductor – Only if Required
0 – 1,500'	12-1/4"	9-5/8"	36# J55 ST&C, API New Pipe
0 – 11,575'	7-7/8"	4-1/2"	11.6# HCP-110 LT&C, API New Pipe

**Table 4: Proposed Casing Specifications and Design Safety Factors**

Size	Collapse (psi)	Burst (psi)	Body Strength (1,000 lbs.)	Joint Strength (1,000 lbs.)	Thread	*Safety Factors		
						Burst Design (1.2)	Collapse Design (1.0)	Tension Design (1.4)
16"	NA – 0.129" wall structural and to seal shallow gravels to allow air drilling surface hole				Weld	NA	NA	NA
9-5/8" 36# J55	2,020	3,520	564	394	ST&C	1.42	6.27	4.17
4-1/2" 11.6# HCP-110	8,650	10,690	367	279	LT&C	1.25	1.51	1.63

**\*Safety Factor Calculation Assumptions:****Surface Casing:**

**Burst Load:** Assumes greater of MASP (maximum anticipated surface pressure) exposure during a worse case kick scenario while drilling at total depth, with mud/gas mixture whose gradient is 0.22 psi/ft. OR, minimum required casing test pressure.

## MASP

$$\begin{aligned} \text{Load} &= (\text{Formation Gradient} - 0.22 \text{ psi/ft}) * \text{Total Depth, TVD} \\ &= (0.468 \text{ psi/ft} - 0.22 \text{ psi/ft}) * 11,575 \text{ ft.} \\ &= 2,871 \text{ psi} \end{aligned}$$

## TEST PRESSURE

$$\text{Load} = \text{Greater of } 1500 \text{ psig or } 0.70 * 3520 = 2464 \text{ psig or MASP} = 2871 \text{ psig}$$

$$\text{SF Burst} = 3,520 \text{ psi} / 2,871 \text{ psi} = 1.22$$

**Collapse Load:** Assumes worse case loading of evacuated casing during cementing process.

Cement density = 12.2 ppg (wtd avg)

$$\begin{aligned} \text{Load} &= 12.2 \text{ ppg} * 0.052 * 1500 \text{ ft} \\ &= 952 \text{ psi} \end{aligned}$$

$$\text{SF Collapse} = 2020 \text{ psi} / 952 \text{ psi} = 2.12$$

**Tension Load:** Assumes air weight at total depth + 100,000 lbs overpull design factor.

$$\begin{aligned} \text{Load} &= (36 \text{ lbs/ft} * 1500 \text{ ft}) + 100,000 \text{ lbs overpull} \\ &= 154,000 \text{ lbs} \end{aligned}$$

$$\text{SF Tension} = 394,000 \text{ lbs} / 154,000 \text{ lbs} = 2.55$$

**Test Pressure =**

**Production Casing**

**Burst Load:** Assumes maximum load applied during the hydraulic fracture stimulations. It is Vantage Energy's policy not to exceed 80% rating of the production casing during the stimulation treatment. The 80% rating factor will also be the casing test pressure.

$$\begin{aligned}\text{Load} &= 10690 \text{ psi} * 0.80 \\ &= 8552 \text{ psi}\end{aligned}$$

$$\text{SF Burst} = 10690 \text{ psi} / 8552 \text{ psi} = 1.25$$

**Collapse Load:** Assumes worse case loading applied during the production cycle, with evacuated casing, and normally pressured formation gradient applied externally.

$$\begin{aligned}\text{Load} &= 0.433 \text{ psi/ft} * 11575 \text{ ft} \\ &= 5012 \text{ psi}\end{aligned}$$

$$\text{SF Collapse} = 8650 \text{ psi} / 5012 \text{ psi} = 1.72$$

**Tension Load:** Assumes buoyed weight of casing at total depth + 80,000 lbs overpull design factor.

$$\begin{aligned}\text{Load} &= [11.6 \text{ lbs/ft} * 11575 \text{ ft} * ((65.5 - 10.0) / 65.5)] + 80,000 \text{ lbs} \\ &= 113,771 \text{ lbs} + 80,000 \text{ lbs} \\ &= 193,771 \text{ lbs}\end{aligned}$$

$$\text{SF Tension} = 279,000 \text{ lbs} / 193,771 \text{ lbs} = 1.44$$

## e) CEMENT PROGRAM

Table 5: Proposed Cement Program

Depth	Hole Diameter	Casing Diameter	Cement
0' – ± 50'	24"	16"	Optional structural conductor if required: Grout with approximately 4 cubic yards of redi-mix back to surface (includes 100% excess)  <b>TOC: Surface (Top-off per visual observation)</b>
0' – 1500'	12 1/4"	9 5/8"	<b><u>Lead System (1,000' – Surface)</u></b> 216 sks "Lite" slurry + ¼ lb/sk celloflake.  Density: 11.0 ppg Yield: 2.90 cuft/sk Water: 15.45 gal/sk Excess: 100%  <b><u>Tail System (1,500' – 1,000') + 40' Shoe Joint</u></b> 205 sks 50:50 (Class G: Poz) + 2% gel + 2% CaCl <sub>2</sub> Density: 14.2 ppg Yield: 1.61 cuft/sk Water: 5.75 gal/sk Excess: 100%  <b>TOC: Surface (Top-off per visual observation)</b>
0' - 11,575'	7 7/8"	4 1/2"	<b><u>Lead System (9,500' – 2,500')</u></b> 543 sks Type "V" + 16% Gel + 10 lbs/sk gilsonite + 3% Salt + ¼ lb/sk celloflake  Density: 11.0 ppg Yield: 3.82 cuft/sk Water: 23.0 gal/sk *Excess: 30%  <b><u>Tail System (11,575' – 9,500') + 40' Shoe Joint</u></b> 490 sks 50:50 (Class G:Poz) + 2% gel + 10% salt + ¼ lb/sk celloflake  Density: 14.2 ppg Yield: 1.26 cuft/sk Water: 5.75 gal/sk *Excess: 30%

\*Note: The production hole cement volume will be determined by the caliper log, using caliper volume + 15% excess factor.

**f) MUD PROGRAM**

The mud program for the proposed well is indicated in **Table 6**.

**Table 6 Proposed Mud Program**

Interval (feet)	Mud Weight (lbs/gallon)	Viscosity (secs/qt)	Fluid Loss (ccs/30 min)	Mud Type
0 – ± 50'	NA	NA	NA	NA
Set optional 14" conductor with bucket rig				
50' - 1500'±	NA	NA	N/C	Air/Mist
Run/cement 9 5/8" surface casing				
1500'± - TD	8.6 – 10.0	28 - 42	< 10	KCL Water / PHPA / DAP
Run Logs – Run/cement 4 1/2" production casing				

Surface Hole Comments: Spud with “spudder rig” and air drill surface hole misting as may be required to assist with cuttings removal. Report any water encountered to the appropriate agencies. **Please see variance requests for this section.**

Production Hole Comments: Dump spud mud to reserve pit. Drill out surface casing with fresh water adding 6 ppb DAP (Diammonium Phosphate) for shale inhibition and corrosion control. Circulate the reserve pit and flocculate out drill solids. Use pre-hydrated gel and PHPA polymer mud sweeps to assist with hole cleaning. At approximately 3,600' “mud up” and “close in” the fluid system to a 2-3% KCL base fluid. Use PHPA PAC and lignite for filtration control. Maintain fluid system through potential production zones to TD. Should seepage losses be experienced, control with LCM sweeps consisting of calcium carbonate, sawdust, cedar fiber, or mica.

Sufficient mud materials will be maintained on location to adequately maintain mud properties and contain any well kicks. Monitoring equipment will be installed on site to detect changes in mud volume.

**g) LOGGING, CORING, AND TESTING PROGRAM**

The proposed logging program is indicated in **Table 7**.

**Table 7 Proposed Logging Program**

Log Suites	Depth Range	Remarks
DIL-SP-LD-CN-GR	Surface Casing to TD + GR to surface	Standard "triple combo" equivalent with resistivity-spontaneous potential, litho-density, compensated neutron, gamma ray, and caliper
Dipole Sonic	± 9,700' to TD	Optional – Operator's discretion Rock property data
Rotary Sidewall Cores	± 9,972' to TD	Optional – Operator's discretion PP/Lithology data (perm-porosity)

No coring or drill stem tests are planned. Mud logging unit will be operational from 200 feet above the Douglas Creek through total depth. Cuttings will be sampled every 20-30 feet.

Prospective zones from the Douglas Creek formation through total depth will be perforated, tested, and potentially acid-washed. It is anticipated that multi-stage hydraulic fracture stimulations of the reservoir will be required.

#### **h) ANTICIPATED PRESSURES AND HAZARDS**

No abnormal pressures are anticipated. Pressure gradient in the Green River and Wasatch sequence is expected to be sub-normal pressured to less than 0.44 psi/ft, and then transition to slightly over pressure in the Price River sequence.

Estimated BHP Douglas Creek (4,202')	1,849 psi
Estimated BHP Wasatch (5,762')	2,535 psi
Estimated BHP Total Depth (11,575')	5,417 psi
Hydrostatic head of gas/mud	0.22 psi/ft.
<b>Maximum design surface pressure</b>	<b>0.468 – 0.22 psi/ft x 11,575 ft = 2,871 psi</b>

No H2S zones are anticipated. No abnormal lost circulation zones are anticipated.

#### **i) DIRECTIONAL PROGRAM**

This is a vertical well. Natural drift will prevail.

#### **j) OTHER INFORMATION**

##### Contact Information and Personnel

##### Mailing Address

Vantage Energy Uinta LLC  
116 Inverness Drive, Suite 107  
Englewood, CO 80112

Main Number: 303-386-8600  
Fax Number: 303-386-8700

##### Drilling Operations: John Moran

Office Direct: 303-386-8610  
Fax Direct: 303-386-8710  
Mobile: 303-249-2234  
E-Mail: John.Moran@VantageEnergy.com

Completion/Production Operations: Ed Long

Office Direct: 303-386-8639

Fax Direct: 303-386-8739

Mobile: 720-635-2125

E-Mail: Ed.Long@VantageEnergy.com

Geologist: Andrea Steinle

Office Direct: 303-386-8632

Fax Direct: 303-386-8732

Mobile: 303-408-0994

E-Mail: Andrea.Steinle@VantageEnergy.com

Landman: Michael Holland

Office Direct: 303-386-8638

Fax Direct: 303-386-8738

Mobile: 303-396-3443

E-Mail: Michael.Holland@VantageEnergy.com

**START DATE AND DURATION OF ACTIVITIES**

Anticipated start date

The drilling operations will commence as soon as possible following contracting of drilling rig and in compliance with restrictions imposed by lease stipulations and/or Conditions of Approval. It is therefore anticipated the access upgrade work and location work would commence on or about August 1, 2012, with a target spud date of August 15, 2012. It is anticipated the drilling phase will require 25 days.

Completion

The well pad will be of sufficient size to accommodate all required completion equipment and activities. It is anticipated select intervals will be perforated, stimulated and adequately tested for the presence of commercial hydrocarbons prior to moving uphole to the next prospective test interval. As such, it is anticipated the completion phase will require 45 - 60 days.

The total project duration is therefore estimated to be **70 - 85 days**, and therefore anticipated to be concluded on or about November 10, 2012.

A string of 2 3/8 inch 4.7 lb/ft. N-80 tubing would be run as the production tubing. A Sundry Notice will be submitted should there be any changes to the proposed completion program.

**VARIANCE REQUESTS**

1. Operator requests a variance to *Onshore Oil and Gas Order 2, Item E*, regulations for air/gas drilling operations. Operator plans to drill the surface hole to a depth of 1500', with a "spud rig", in a separate operation from the drilling rig. No hydrocarbons are present in the surface hole section and therefore, "gas" drilling is not applicable to this hole section. Therefore, for the purpose only of drilling the surface hole with an air rig, Operator requests the following four (4) variances from the order that states "...the following equipment shall be in place and operational

during air/gas drilling: (1) properly lubricated and maintained rotating head; (2) blooie line discharge one hundred feet (100') from wellbore; (3) automatic igniter or continuous pilot light on the blooie line; and (4) compressor located...a minimum of 100 feet (100') from the wellbore”.

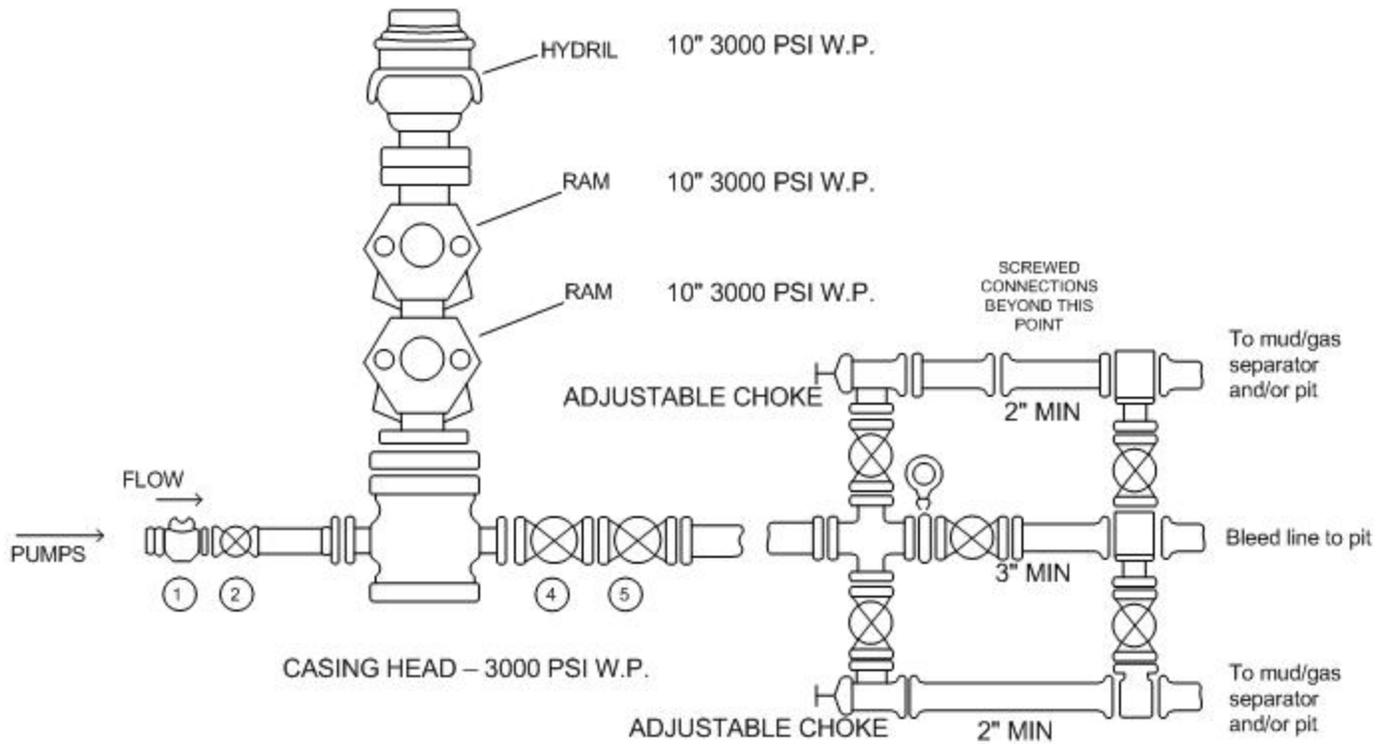
- a. Operator requests approval to use a diverter bowl rather than a rotating head as specified in the Order. The diverter bowl forces air and cuttings to the reserve pit and is only used to drill the surface hole (to a total depth of 1500'). The surface hole section is non-hydrocarbon bearing, and therefore formation pressures will not require a pressure rated rotating head. Should water flows be encountered, they will be reported to the appropriate agencies.
- b. Operator requests approval to use a blooie line with a discharge length of less than the required one hundred feet (100') from the wellbore in order to minimize the well pad size, and to direct the cuttings into the reserve pit. The wellbore is to be located approximately thirty-five feet (35') from the reserve pit which is to be seventy feet (70') wide. Therefore, a one hundred foot (100') blooie line would blow cuttings across the reserve pit. The requested length of blooie line to drill the surface hole is thirty-five feet (35'). This is the distance necessary to reach the edge of the reserve pit, and to therefore direct cuttings into the reserve pit in a safe and efficient manner.
- c. Operator requests approval to operate without an automatic igniter or continuous pilot light on the blooie line. The surface hole section is non-hydrocarbon bearing and therefore does not require a continuous ignition source.

Operator requests approval to use a trailer mounted air compressor located less than one hundred feet (100') from the wellbore in order to minimize the location size. The compressor will be located fifty feet (50') from the wellbore in an opposite direction of the blooie line. The compressor has the following safety features: (1) shut-off valve on the trailer located approximately fifteen feet (15') from the air rig; (2) pressure relief valve on the compressor; and (3) spark arrestors on the motors. The compressor will only be used for the drilling of the surface hole, which is non-hydrocarbon bearing.

# MINIMUM BOP Requirements

3000 PSI W.P.

FILL LINE ABOVE THE UPPERMOST PREVENTER



**KILL LINE**

- Valve #1 – Flanged check valve  
Full working pressure of BOP
- Valve #2 – Flanged, minimum 2" bore  
Full working pressure of BOP

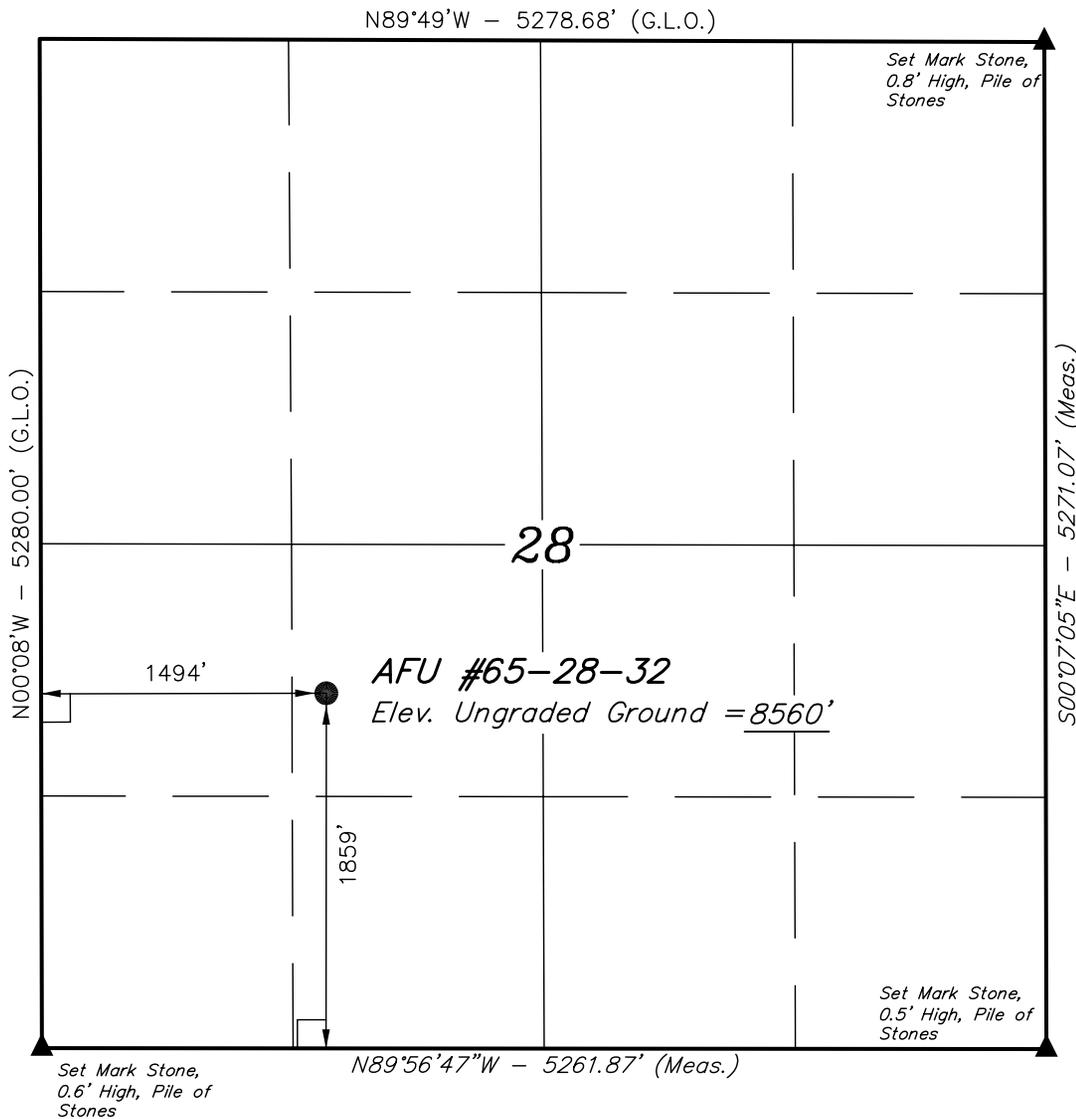
**CHOKE LINE**

- Valves #4 & 5 – Flanged minimum 3" bore  
Full working pressure of BOP
- (Note: An HCR can be used instead of Valve # 5)

**GENERAL RULES AND RECOMMENDATIONS**

All lines to manifold are to be at right angles (90 deg.). No 45 deg. angles are to be used.  
Blind flanges are to be used for blanking.  
All studs and nuts are to be installed on all flanges.

# T6S, R5W, U.S.B.&M.



## Vantage Energy Uinta LLC

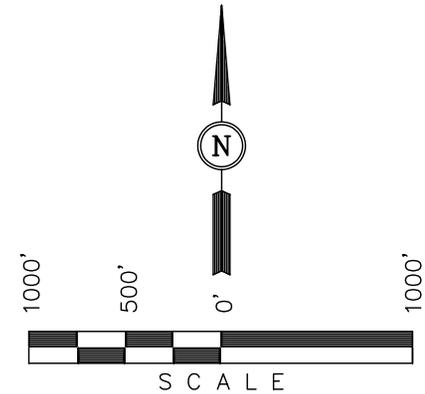
Well location, AFU #65-28-32, located as shown in the NE 1/4 SW 1/4 of Section 28, T6S, R5W, U.S.B.&M., Duchesne County, Utah.

### BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M. TAKEN FROM THE DUCHESNE SE QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM 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.

*Robert L. Kay*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH

**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

### LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(NAD 83)  
 LATITUDE = 39°55'43.26" (39.928683)  
 LONGITUDE = 110°27'24.30" (110.456750)  
 (NAD 27)  
 LATITUDE = 39°55'43.40" (39.928722)  
 LONGITUDE = 110°27'21.74" (110.456039)

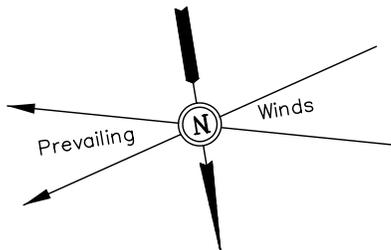
SCALE 1" = 1000'	DATE SURVEYED: 08-20-08	DATE DRAWN: 10-31-08
PARTY M.A. N.F. S.P.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE Vantage Energy Uinta LLC	

Vantage Energy Uinta LLC

LOCATION LAYOUT FOR

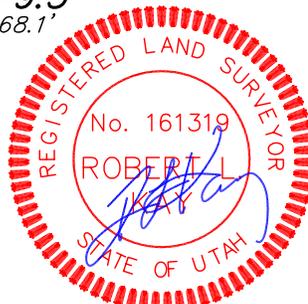
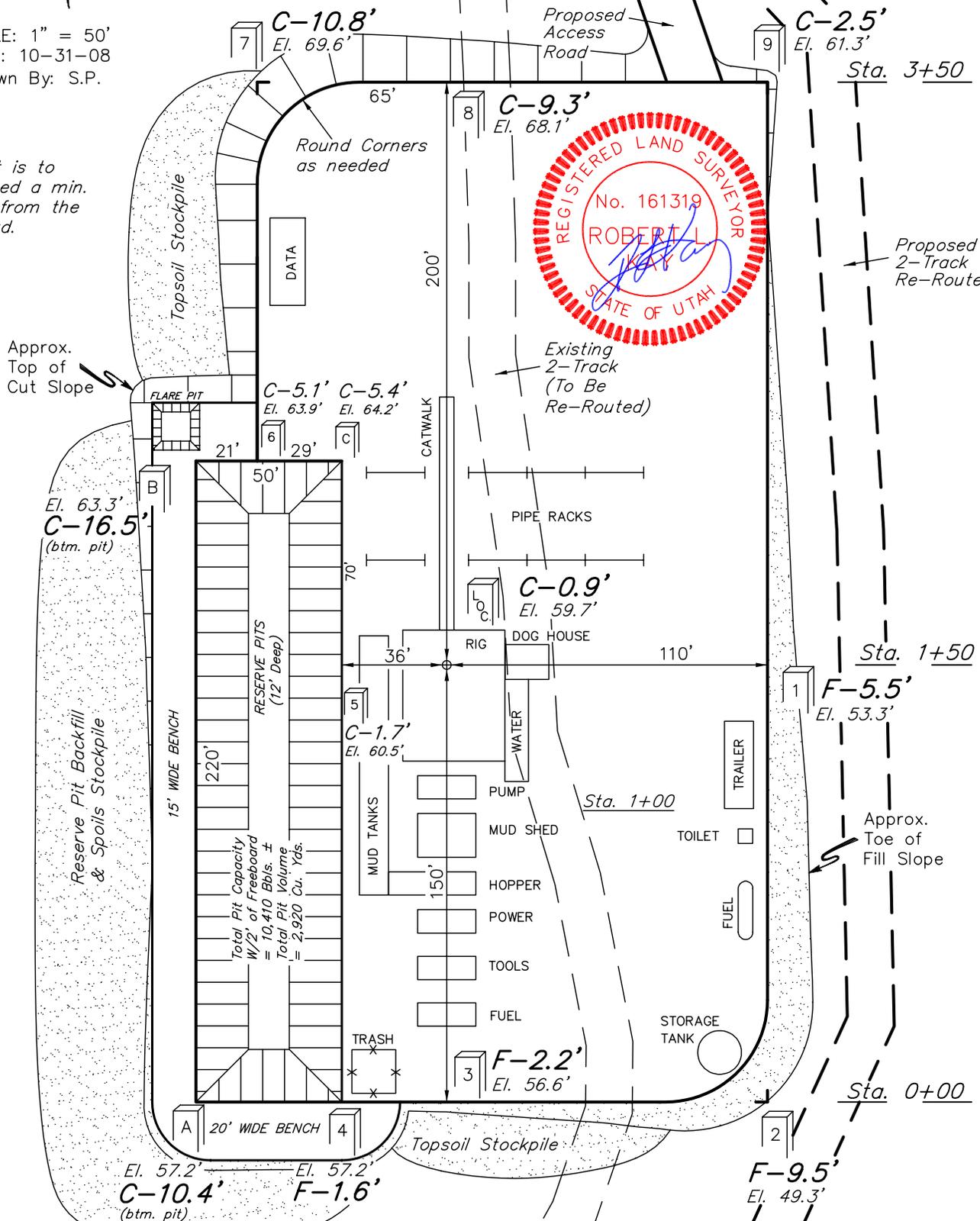
AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL

FIGURE #1



SCALE: 1" = 50'  
DATE: 10-31-08  
Drawn By: S.P.

NOTE:  
Flare Pit is to be located a min. of 100' from the Well Head.



Elev. Ungraded Ground at Location Stake = 8559.7'  
Elev. Graded Ground at Location Stake = 8558.8'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

Vantage Energy Uinta LLC

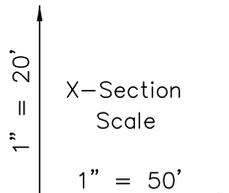
TYPICAL CROSS SECTIONS FOR

AFU #65-28-32

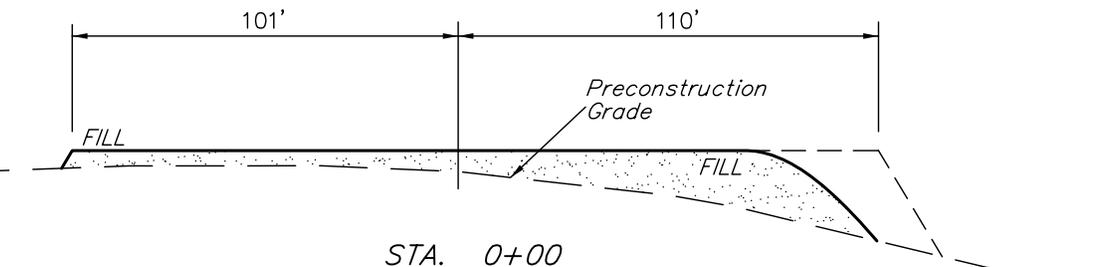
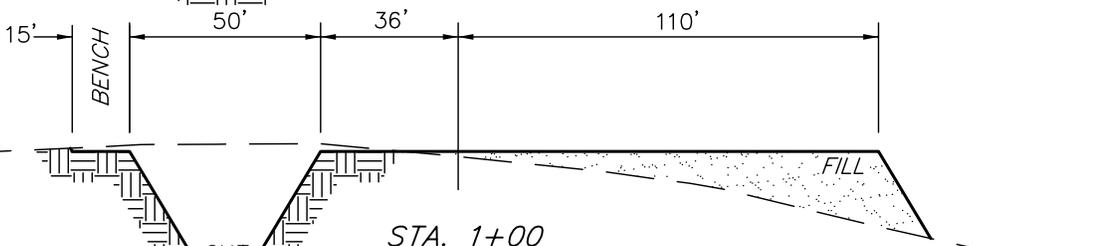
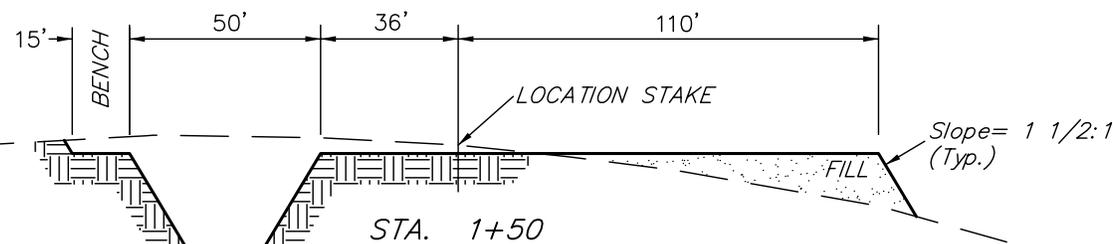
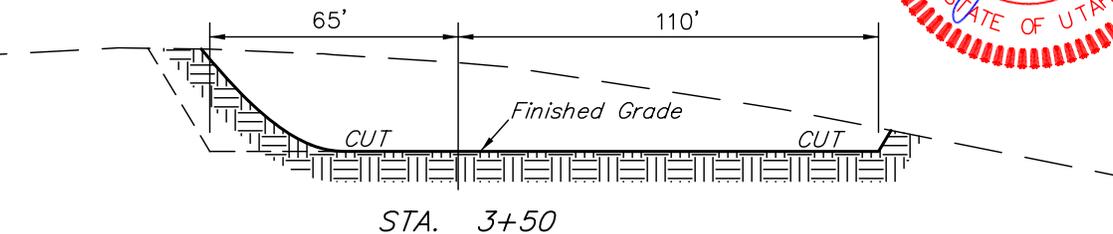
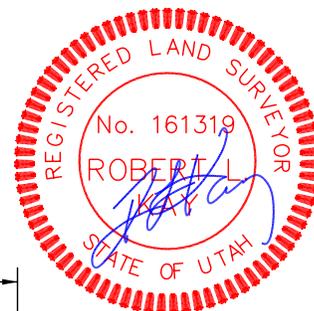
SECTION 28, T6S, R5W, U.S.B.&M.

1859' FSL 1494' FWL

FIGURE #2



DATE: 10-31-08  
Drawn By: S.P.



NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ± 2.212 ACRES  
ACCESS ROAD DISTURBANCE = ± 0.145 ACRES  
ACCESS ROAD RE-ROUTE DISTURBANCE = ± 0.455 ACRES  
TOTAL = ± 2.812 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 1,540 Cu. Yds.  
Remaining Location = 8,020 Cu. Yds.  
TOTAL CUT = 9,560 CU.YDS.  
FILL = 4,370 CU.YDS.

EXCESS MATERIAL = 5,190 Cu. Yds.  
Topsoil & Pit Backfill (1/2 Pit Vol.) = 3,000 Cu. Yds.  
EXCESS UNBALANCE (After Interim Rehabilitation) = 2,190 Cu. Yds.

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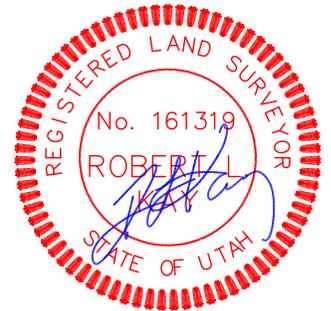
Vantage Energy Uinta LLC  
PRODUCTION FACILITY LAYOUT FOR

FIGURE #3

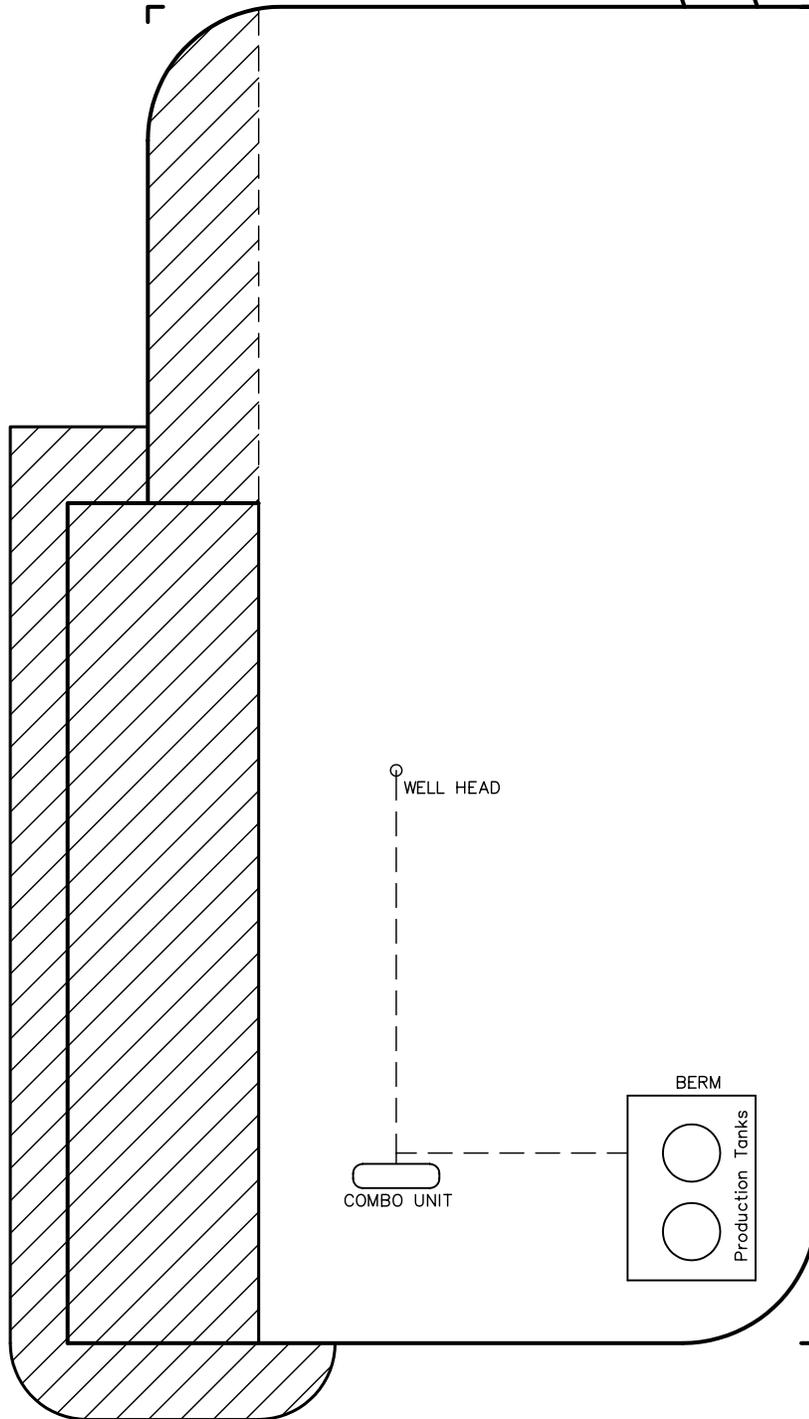
AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL



SCALE: 1" = 50'  
DATE: 10-31-08  
Drawn By: S.P.



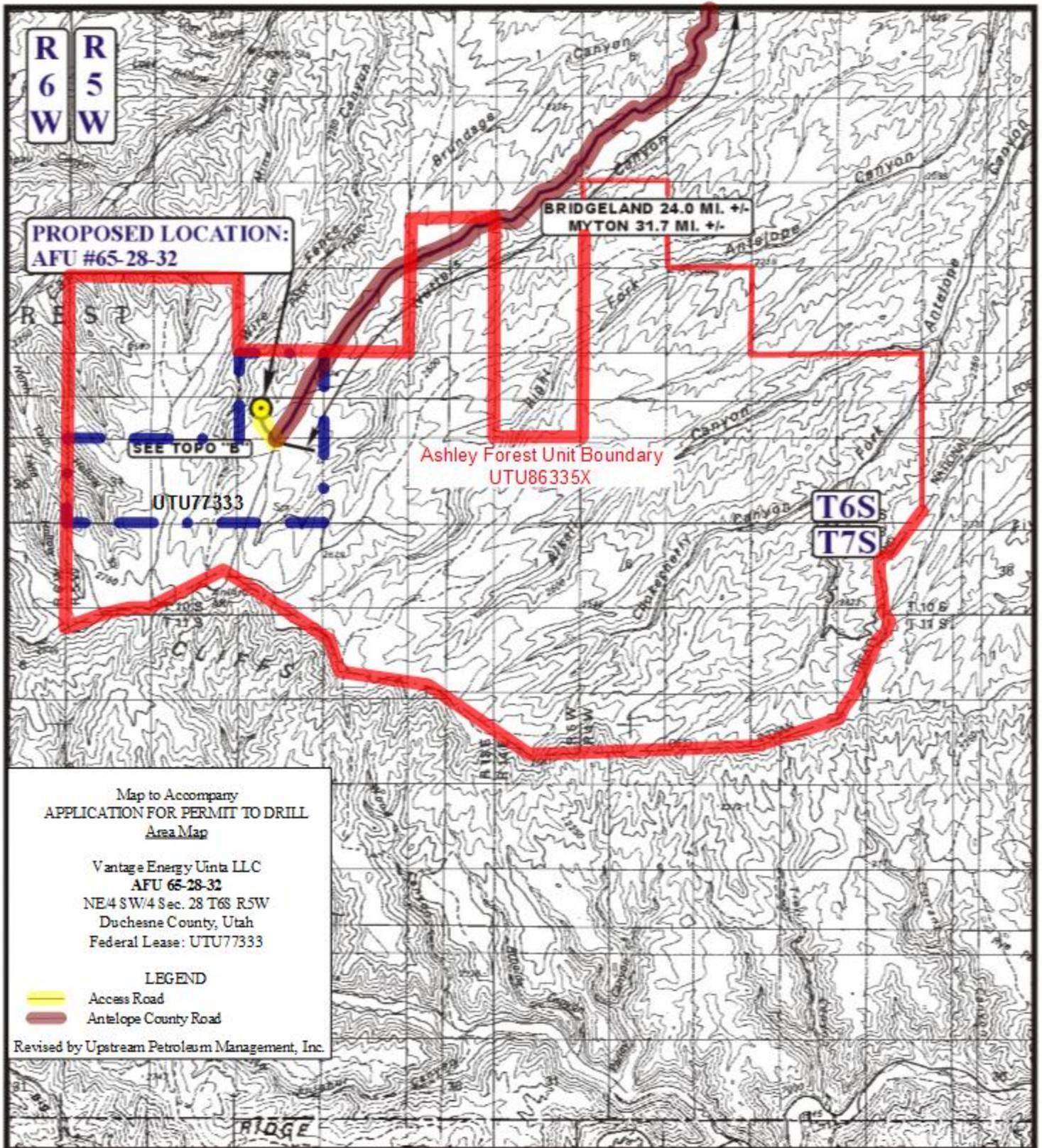
Access Road



 RE-HABED AREA

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

RECEIVED: Mar. 28, 2013



Map to Accompany  
APPLICATION FOR PERMIT TO DRILL  
Area Map

Vantage Energy Uinta LLC  
AFU 65-28-32  
NE 4 SW/4 Sec. 28 T6S R5W  
Duchesne County, Utah  
Federal Lease: UTU77333

LEGEND

-  Access Road
-  Antelope County Road

Revised by Upstream Petroleum Management, Inc.

LEGEND:

-  PROPOSED LOCATION



Vantage Energy Uinta LLC

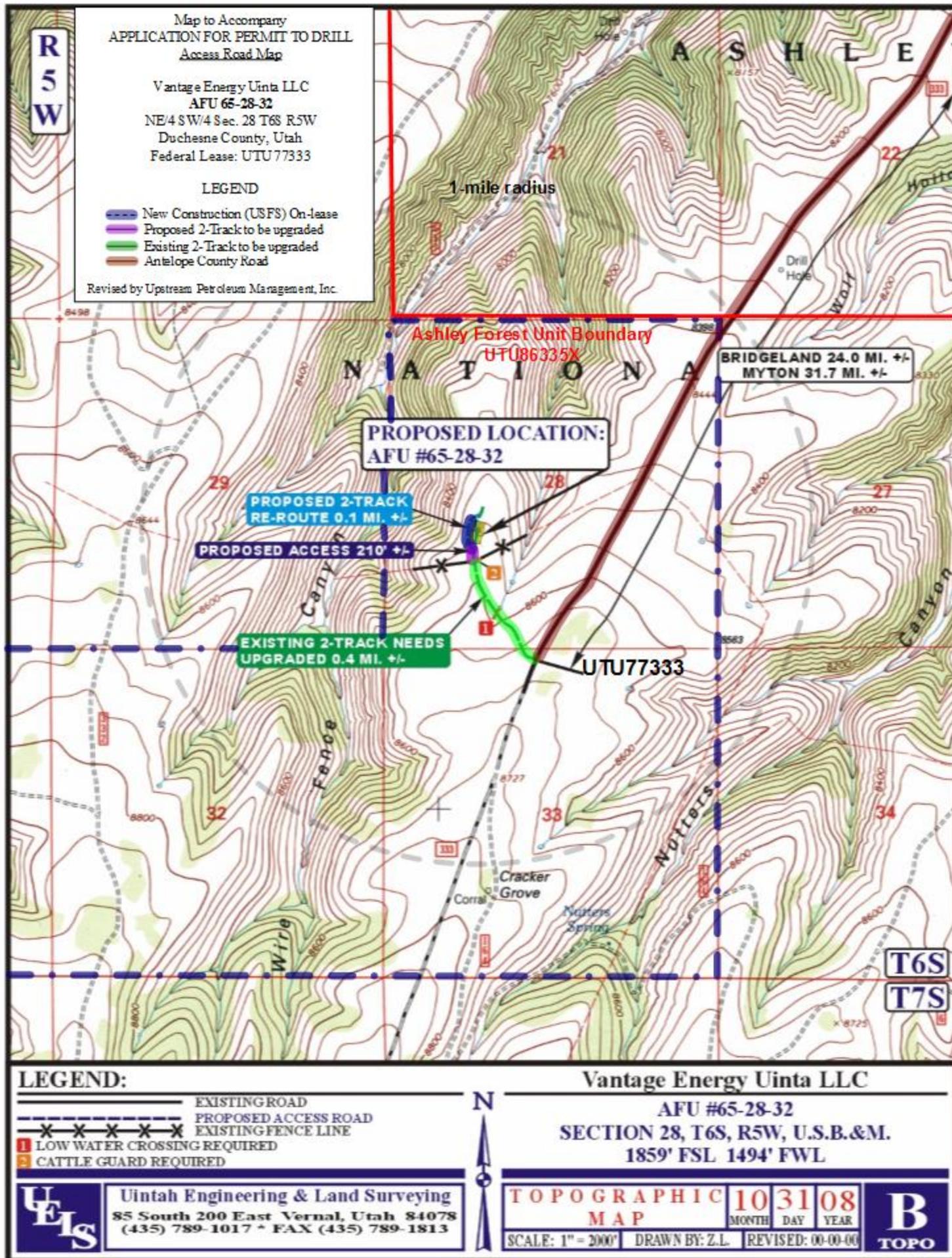
AFU #65-28-32  
SECTION 28, T6S, R5W, U.S.B.&M.  
1859' FSL 1494' FWL



Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC MAP  
10 31 08  
MONTH DAY YEAR  
SCALE: 1:100,000 DRAWN BY: Z.L. REVISED: 00-00-00







DIVISION OF OIL, GAS & MINING  
1594 W. N. Temple STE 1210  
Salt Lake City, UT 84114-5801  
Attn: Ms. Diana Mason

March 28, 2013

Dear Ms. Mason:

In reference to the State Oil and Gas Conservation rule R649-3-3, Vantage Energy Uinta LLC ("Vantage"), requests an exception location for the AFU #65-28-32 well. The exception is requested as a result of topographic considerations resulting in the well being located at a surface location of 1,494' FWL, 1,859' FSL of Section 28, Township 6 South, Range 5 West, U.S.B. & W., Duchesne County, Utah.

Ownership is consistent within 460' of the proposed location. Vantage makes this request on behalf of the working interest owners in its authority as Unit Operator of the Ashley Forest Federal Unit (UTU-86335X).

Thank you for your attention to this matter. If you have questions or if I may be of further assistance, please call me at 303-386-8638.

Sincerely,  
VANTAGE ENERGY UINTA LLC

Michael Holland  
Senior Landman

Cc: mth, jm, su, wm, Kim Rodell, Andrea Goss

<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> UTU77333	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>7. UNIT or CA AGREEMENT NAME:</b> ASHLEY FOREST	<b>8. WELL NAME and NUMBER:</b> AFU 65-28-32
<b>1. TYPE OF WELL</b> Gas Well	<b>9. API NUMBER:</b> 43013513240000
<b>2. NAME OF OPERATOR:</b> VANTAGE ENERGY UINTA LLC	<b>9. FIELD and POOL or WILDCAT:</b> UNDESIGNATED
<b>3. ADDRESS OF OPERATOR:</b> 116 Inverness Drive East, Ste 107 , Englewood , CO, 80112	<b>PHONE NUMBER:</b> 303 386-8600 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1859 FSL 1494 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 28 Township: 06.0S Range: 05.0W Meridian: U	<b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>5/15/2015</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<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 checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Vantage Energy Uinta LLC requests an extension to the Application for Permit to Drill for the maximum amount of time allowed. Thank you.

**Approved by the**  
**April 20, 2015**  
**Oil, Gas and Mining**

**Date:** \_\_\_\_\_  
**By:**

<b>NAME (PLEASE PRINT)</b> Kimberly Rodell	<b>PHONE NUMBER</b> 303 941-0506	<b>TITLE</b> President
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/16/2015	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43013513240000**

API: 43013513240000

Well Name: AFU 65-28-32

Location: 1859 FSL 1494 FWL QTR NESW SEC 28 TWNP 060S RNG 050W MER U

Company Permit Issued to: VANTAGE ENERGY UINTA LLC

Date Original Permit Issued: 4/5/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
  
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?  Yes  No
  
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes  No
  
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
  
- Has the approved source of water for drilling changed?  Yes  No
  
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?  Yes  No
  
- Is bonding still in place, which covers this proposed well?  Yes  No

Signature: Kimberly Rodell

Date: 4/17/2015

Title: President

Representing: VANTAGE ENERGY UINTA LLC



## United States Department of the Interior

### BUREAU OF LAND MANAGEMENT

Green River District  
Vernal Field Office  
170 South 500 East  
Vernal, UT 84078

<http://www.blm.gov/ut/st/en/fo/vernal.html>



JUL 15 2015

IN REPLY REFER TO:  
3160 (UTG011)

Michael Holland  
Vantage Energy  
116 Inverness Drive East, Suite 107  
Englewood, CO 80112

43-013-51324

Re: Return APD  
Well No. AFU 65-28-32  
NESW, Sec. 28, T6S, R5W  
Duchesne County, Utah  
Lease No. UTU-77333  
Ashley Forest Unit

RECEIVED

AUG 03 2015

DIV. OF OIL, GAS & MINING

Dear Mr. Holland:

The Application for Permit to Drill (APD) for the above referenced well received in this office on February 24, 2008, is being returned unapproved due to the lease not being reinstated and was closed, effective July 7, 2015. If you intend to drill at this location at a future date, a new APD must be submitted.

If you have any questions regarding APD processing, please contact Robin R. Hansen at (435) 781-3428.

Sincerely,

/s/ Jerry Kenczka

Jerry Kenczka  
Assistant Field Manager  
Lands & Resource Minerals

Enclosures

cc: UDOGM

bcc: Well File



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*

June 7, 2016

Vantage Energy Uinta LLC.  
116 Inverness Drive East, Ste 107  
Englewood, CO 80112

Re: APDs Rescinded for Vantage Energy Uinta, LLC, Duchesne County

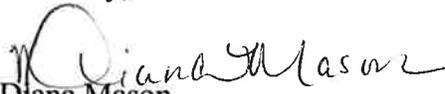
Ladies and Gentlemen:

Enclosed find the list of APDs that is being rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded as of June 7, 2016.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

Wild Horse 1-11	43-013-51305
AFU 64-18-41	43-013-51325
AFU 64-19-11	43-013-51327
Quitchampau 1-15	43-013-51330
AFU 65-28-32	43-013-51324