

**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> BW 5G-16-10-16				
<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> WILDCAT				
<b>4. TYPE OF WELL</b> Oil Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> KRAKEN (GR)				
<b>6. NAME OF OPERATOR</b> QEP ENERGY COMPANY						<b>7. OPERATOR PHONE</b> 303 308-3068				
<b>8. ADDRESS OF OPERATOR</b> 11002 East 17500 South, Vernal, Ut, 84078						<b>9. OPERATOR E-MAIL</b> debbie.stanberry@questar.com				
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU-65777			<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 type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" 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 type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
<b>20. LOCATION OF WELL</b>		<b>FOOTAGES</b>		<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>		
LOCATION AT SURFACE		1955 FNL 629 FWL		SWNW	16	10.0 S	16.0 E	S		
Top of Uppermost Producing Zone		1955 FNL 629 FWL		SWNW	16	10.0 S	16.0 E	S		
At Total Depth		1700 FNL 911 FEL		SENE	20	10.0 S	16.0 E	S		
<b>21. COUNTY</b> DUCHESNE			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 629			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1920				
<b>27. ELEVATION - GROUND LEVEL</b> 6224			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 0			<b>26. PROPOSED DEPTH</b> MD: 10437 TVD: 5180				
			<b>28. BOND NUMBER</b> ESB000024			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> A36125 - 49-2153				
<b>Hole, Casing, and Cement Information</b>										
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Length</b>	<b>Weight</b>	<b>Grade &amp; Thread</b>	<b>Max Mud Wt.</b>	<b>Cement</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>
Surf	12.25	9.625	0 - 480	36.0	J-55 ST&C	0.0	Rockies Lite	170	1.81	13.5
I1	8.75	7	0 - 4800	26.0	N-80 LT&C	9.0	50/50 Poz	815	1.24	14.35
<b>ATTACHMENTS</b>										
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input 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 checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
<b>NAME</b> Jan Nelson			<b>TITLE</b> Permit Agent			<b>PHONE</b> 435 781-4331				
<b>SIGNATURE</b>			<b>DATE</b> 08/05/2010			<b>EMAIL</b> jan.nelson@questar.com				
<b>API NUMBER ASSIGNED</b> 43013504160000					<b>APPROVAL</b>					

LOCATION OF LATERAL NUMBER 1	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
Location At Kickoff Point Depth: 4902	1955 FNL 629 FWL	SWNW	16	10.0 S	16.0 E	S
Top of Uppermost Producing Zone	1955 FNL 629 FWL	SWNW	16	10.0 S	16.0 E	S
At Total Depth	1700 FNL 911 FEL	SENE	20	10.0 S	16.0 E	S
COUNTY DUCHESNE		DISTANCE TO NEAREST LEASE LINE (Feet) 629				
DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 0		PROPOSED DEPTH MD: 10437 TVD: 5180				

**Hole, Casing, and Cement Information**

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
L1	6.125	4.5	0 - 10437	11.6	N-80 LT&C	10.0	None	0	0.0	0.0

LOCATION OF LATERAL NUMBER 2	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
Location At Kickoff Point Depth: 4902	1955 FNL 629 FWL	SWNW	16	10.0 S	16.0 E	S
Top of Uppermost Producing Zone	1955 FNL 629 FWL	SWNW	16	10.0 S	16.0 E	S
At Total Depth	2499 FSL 883 FWL	NWSW	9	10.0 S	16.0 E	S
COUNTY DUCHESNE		DISTANCE TO NEAREST LEASE LINE (Feet) 629				
DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 0		PROPOSED DEPTH MD: 10437 TVD: 5180				

**Hole, Casing, and Cement Information**

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
L2	6.125	4.5	0 - 9656	11.6	N-80 LT&C	10.0	None	0	0.0	0.0

**QEP ENERGY COMPANY  
BW 5G-16-10-16  
1955' FNL 629' FWL  
SWNW, SECTION 16, T10S, R16E  
DUCHESNE COUNTY, UTAH  
LEASE # ML-47000**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. Existing Roads:**

See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.

The proposed well site is located approximately 23 miles from Myton, Utah.  
-See attached TOPO Map "A".

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Existing roads will be maintained and repaired as necessary.

**2. Planned Access Roads:**

New access roads on State surface will be crowned (2 to 3%), ditched, and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet. Any additional disturbance required due to intersections or sharp curves will be discussed at the on-site and approved by the State.

Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. Surface disturbance and vehicular traffic will be limited to the approved location and access route or, as proposed by the Operator.

The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards.

If culverts are needed, the location and size of the culverts will be proposed during the on-site. The operator will clean and maintain approved culverts as needed. All drainage ditches and culverts will be kept clear and free-flowing and will be maintained according to original construction standards.

The access road disturbed area will be kept free of trash during operations. All traffic will be confined to the approved road running surface. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause excess siltation or accumulation of debris in the drainage nor shall the drainage be blocked by the roadbed.

Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Should mud holes develop, the holes shall be filled in and detours around the holes avoided.

When snow is removed from the road during the winter months, the snow should be pushed outside of the borrow ditches, and the turnouts kept clear so that snowmelt will be channeled away from the road.

Refer to Topo Map B for the location of the proposed access road.

**3. Location of Existing Wells Within a 1-Mile Radius:**

A map will be provided with the site-specific APD showing the location of existing wells within a one mile radius.

Please refer to Topo map C.

**4. Location of Existing and Proposed Facilities:**

The following guidelines will apply if the well is productive.

- A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed.
- All loading lines will be placed inside the berm surrounding the tank batteries.
- All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a color approved by the State.

**5. Location and Type of Water Supply:**

Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

## **7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

It will be determined at the on-site inspection if a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced liner, a minimum of 20 millimeters thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order # 7, all produced water will be contained in tanks on location and then hauled to Wonsits Valley water injection station located in the SWNW Section 12, T8S, R21E; or, the Red Wash disposal well located in the NESW, Section 28, T7S, R22E; or, the Red Wash Central Battery Disposal located in SWSE, Section 27, T7S, R23E, or third-party surface evaporative pits.

Produced water, oil, and other byproducts will not be applied to roads or well pads for control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

A chemical porta-toilet will be furnished with the drilling rig. The chemical porta-toilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APD's shall address any modifications from this policy.

**8. Ancillary Facilities:**

This will be an independent well location. Product will be contained in two 500 bbl tanks and then transported from location to delivery site.

A suitable muffler will be installed on pumping unit to help reduce noise control.

**9. Well Site Layout:**

A Location Layout Diagram describing drill pad cross-sections, cuts and fills, and locations of mud tanks, reserve pits, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and the surface material stockpile(s) will be included with the site specific APD.

Please see the attached diagram rig orientation, parking areas, and access roads, as well as the location of the following:

- The reserve pit.
- The stockpiled topsoil (first six inches), will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with the topsoil.
- The flare pit or flare box will be located downwind from the prevailing wind direction.
- Any drainage that crosses the well location will be diverted around the location by using ditches, water diversion drains or berms. If deemed necessary at the on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

**10. Fencing Requirements:**

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

- 39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched using a stretching device before it is attached to corner posts.
- The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If drilling operations does not commence within 3 days, the fourth side of the fence will be installed.

## **11. Reclamation Plan:**

### **Long-Term Reclamation**

Long-term reclamation will be conducted on all disturbed areas no longer required for field operations. This includes unnecessary portions of the well pads after completion and throughout the well's production period, road outcrops, and pipeline corridors. Long-term reclamation will be conducted on pads and roads for non-producing wells and on pads for wells that have reached the end of their productive life (includes facility removal and complete well pad and access road reclamation). Because long-term reclamation will occur throughout the life of the project, this plan does not differentiate between "interim" and "final" reclamation. All long-term reclamation is considered final unless monitoring shows the need for additional reclamation action. Long-term reclamation will return as much of the well pad as possible to its predisturbance condition as quickly as possible. Long-term reclamation will increase habitat patch sizes and reduce habitat fragmentation for sagebrush obligate species.

### **Temporary Reclamation, Soil Stabilization, and Erosion Control**

Topsoil that will be stored more than 2 years before long-term reclamation begins will be stabilized and windrowed, where possible, to a depth of 2 – 3 feet at a specified location near the margin of the well site as determined at the on-site inspection.

- Windrowed topsoil will then be broadcast-seeded with an approved seed mixture and raked or dragged with a chain, immediately after windrowing.
- Other erosion control techniques will be applied where necessary and may include:

- diversion ditch design and construction
- sediment control basin design and construction
- straw or hay bale check dams
- rock check dams
- sediment fence
- energy dissipaters

All runoff and erosion control structures will be inspected, maintained, and cleaned-out by the Operator on a regular basis throughout the life of the project. Inspections will occur after runoff events (e.g., spring runoff, storm events).

### Topsoil and Spoil Handling

Topsoil will be salvaged from all proposed disturbance areas and stockpiled separately from subsoil materials. Topsoil salvaged from the reserve pit will be stockpiled separately near the reserve pit.

Topsoil stockpiles will be adequately protected until replaced on the surface during reclamation. Temporary erosion control measures such as temporary vegetation cover, application of mulch, netting, or soil stabilizers may be used in some areas to minimize wind and water erosion and sedimentation prior to vegetation establishment.

### **Surface Preparation**

#### Backfilling, Grading, and Contouring

Areas to be reclaimed will be graded to approximate original contours and to blend in with adjacent topography. Area-wide drainage will be restored so that surface runoff flows and gradients are returned to the condition present prior to development. Graded surfaces will be suitable for the replacement of a uniform depth of topsoil, will promote cohesion between subsoil and topsoil layers, will reduce wind erosion, and will facilitate moisture capture. Specialized grading techniques may be applied, if warranted, and could include slope rounding, bench grading, stair-step grading/terracing, and/or contour furrowing.

Dozers, loaders, scrapers, and motor graders are typically used for backfilling and grading.

#### Reserve Pit Evaporation

After the well has been completed and is put into production, the reserve pit will be evaporated. Depending on the time of year and precipitation accumulations, the reserve pit may evaporate naturally. If the reserve pit will not evaporate naturally within one summer season (i.e., June – August) after drilling is completed, alternative evaporation techniques may be applied. Some alternative techniques may include:

- Trickle Systems
- Evaporation Mistlers and Aerators
- Evaporation Ponds (with approved regulatory filings)
- Pit Solidification

- **Water Hauling**
  - Haul non-reusable water to an approved disposal facility.
  - Haul or polypipe re-useable water to another reserve pit to be used in the drilling process; water filters may be used if necessary.

Once the reserve pit is as dry as possible, all debris in the pit will be removed. Excess pit liner will be cut off and removed and the remaining liner will be torn and perforated while backfilling the pit. The liner will be buried to a minimum of 4 feet deep. The reserve pit will be backfilled and recontoured to blend with the natural landscape. The reserve pit will be crowned convexly to allow for settling and prevent standing water.

### Ripping and Discing

Compacted areas such as roads and well pads will be ripped to a depth of 12 – 18 inches to improve soil aeration, water infiltration, and root penetration. Ripped areas will be disced, if necessary, to fill in deep furrows (where topsoil would be lost) and break up large clods (to which topsoil will not adhere).

Motor graders or tractors equipped with ripping shanks are typically used for ripping. Ripper shanks will be set approximately 1 – 2 feet apart. Discing is typically accomplished using a tractor-drawn disc set 2 – 6 inches deep.

### **Seedbed Preparation**

Seedbed preparation maximizes seeding efficiency and improves reclamation success. It includes topsoil replacement and various cultivation techniques. Cultivation techniques may include one or more of the following:

- plowing
- chisel plowing
- discing
- chaining
- rotary hoeing
- harrowing
- cultipacking
- extreme surface roughening
- pitting

### Topsoil Replacement

Waterbars and erosion control devices will be installed on reclaimed areas prior to topsoil replacement, as necessary, to control topsoil erosion. Stockpiled topsoil will be redistributed uniformly on areas to be reclaimed.

Topsoil is typically replaced using scrapers, dozers, and/or motor graders.

### Seeding

Once the topsoil is replaced, seeding will occur generally between September 15 and freeze-up. If fall seeding is not feasible, seeding may occur between spring thaw and

May 15. Seeding will not be applied to wet or frozen ground. In this circumstance, seeding will take place when the ground dries or thaws to the point where soils are friable.

Reclaimed areas will be seeded with seed mixtures that will restore disturbed sites so that they closely resemble pre-disturbance plant communities. Seed mixtures will be developed based on the following criteria: general conditions within the analysis area, species adaptations to site condition, usefulness of the species for rapid site stabilization, species success in past revegetation efforts, and seed costs and availability.

The seed mixture and seeding rates will be recommended by the State authorized officer (AO) at the on-site inspection and included in the Application for Permit to Drill (APD) or Right-of-Way (ROW). Alternative species and seeding rates may be used at the Operator's discretion with State approval, if warranted by site-specific conditions or seed availability, provided that the alternative species/seeding rates facilitate achieving reclamation success and all modifications are documented.

Seed mixtures will be certified weed-free.

Seed will be drilled on the contour to an appropriate depth. When drill-seeding is not practical due to steep slopes or rocky surfaces, seeding rates would be doubled, seed would be broadcast, and the area would be raked, "walked" with tracked equipment, or dragged with a chain or harrow to cover seed.

### **Mulching**

Dry mulch may be considered as one method to enhance the reestablishment of desired plant communities. Where mulching is deemed appropriate, the reclaimed area will be uniformly mulched with certified weed-free grass, hay, small grain straw, wood fiber, and/or live mulch at a rate of 1.5 - 2 tons/acre. Alternatively, cotton, jute, or synthetic netting could be applied. Mulch will be crimped into the soil, tackified, or incorporated into erosion control blankets to prevent it from blowing or washing away and from entering waterways. Mulch will protect the soil from wind and water erosion, raindrop impact, and surface runoff and will help to hold seeds in place.

Alternative mulching techniques may be considered on steep slopes where it is unsafe to operate equipment, at sites where soils have 35 percent or more surface rock content, or on notably unstable areas. Alternative techniques may include hydromulch, biodegradable erosion control netting, or matting and will be firmly attached to the surface.

### **Monitoring**

QEP will monitor the success of interim and final reclamation. QEP will monitor the success of reclamation with documentation for 3 years. If QEP and an authorized officer for the State determine the reclamation has not been successful after the second growing season, QEP will take remedial action.

### **Debris**

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

## **Weed Control**

The Operator will be responsible for noxious and invasive weed control from all project activities for the life of project. If use of herbicides is deemed necessary by Operators, a Pesticide Use Permit will be submitted for approval to the BLM. Herbicides will be used only in the season or growth stage during which they are most effective. Herbicides will be applied only by certified personnel using approved precautionary and application procedures in compliance with all applicable federal, state, and local regulations. Herbicides will not be used within 100 feet of open water or during extremely windy conditions. Aerial application of herbicides will be prohibited within 0.25 mile of known special status plant species locations and hand application of herbicides will not occur within 500 feet of such occurrences. Certified weed-free seed mixtures and mulches will be used, thereby minimizing the potential for noxious weed introduction.

Mowing may be considered as an alternative to herbicide applications. Mowing would be implemented prior to seed head establishment or bloom.

A weed control program will be applied to all existing and proposed access roads, pipeline ROWs, and well pads. Weed control involves annual treatments that are monitored and continued until desirable vegetation out-competes invasive or noxious weeds.

## **Dry Hole/Abandoned Location**

On lands administered by the State abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions may include the reestablishment of irrigation systems; reestablishment of appropriate soil conditions; and, the reestablishment of vegetation as specified.

All disturbed surfaces will be recontoured to approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment.

At final abandonment, the Operator will cap the casing with a metal plate a minimum of 0.25 inch thick. The cap will be welded in place and the well location and identity will be permanently inscribed on the cap. The cap will be constructed with a weep hole. The depth of the permanent cap will be determined at the time of final abandonment. Long-term reclamation will then be applied and will follow the reclamation process described in this plan. When reclamation is deemed successful by the Operator and the State, the Operator will request a bond release.

### **12. Surface Ownership:**

The well pad and access road are located on lands owned by:  
State of Utah  
Trust Lands Administration  
675 East, 500 South – Suite 500  
Salt Lake City, UT. 84102

### **13. Other Information:**

Drilling rigs and/or equipment used during drilling operations will not be stacked or stored on Federal lands on State administered lands after the conclusion of drilling

operations or at any other time without authorization by the State Authorized Officer. If State authorization is obtained, such storage is only a temporary measure.

A Class III archeological survey was conducted by Montgomery Archaeology Consultants, **MOAC Report No.10-016**. A copy of the report was submitted directly to the appropriate agencies by Montgomery Archaeology Consultants. Cultural resource clearance has been recommended for this project. If these surveys identify areas with a high probability of encountering potentially significant subsurface archaeological sites, QEP would provide a qualified archaeologist to monitor surface disturbance. 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 Authorized Officer.

A paleontological survey was conducted by Intermountain Paleo Consulting. A copy of this report was submitted directly to the appropriate agencies by Stephen D. Sandau, **Report No. IPC 10-25**. The inspection for this project resulted in some signs of vertebrate fossils, therefore, we advise that a permitted paleontologist be present to monitor the beginning of the construction process. QEP will provide a qualified paleontologist to monitor surface disturbance.

**Lessee's or Operator's Representative & Certification:**

Jan Nelson  
Permit Agent  
QEP Energy Company  
11002 East 17500 South  
Vernal, UT 84078  
(435) 781-4331

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

QEP Energy Company is considered to be the operator of the subject well. QEP Energy Company agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104.2 for lease activities is being provided by Bond No. 965010695

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operations; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

  
\_\_\_\_\_  
Jan Nelson

8/4/2010  
\_\_\_\_\_  
Date

**From:** Jim Davis  
**To:** Bonner, Ed; Hill, Brad; Jan Nelson; Mason, Diana; kevin\_sadlier@blm.gov  
**CC:** Garrison, LaVonne  
**Date:** 9/14/2010 9:31 AM  
**Subject:** APD approval QEP's BW 5G-16-10-16

The following well has been approved by SITLA including arch clearance and paleo clearance with the following paleo stipulation: that a permitted paleontologist monitor all construction activities as recommended in IPC report 10-25.

QEP's BW 5G-16-10-16 (API: 4301350416), located in T10S, R16E, Sec. 16.

Note to BLM:

SITLA is allowing QEP to utilize SITLA surface lands at the proposed well pad for the purpose of producing BLM administered minerals within the Kraken Unit.

Thanks.

-Jim

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov  
Phone: (801) 538-5156

CONFIDENTIAL

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1  
 Approval of Operations on Onshore  
 Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

**1. Formation Tops**

The estimated top of important geologic markers are as follows:

SSW Lateral #1:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,100'	1,100'
Kick Off Point	4,902'	4,902'
HP Lime	5,379'	5,672'
TD	5,180'	10,437'

North Lateral #2:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,100'	1,100'
Kick Off Point	4,752'	4,752'
HP Lime	5,418'	5,674'
TD	5,571'	9,656'

**2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

SSW Lateral #1:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	HP Lime	5,379' – 5,180'	5,672' – 10,437'

North Lateral #2:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	HP Lime	5,418' – 5,571'	5,674' – 9,656'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

**3. Operator's Specification for Pressure Control Equipment**

- A. 3,000 psi double gate, 3,000 psi annular (schematic attached)
- B. Function test daily.
- C. All casing strings shall be pressure tested (0.22 psi/ft or 1,500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield of the casing.
- D. Ram type preventers and associated equipment shall be tested to rated working pressure if isolated by a test plug or to 50% of the internal yield pressure of casing, whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil & Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 3M system and individual components shall be operable as designed.

**4. Casing Program**

Hole Size	Casing Size	Top, MD	Bottom, MD	Weight, lb/ft	Grade	Thread	Condition	MW
17 1/2"	14"	sfc	40'	Steel	Cond.	None	Used	Air
12 1/4"	9 5/8"	sfc	480'	36.0	J-55	STC	New	Air
8 3/4"	7"	sfc	4,800'	26.0	N-80	LTC	New	8-10 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
9 5/8"	36.0 lb.	J-55	STC	2,020 psi	3,520 psi	394,000 lb.
7"	26.0 lb.	N-80	LTC	5,410 psi	7,240 psi	519,000 lb.

The Lateral's will be lined with casing.

SSW lateral #1:

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,780'	10,437'	11.6	N-80	8 – 10 ppg

North Lateral #2:

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,752'	9,656'	11.6	N-80	8 – 10 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
4 1/2"	11.6 lb.	N-80	LTC	6,350 psi	7,780 psi	223,000 lb.

Please refer to the attached wellbore diagram procedure for further details.

**5. Cementing Program**

**20" Conductor:**

Cement to surface with construction cement.

**9-5/8" Surface Casing: sfc – 480' (MD)**

**Lead/Tail Slurry:** 0' – 480'. 170 sks (310 cu ft) Rockies LT cement + 0.25 lb/sk Kwik Seal + 0.125 lb/sk Poly-E-Flake. Slurry wt: 13.5 ppg, Slurry yield: 1.81 ft<sup>3</sup>/sk, Slurry volume: 12-1/4" hole + 100% excess.

**7" Intermediate Casing: sfc – 4,800' (MD)**

**Lead/Tail Slurry:** Sfc – 4,800'. 815 sks (1010 cu ft) 50/50 Poz Premium + 0.6% Halad (R)-322 fluid loss + 2.0% Microbond M expander + 5% salt + 0.125 lb/sk Poly-E-Flake. Slurry wt: 14.35 ppg, Slurry yield: 1.24 ft<sup>3</sup>/sk, Slurry volume: 8-3/4" hole + 40% excess.

**SSW Lateral #1: 4,780' – 10,437' (MD)**

No cement, liner hung in open hole.

**North Lateral #2: 4,752' – 9,656' (MD)**

No cement, liner hung in open hole.

**6. Auxilliary Equipment**

- a. Kelly Cock – Yes

- b. Float at the bit – No
- c. Monitoring equipment on the mud system – visually and/or PVT or Flow Show
- d. Fully opening safety valve on the rig floor – Yes
- e. Rotating Head – Yes
- f. Request For Variance

Drilling the surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III Requirements, subsection E. Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is 500 feet and high pressures are not expected.

1. **Properly lubricated and maintained rotating head** – A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
2. **Blooiie line discharge 100 feet from wellbore and securely anchored** – the blooiie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.
3. **Automatic igniter or continuous pilot light on blooiie line** – a diffuser will be used rather than an automatic pilot/igniter. Water is injected into the compressed air and eliminates the need for a pilot light and the need for dust suppression equipment.
4. **Compressors located in the opposite direction from the blooiie line a minimum of 100 feet from the wellbore** – compressors located within 50 feet on the opposite side of the wellbore from the blooiie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valves on the compressors, 3) spark arrestors on the motors.
5. **Kill Fluid to control well** – In lieu of having mud products on location to kill the well for an unanticipated kick, Questar will kill the well with water contained in a 400 bbl tank on site. The 400 bbl water tank will also be storage for surface casing cement water.
6. **Deflector on the end of the blooiie line** – Questar will mount a deflector unit at the end of the blooiie line for the purpose of changing the direction and velocity of the air and cuttings flow into the reserve pit. Changing the velocity and direction of the cuttings and air will preserve the pit liner. In the event the deflector washes out due to erosion caused by the sand blasting effect of the cuttings, there will be no problem because the deflector is mounted on the very end of the blooiie. A washed out deflector will be easily replaced.

7. **Flare Pit** – there will be no need of a flare pit during the surface hole air drilling operation because the blooie line is routed directly to the reserve pit. When the big rig arrives for the main drilling after setting surface casing, a flare box will be installed and all flare lines will be routed to the flare box.

Drilling of the laterals will be done with fresh water NaCl based mud systems consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash, polymers, and NaCl. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used the concentration will be less than 4% by volume. Maximum anticipated mud weight is 10.0 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow show will be used upon exit of surface casing to TD.

Gas detector will be used upon exit of surface casing to TD.

## 7. **Testing, Logging, and Coring Program**

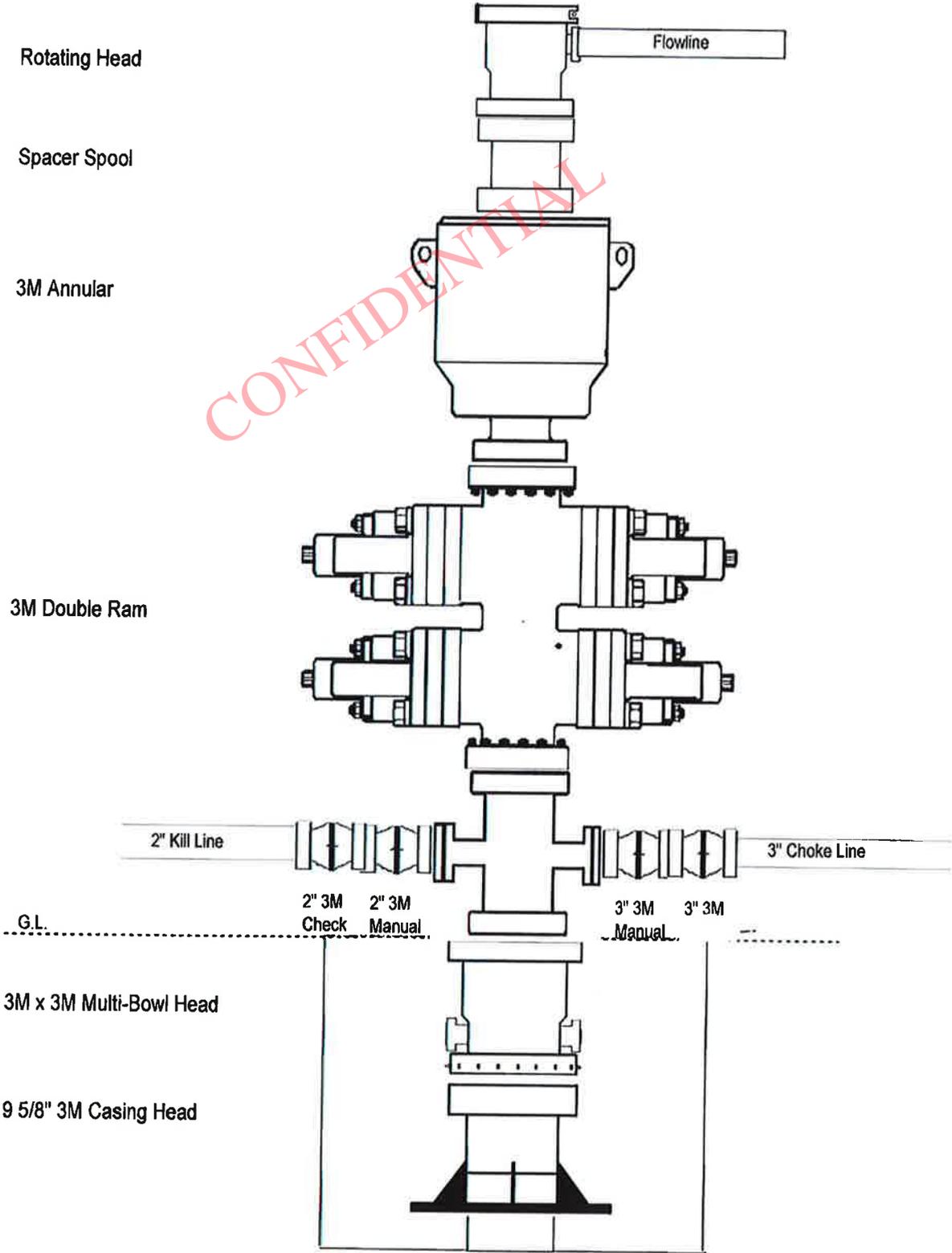
- a. Cores – None Anticipated
- b. DST – None Anticipated
- c. Logging:
  - i. Mud logging from casing exit to TD
  - ii. MWD-GR will be utilized during drilling operations to aid in landing the curve and maintaining the laterals within the desired zone.
- d. Formation and completion interval: G1 Lime interval, final determination of completion will be made by analysis of mud logging data. Stimulation: stimulation will be designed for the particular area of interest encountered.

## 8. **Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards**

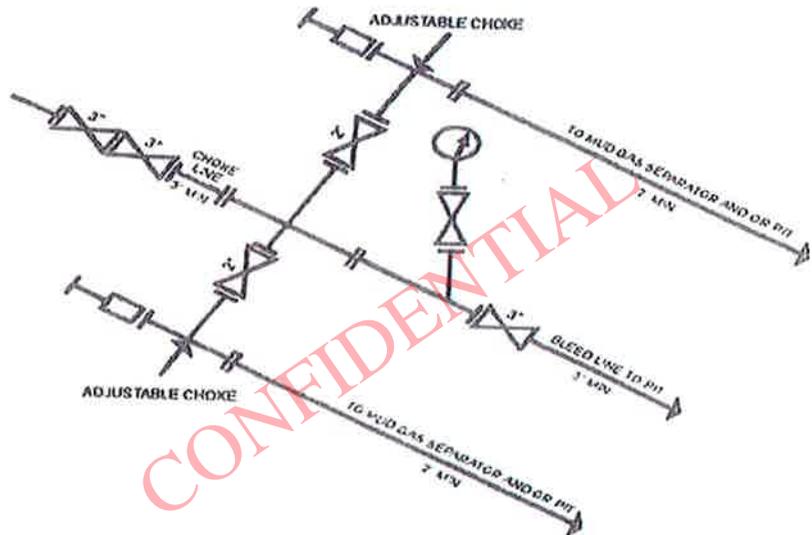
No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or is known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom-hole pressure equals approximately 2,897 psi. Maximum anticipated bottom hole temperature is approximately 150°F.

ONSHORE OIL & GAS ORDER NO. 1  
QEP ENERGY COMPANY

3M BOP STACK



ONSHORE OIL & GAS ORDER NO. 1  
QEP ENERGY COMPANY



**3M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY**  
[54 FR 39528, Sept. 27, 1989]

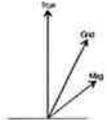
WELL	<b>BW 5G-16-10-16</b>	FIELD	<b>Uinta</b>	STRUCTURE	<b>Big Wash</b>
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<b>Magnetic Parameters</b> Model: IGRF 2010 Dip: 65.717° Mag Dec: +11.413° Date: October 06, 2010 FS: 52268.9 nT	<b>Surface Location</b> Lat: N99 56 44.790 Lon: W110 7 52.910 Northing: 7151907.89 NUS Easting: 2024107.93 NUS NAD83 Utah State Planes, Central Zone, US Feet Grid Conv: +0.87671900° Scale Fact: 0.999900684	<b>Miscellaneous</b> Skt: BW 5G-16-10-16 Plan: BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit TVD Ref: KB (6237.20 ft above MSL) Date: October 08, 2010
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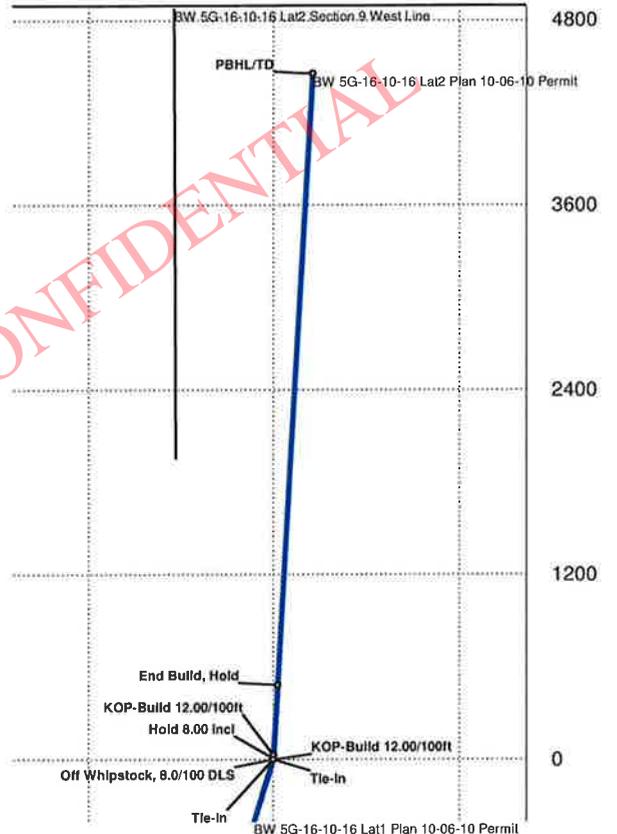


<<< W Scale = 1(in):1200(ft) E >>>  
-1200 0 1200

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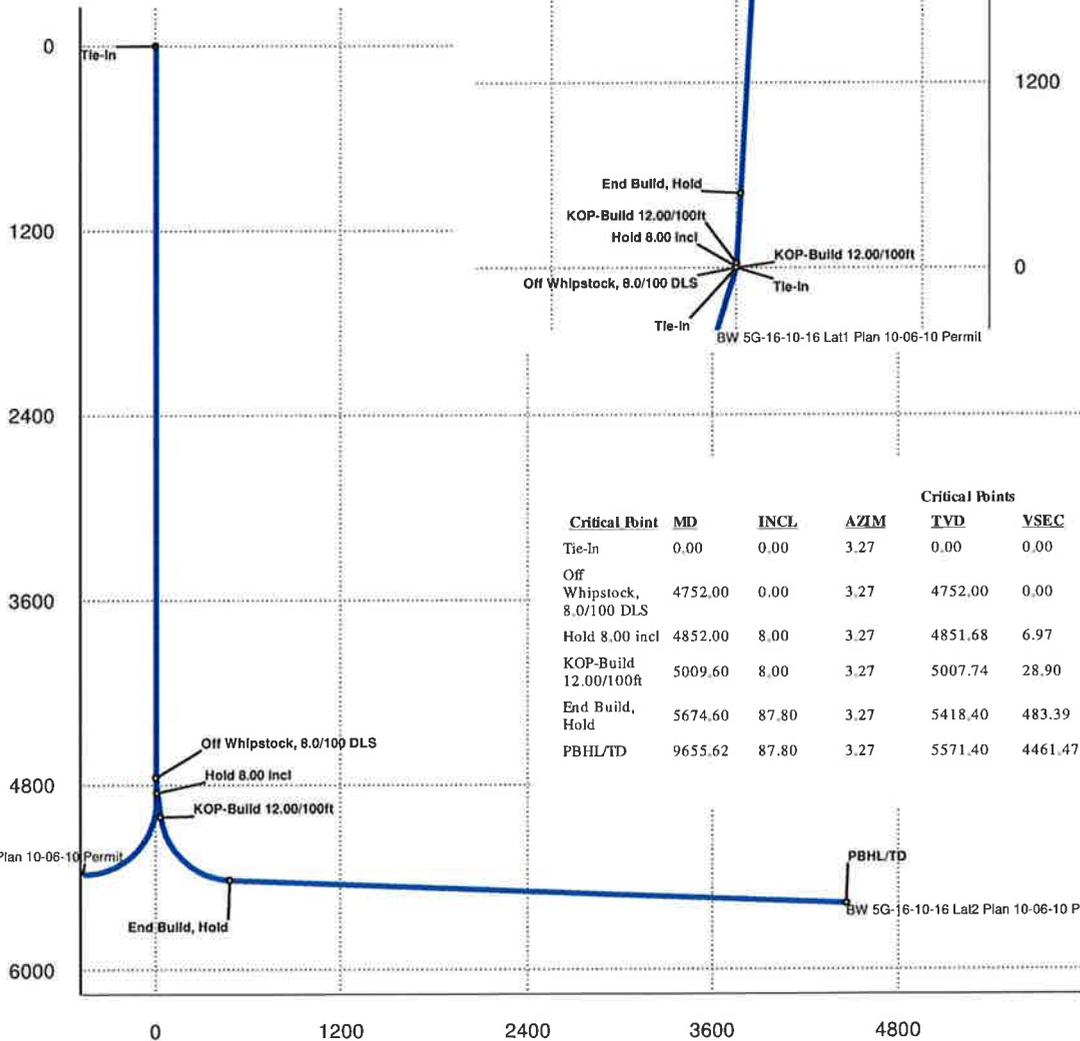


True North  
 Tot Corr (M->T  
 +11.4130°)  
 Mag Dec (+11.413°)  
 Grid Conv  
 (+0.87671900°)



<<< S Scale = 1 (in):1200 (ft) N >>>

TVD Scale = 1 (in):1200 (ft)



Critical Point	MD	INCL	AZIM	Critical Points				
				TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	3.27	0.00	0.00	0.00	0.00	
Off Whipstock, 8.0/100 DLS	4752.00	0.00	3.27	4752.00	0.00	0.00	0.00	0.00
Hold 8.00 incl	4852.00	8.00	3.27	4851.68	6.97	6.96	0.40	8.00
KOP-Build 12.00/100ft	5009.60	8.00	3.27	5007.74	28.90	28.86	1.65	0.00
End Build, Hold	5674.60	87.80	3.27	5418.40	483.39	482.61	27.57	12.00
PBHL/TD	9655.62	87.80	3.27	5571.40	4461.47	4454.21	254.49	0.00

BW 5G-16-10-16 Lat1 Plan 10-06-10 Permit

BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit

Vertical Section (ft) Azim = 3.27°, Scale = 1(in):1200(ft) Origin = 0 N/-S, 0 E/-W



# BW 5G-16-10-16 Lat1 Plan 10-06-10 Permit Proposal

<b>Report Date:</b> October 8, 2010 <b>Client:</b> QEP ENERGY <b>Field:</b> Uinta <b>Structure / Slot:</b> Big Wash / BW 5G-16-10-16 <b>Well:</b> BW 5G-16-10-16 <b>Borehole:</b> Lateral 1 <b>UWI/API#:</b> <b>Survey Name / Date:</b> BW 5G-16-10-16 Lat1 Plan 10-06-10 Permit / October 6, 2010 <b>Tort / AHD / DDI / ERD ratio:</b> 92.402° / 5258.36 ft / 5.974 / 0.977 <b>Grid Coordinate System:</b> NAD83 Utah State Planes, Central Zone, US Feet <b>Location Lat/Long:</b> N 39 56 44.790, W 110 7 52.910 <b>Location Grid N/E Y/X:</b> N 7151907.891 ftUS, E 2024107.926 ftUS <b>Grid Convergence Angle:</b> +0.87671900° <b>Grid Scale Factor:</b> 0.99990068	<b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski <b>Vertical Section Azimuth:</b> 197.040° <b>Vertical Section Origin:</b> N 0.000 ft, E 0.000 ft <b>TVD Reference Datum:</b> KB <b>TVD Reference Elevation:</b> 6237.2 ft relative to MSL <b>Sea Bed / Ground Level Elevation:</b> 6224.000 ft relative to MSL <b>Magnetic Declination:</b> 11.413° <b>Total Field Strength:</b> 52268.925 nT <b>Magnetic Dip:</b> 65.717° <b>Declination Date:</b> October 06, 2010 <b>Magnetic Declination Model:</b> IGRF 2010 <b>North Reference:</b> True North <b>Total Corr Mag North -&gt; True North:</b> +11.413° <b>Local Coordinates Referenced To:</b> Well Head
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)	Easting (ftUS)	Northing (ftUS)
Tie-In	0.00	0.00	197.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-162.96M	2024107.93	7151907.89
KOP-Build 12.00/100ft	4902.00	0.00	197.04	4902.00	0.00	0.00	0.00	0.00	0.00	0.00	-162.96M	2024107.93	7151907.89
End Build, Hold	5672.00	92.40	197.04	5379.05	497.46	-475.62	-145.77	497.46	197.04	12.00	177.24G	2023969.46	7151430.14
PBHL/TD	10437.08	92.40	197.04	5179.60	5258.36	-5027.52	-1540.91	5258.36	197.04	0.00	0.00G	2022644.27	7146857.89

**Survey Type:** Non-Def Proposal

**Survey Error Model:** SLB ISCWSA version 22 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

MD From (ft)	MD To (ft)	EOU Freq	Survey Tool Type
0.00	13.20	1/100.00	SLB_MWD-STD-Depth Only
13.20	10437.08	1/100.00	SLB_MWD-STD

**Borehole -> Survey**

Lateral 1 -> BW 5G-16-10-16 Lat1 Plan 10-06-10 Permit  
 Lateral 1 -> BW 5G-16-10-16 Lat1 Plan 10-06-10 Permit



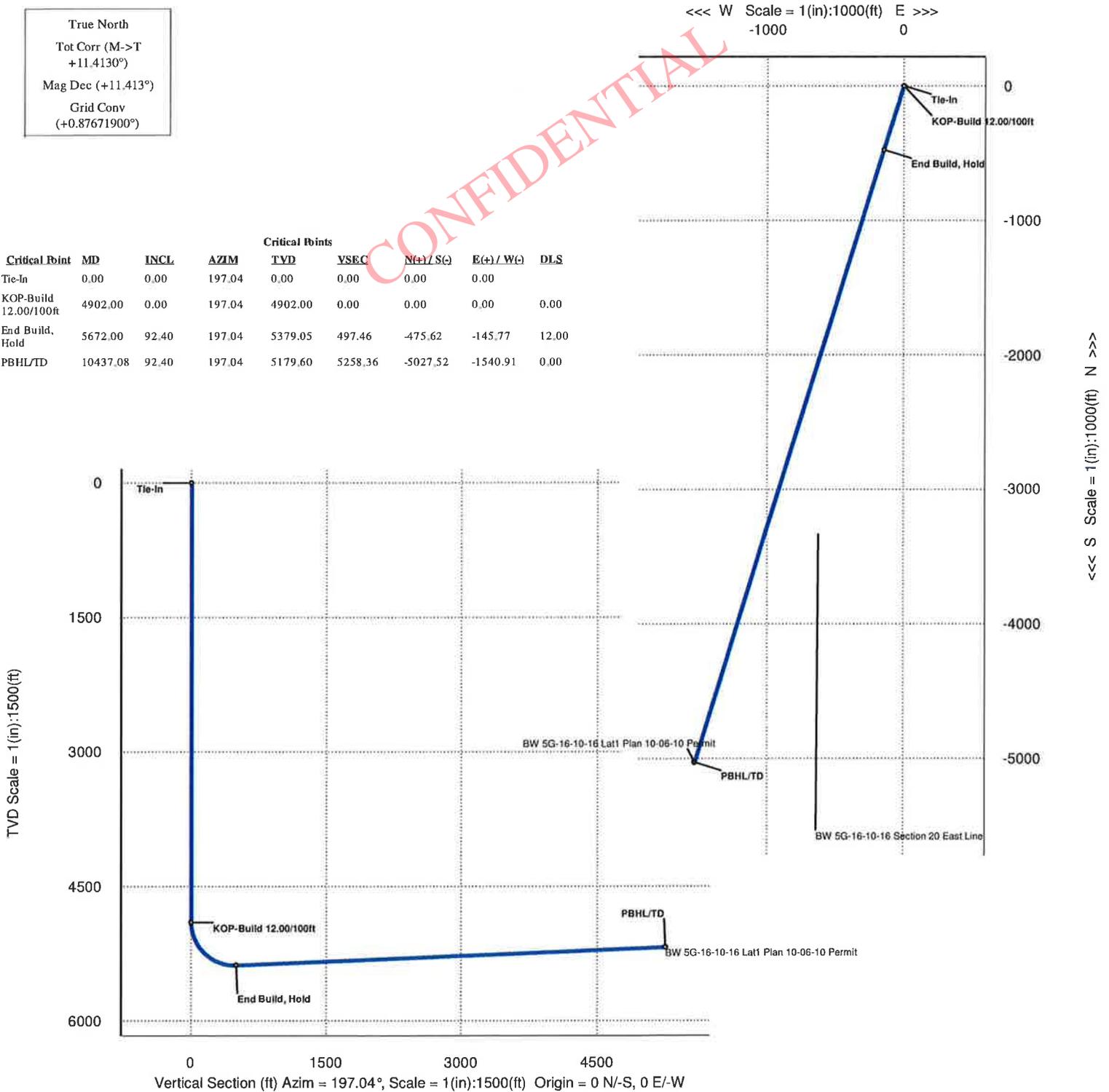
WELL: <b>BW 5G-16-10-16</b>		FIELD: <b>Uinta</b>	STRUCTURE: <b>Big Wash</b>
Magnetic Parameters Model: IGRF 2010	Dec: 65.717° Mag Dec: +11.413°	Date: October 06, 2010 FS: 52288.9 nT	Surface Location Lat: N99 56 44.790 Lon: W110 7 52.910
NADE3 Utah State Planes, Central Zone, US Feet Nothing: 2151907.89 NUS Easting: 2024107.93 NUS		Miscellaneous Sk: BW 5G-16-10-16 Plan: BW 5G-16-10-16 Lat1 Plan 10-05-10 Permit TVD Ref: KB (6237.20 ft above MSL) Date: October 06, 2010	



True North  
Tot Corr (M->T  
+11.413°)  
Mag Dec (+11.413°)  
Grid Conv  
(+0.87671900°)

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	197.04	0.00	0.00	0.00	0.00	
KOP-Build 12.00/100ft	4902.00	0.00	197.04	4902.00	0.00	0.00	0.00	0.00
End Build, Hold	5672.00	92.40	197.04	5379.05	497.46	-475.62	-145.77	12.00
PBHL/TD	10437.08	92.40	197.04	5179.60	5258.36	-5027.52	-1540.91	0.00

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# BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit Proposal

<b>Report Date:</b> October 8, 2010 <b>Client:</b> QEP ENERGY <b>Field:</b> Uinta <b>Structure / Slot:</b> Big Wash / BW 5G-16-10-16 <b>Well:</b> BW 5G-16-10-16 <b>Borehole:</b> Lateral 2 <b>UWI/API#:</b> <b>Survey Name / Date:</b> BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit / October 8, 2010 <b>Tort / AHD / DDI / ERD ratio:</b> 87.805° / 4461.47 ft / 5.832 / 0.801 <b>Grid Coordinate System:</b> NAD83 Ulah State Planes, Central Zone, US Feet <b>Location Lat/Long:</b> N 39 56 44.790, W 110 7 52.910 <b>Location Grid N/E Y/X:</b> N 7151907.891 ftUS, E 2024107.926 ftUS <b>Grid Convergence Angle:</b> +0.87671900° <b>Grid Scale Factor:</b> 0.99990068	<b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski <b>Vertical Section Azimuth:</b> 3.270° <b>Vertical Section Origin:</b> N 0.000 ft, E 0.000 ft <b>TVD Reference Datum:</b> KB <b>TVD Reference Elevation:</b> 6237.2 ft relative to MSL <b>Sea Bed / Ground Level Elevation:</b> 6224.000 ft relative to MSL <b>Magnetic Declination:</b> 11.413° <b>Total Field Strength:</b> 52268.925 nT <b>Magnetic Dip:</b> 65.717° <b>Declination Date:</b> October 06, 2010 <b>Magnetic Declination Model:</b> IGRF 2010 <b>North Reference:</b> True North <b>Total Corr Mag North -&gt; True North:</b> +11.413° <b>Local Coordinates Referenced To:</b> Well Head
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)	Easting (ftUS)	Northing (ftUS)
Tie-In	0.00	0.00	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27M	2024107.93	7151907.89
Off Whipstock, 8.0/100	4752.00	0.00	3.27	4752.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27M	2024107.93	7151907.89
DLS	4852.00	8.00	3.27	4851.68	6.97	6.96	0.40	6.97	3.27	8.00	0.00G	2024108.22	7151914.85
Hold 8.00 incl	5009.60	8.00	3.27	5007.74	28.90	28.86	1.65	28.90	3.27	0.00	0.00G	2024109.13	7151936.77
KOP-Build 12.00/100ft	5674.60	87.80	3.27	5418.40	483.39	482.61	27.57	483.39	3.27	12.00	179.41G	2024128.11	7152390.81
End Build, Hold	9655.62	87.80	3.27	5571.40	4461.47	4454.21	254.49	4461.47	3.27	0.00	0.00G	2024294.21	7156365.02
PBHL/TD													

**Survey Type:** Non-Def Proposal

**Survey Error Model:** SLB ISCWSA version 22 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

MD From (ft)	MD To (ft)	EQU Freq	Survey Tool Type
0.00	13.20	1/100.00	SLB_MWD-STD-Depth Only
13.20	9655.62	1/100.00	SLB_MWD-STD

**Borehole -> Survey**

Lateral 2 -> BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit  
 Lateral 2 -> BW 5G-16-10-16 Lat2 Plan 10-06-10 Permit

**BW 5G-16-10-16**

Updated 10-11-2010 JRD

API # 43-013-xxxxx

Proposed WBD

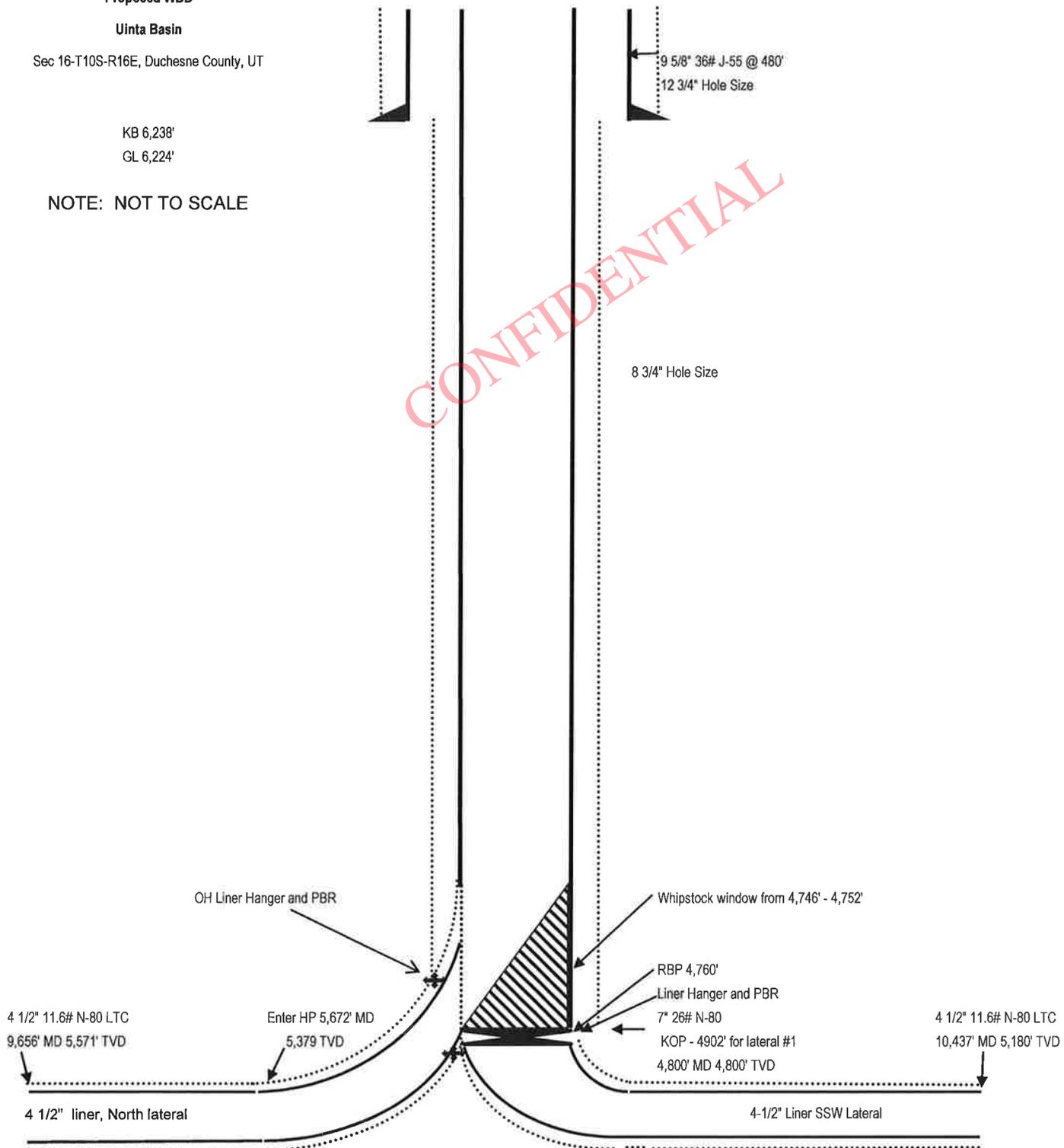
Uinta Basin

Sec 16-T10S-R16E, Duchesne County, UT

KB 6,238'

GL 6,224'

NOTE: NOT TO SCALE



# QUESTAR EXPLR. & PROD.

BW #5G-16-10-16

LOCATED IN DUCHESNE COUNTY, UTAH  
SECTION 16, T10S, R16E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHEASTERLY



Since 1964

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

LOCATION PHOTOS

03 01 10  
MONTH DAY YEAR

PHOTO

TAKEN BY: D.R.

DRAWN BY: Z.L.

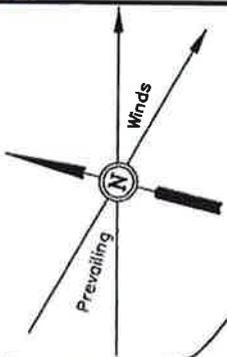
REVISED: 00-00-00

QUESTAR EXPLR. & PROD.

LOCATION LAYOUT FOR  
 BW #5G-16-10-16  
 SECTION 16, T10S, R16E, S.L.B.&M.  
 1955' FNL 629' FWL

FIGURE #1

SCALE: 1" = 60'  
 DATE: 02-23-10  
 DRAWN BY: C.C.

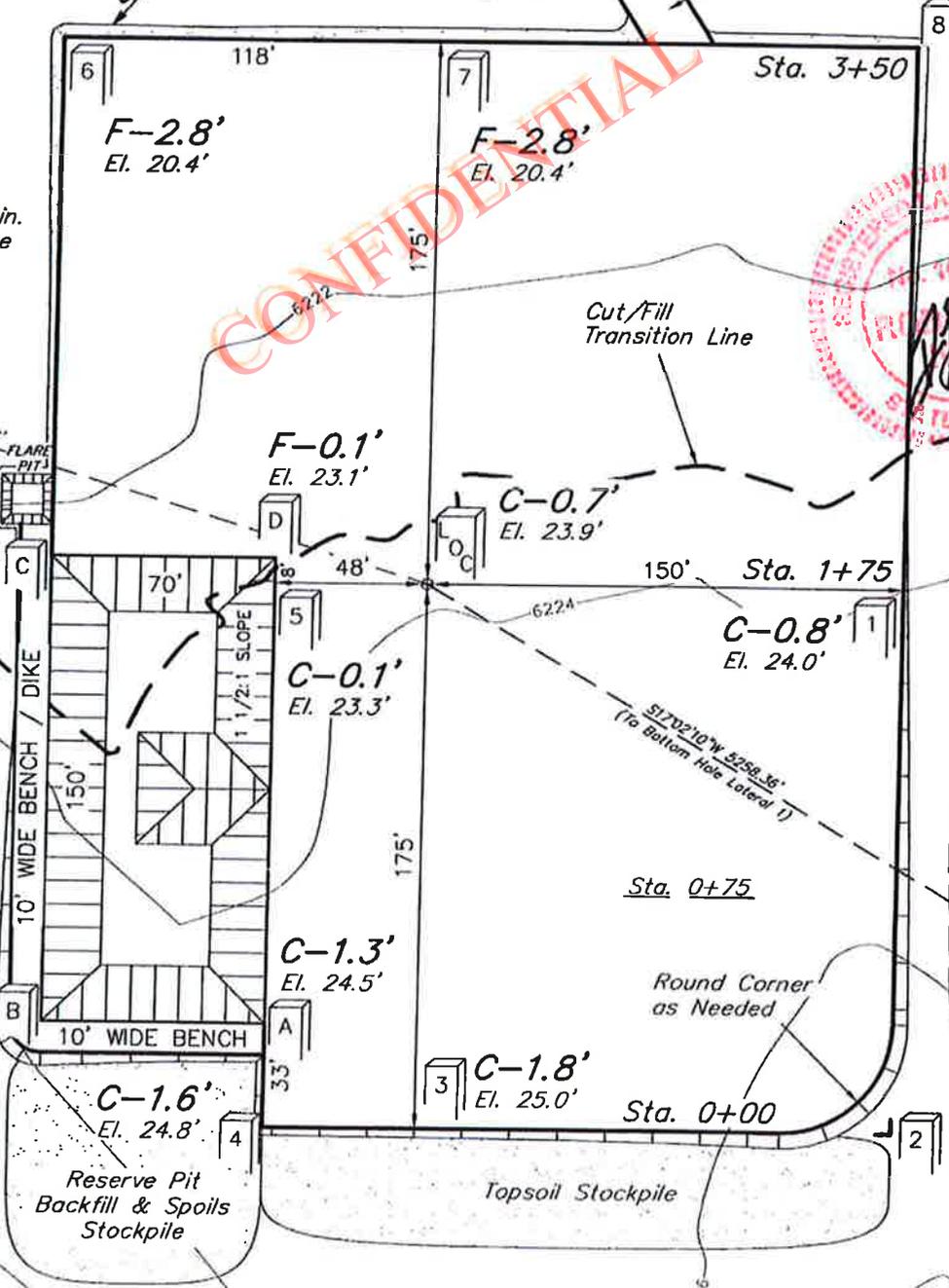


Approx. Toe of Fill Slope

Proposed Access Road

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

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Elev. Ungraded Ground At Loc. Stake = 6223.9'  
 FINISHED GRADE ELEV. AT LOC. STAKE = 6223.2'

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

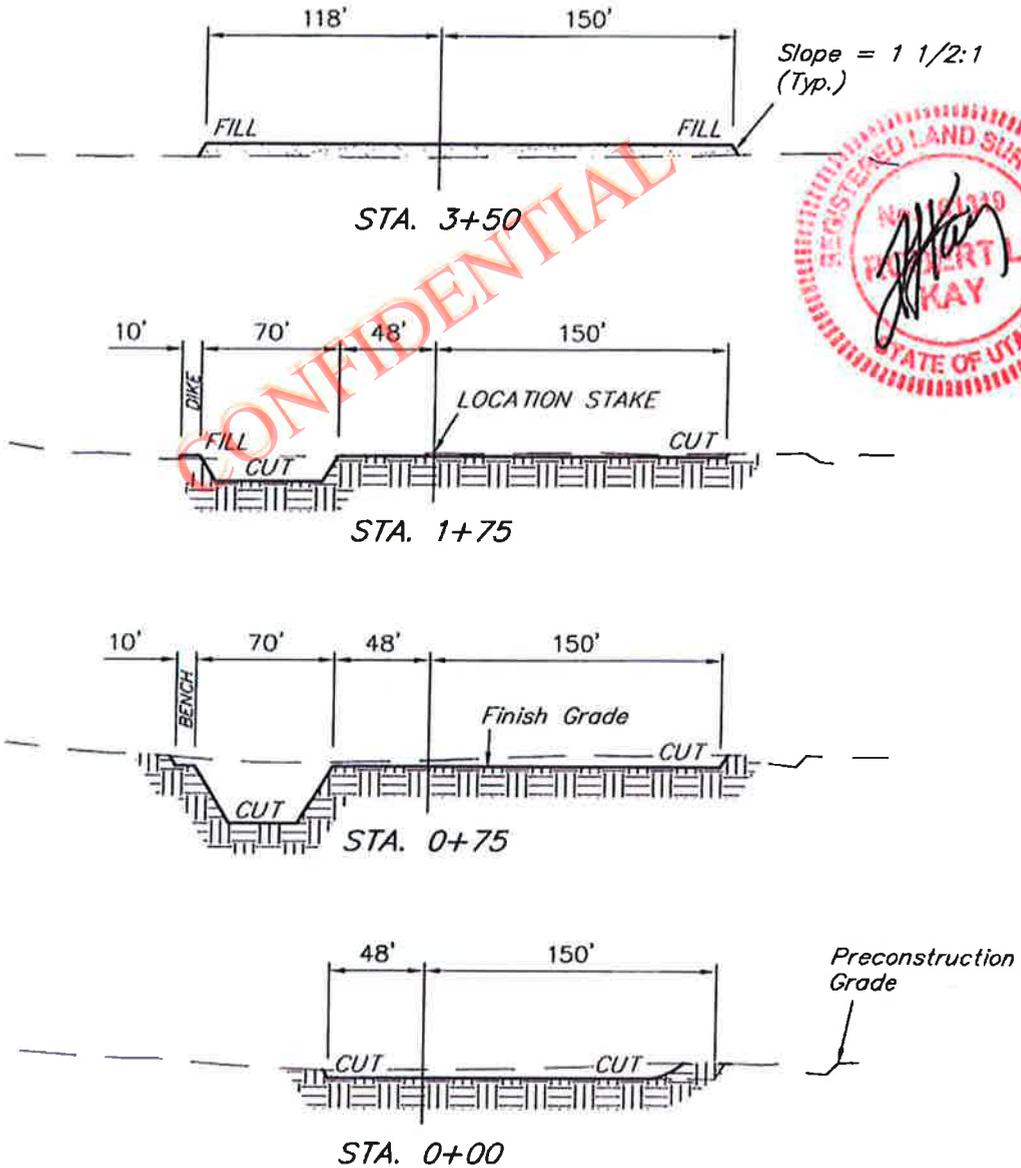
QUESTAR EXPLR. & PROD.

FIGURE #2

1" = 40'  
X-Section Scale  
1" = 100'

DATE: 02-23-10  
DRAWN BY: C.C.

TYPICAL CROSS SECTION FOR  
BW #5G-16-10-16  
SECTION 16, T10S, R16E, S.L.B.&M.  
1955' FNL 629' FWL



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NOTE:

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

APPROXIMATE ACREAGES  
WELL SITE DISTURBANCE = ± 2.512 ACRES  
ACCESS ROAD DISTURBANCE = ± 0.262 ACRES  
TOTAL = ± 2.774 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	1,850 Cu. Yds.
Remaining Location	=	4,530 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>6,380 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>3,060 CU.YDS.</b>

EXCESS MATERIAL	=	3,320 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	3,320 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	0 Cu. Yds.

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

QUESTAR EXPLR. & PROD.

TYPICAL RIG LAYOUT FOR

BW #5G-16-10-16  
SECTION 16, T10S, R16E, S.L.B.&M.  
1955' FNL 629' FWL

FIGURE #3

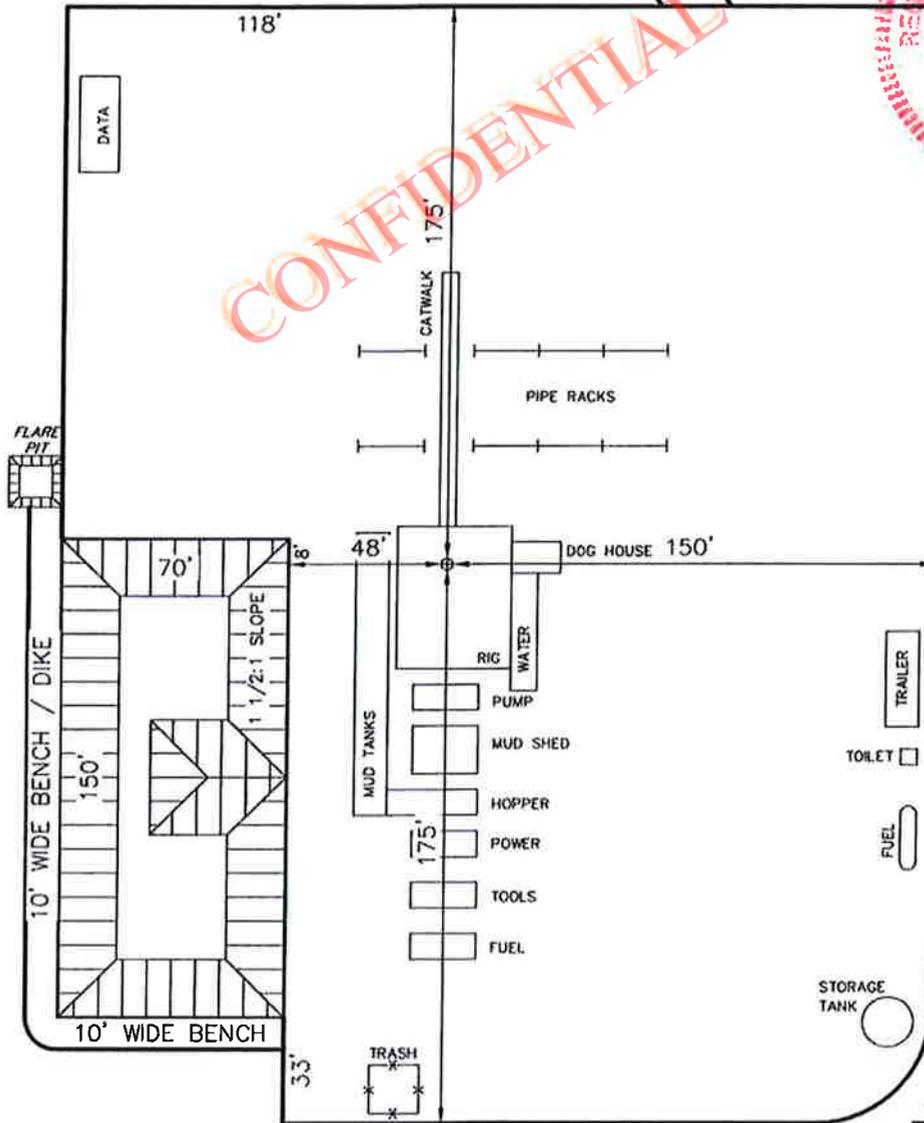
SCALE: 1" = 60'  
DATE: 02-23-10  
DRAWN BY: C.C.



Access Road



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

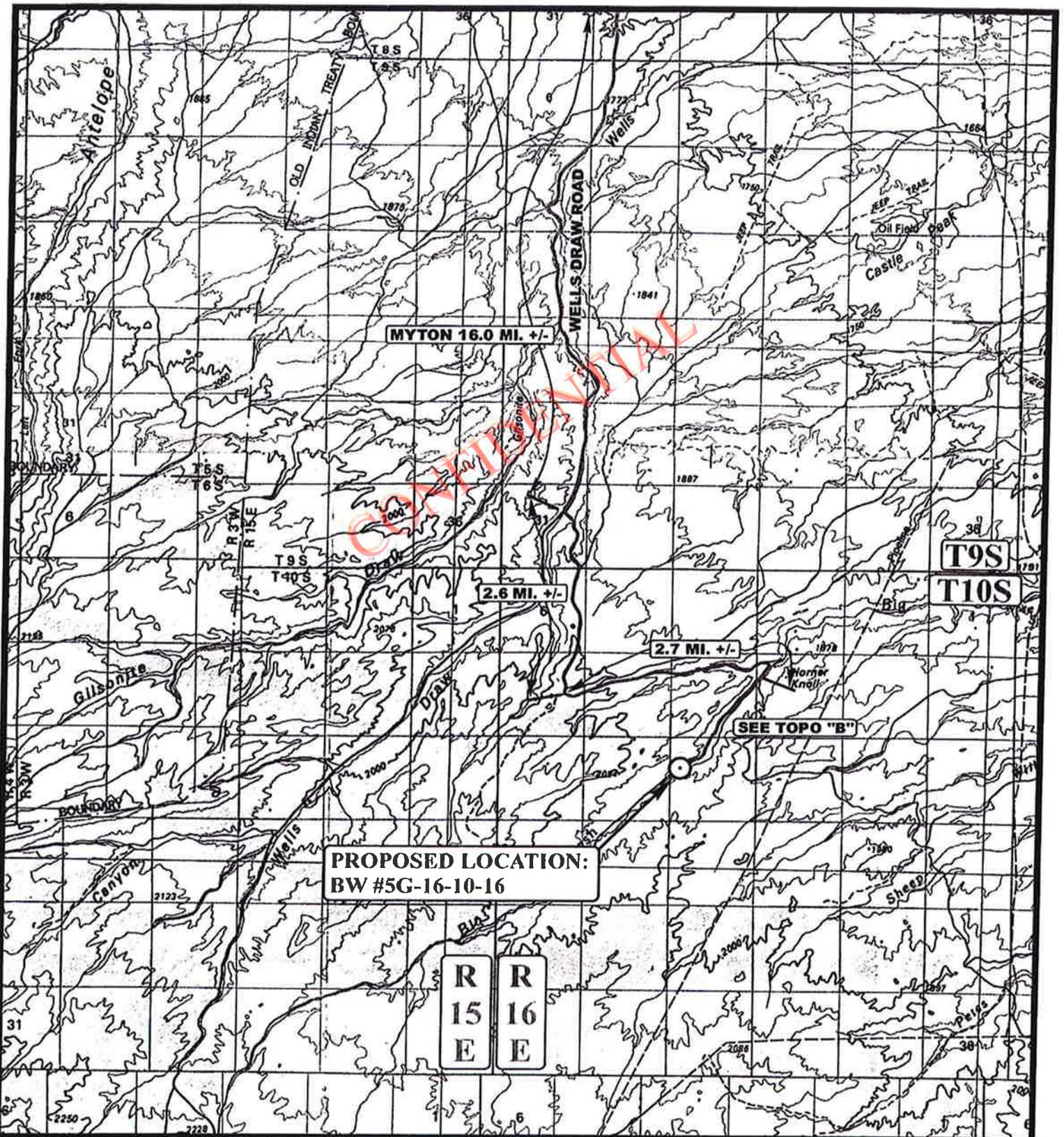


CONFIDENTIAL

**QUESTAR EXPLR. & PROD.  
BW #5G-16-10-16  
SECTION 16, T10S, R16E, S.L.B.&M.**

PROCEED IN A SOUTHWESTERLY DIRECTION FROM MYTON, UTAH ALONG HIGHWAY 40 APPROXIMATELY 1.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 12.9 MILES ALONG THE WELLS DRAW ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN A SOUTHERLY DIRECTION APPROXIMATELY 2.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTTERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 2.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 1.4 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE SOUTHEAST; FOLLOW ROAD FLAGS IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 380' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM MYTON, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 22.7 MILES.



**LEGEND:**

⊙ PROPOSED LOCATION

**QUESTAR EXPLR. & PROD.**

BW #5G-16-10-16  
SECTION 16, T10S, R16E, S.L.B.&M.  
1955' FNL 629' FWL

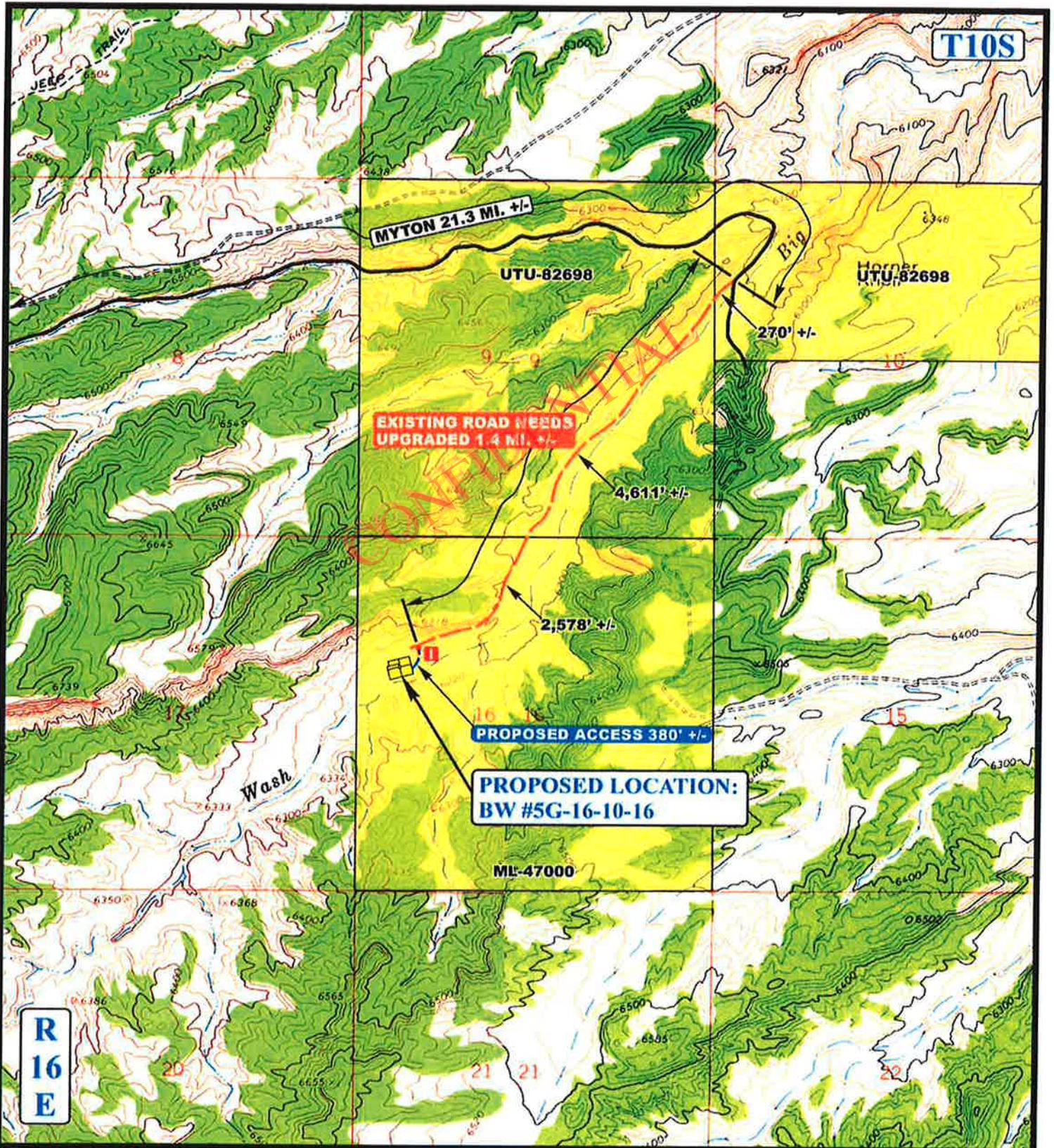


Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



TOPOGRAPHIC MAP  
03 01 10  
MONTH DAY YEAR  
SCALE: 1:100,000 DRAWN BY: Z.L. REVISED: 00-00-00





**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD
-  EXISTING ROAD NEEDS UPGRADED
-  18" CMP REQUIRED

**QUESTAR EXPLR. & PROD.**

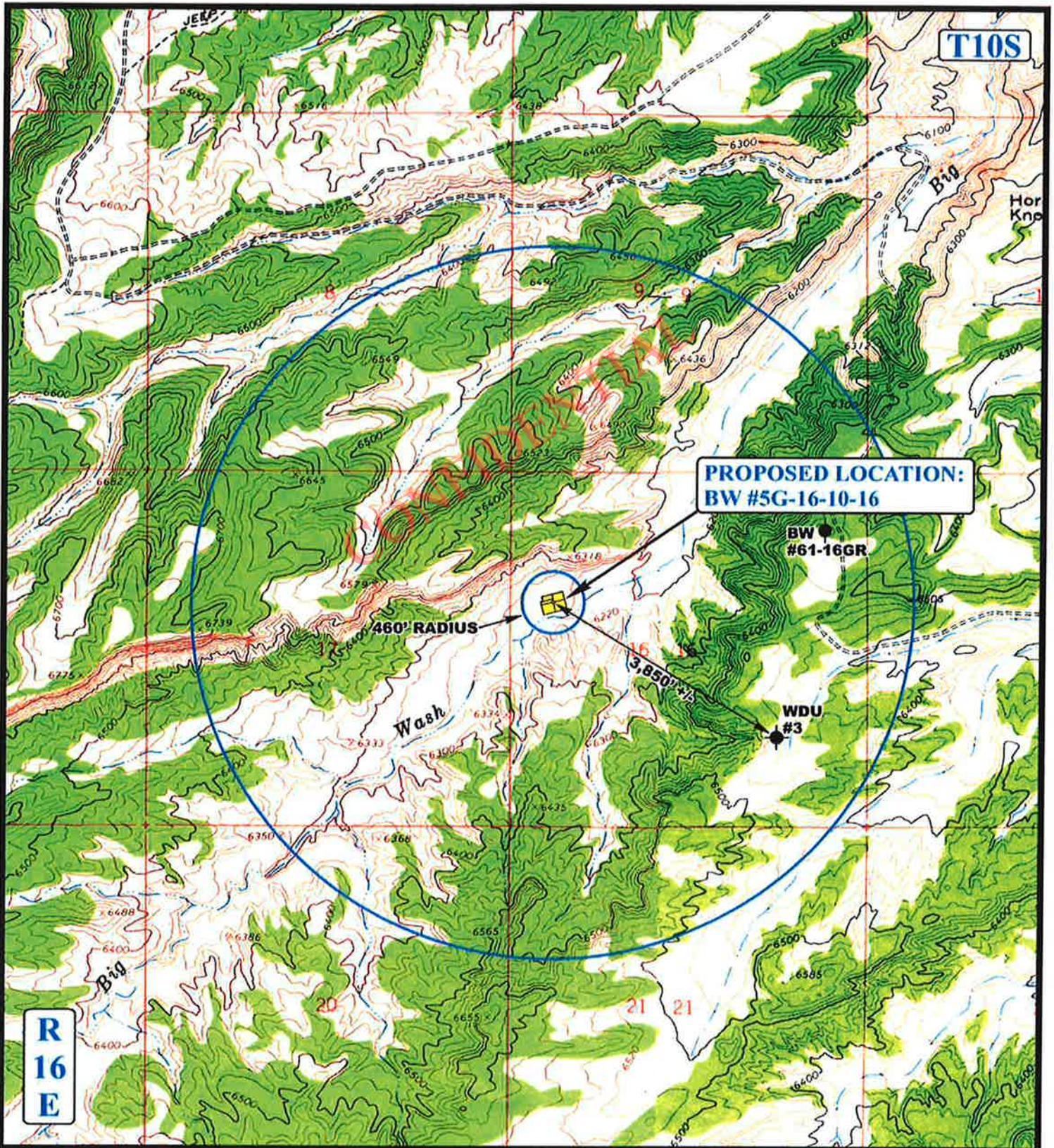
BW #5G-16-10-16  
 SECTION 16, T10S, R16E, S.L.B.&M.  
 1955' FNL 629' FWL

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



**TOPOGRAPHIC MAP**  
 03 01 10  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: Z.L. REVISED: 00-00-00





**LEGEND:**

- ⊘ DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- ⊘ WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED



**QUESTAR EXPLR. & PROD.**

**BW #5G-16-10-16**  
**SECTION 16, T10S, R16E, S.L.B.&M.**  
**1955' FNL 629' FWL**



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

**TOPOGRAPHIC MAP**

**03 01 10**  
 MONTH DAY YEAR

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



**QUESTAR EXPLR. & PROD.**

Well location, BW #5G-16-10-16, located as shown in the SW 1/4 NW 1/4 of Section 16, T10S, R16E, S.L.B.&M., Duchesne County, Utah.

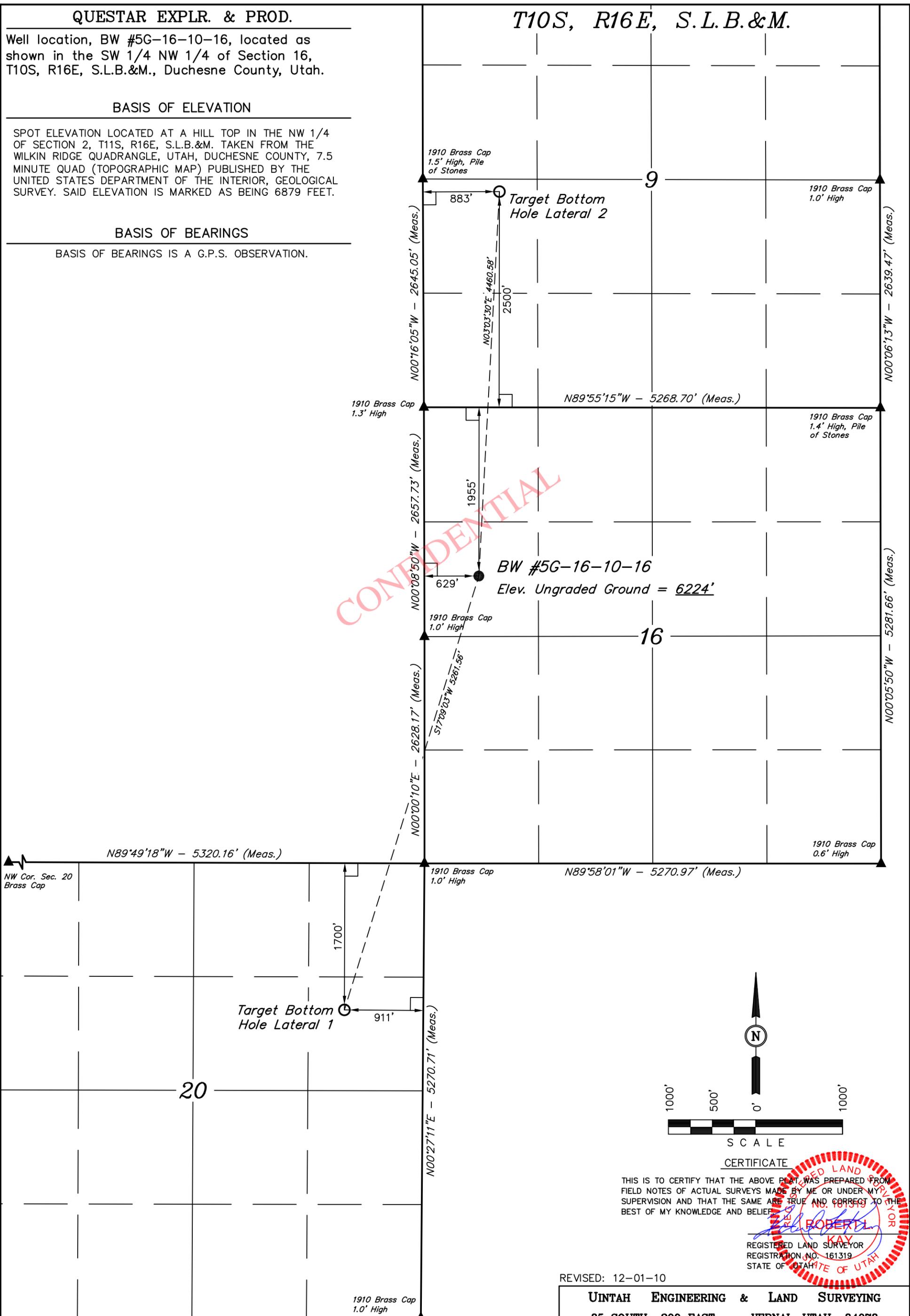
**BASIS OF ELEVATION**

SPOT ELEVATION LOCATED AT A HILL TOP IN THE NW 1/4 OF SECTION 2, T11S, R16E, S.L.B.&M. TAKEN FROM THE WILKIN RIDGE QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6879 FEET.

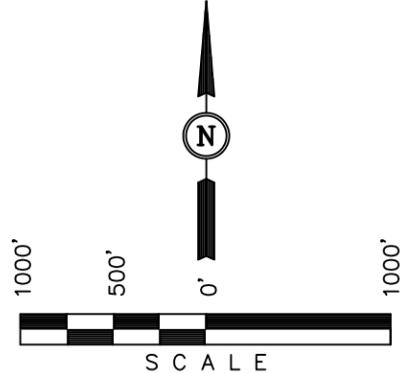
**BASIS OF BEARINGS**

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

**T10S, R16E, S.L.B.&M.**



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**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

REVISED: 12-01-10

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

SCALE 1" = 1000'	DATE SURVEYED: 02-15-10	DATE DRAWN: 02-23-10
PARTY D.R. K.A. C.C.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE QUESTAR EXPLR. & PROD.	

NAD 83 (TARGET BOTTOM HOLE LATERAL 1) LATITUDE = 39°55'55.12" (39.931978) LONGITUDE = 110°08'12.80" (110.136889)	NAD 83 (TARGET BOTTOM HOLE LATERAL 2) LATITUDE = 39°57'28.80" (39.958000) LONGITUDE = 110°07'49.88" (110.130522)	NAD 83 (SURFACE LOCATION) LATITUDE = 39°56'44.79" (39.945775) LONGITUDE = 110°07'52.91" (110.1313694)
NAD 27 (TARGET BOTTOM HOLE LATERAL 1) LATITUDE = 39°55'55.25" (39.932014) LONGITUDE = 110°08'10.25" (110.136181)	NAD 27 (TARGET BOTTOM HOLE LATERAL 2) LATITUDE = 39°57'28.93" (39.958036) LONGITUDE = 110°07'47.33" (110.129814)	NAD 27 (SURFACE LOCATION) LATITUDE = 39°56'44.93" (39.945814) LONGITUDE = 110°07'50.37" (110.130658)

N89°59'W - 5286.60' (G.L.O.)

Well Name	QEP ENERGY COMPANY BW 5G-16-10-16 43013504160000			
String	Surf	I1	Prod	
Casing Size(")	9.625	7.000	4.500	
Setting Depth (TVD)	480	4800	5572	
Previous Shoe Setting Depth (TVD)	0	480	4800	
Max Mud Weight (ppg)	8.3	9.0	10.0	
BOPE Proposed (psi)	500	3000	3000	
Casing Internal Yield (psi)	3520	7420	7420	
Operators Max Anticipated Pressure (psi)	2897		10.0	

Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	207	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	149	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	101	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	101	NO OK
Required Casing/BOPE Test Pressure=		480	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	2246	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1670	YES previously set & cemented
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1190	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1296	NO
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		480	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	2897	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2228	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1671	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	2727	YES OK
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		4800	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

# 43013504160000 BW 5G-16-10-16 Lat1

## Casing Schematic

129'  
181'

Surface

9-5/8"  
MW 8.3  
Frac 19.3

TOC @  
0. ✓

Surface  
480. MD

TOC @ 480. TVD  
861. *1100' Green River*

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7"  
MW 9.  
Frac 19.3

KOP

TOL @  
4780.

4902' Intermediate  
4800. MD

5379' 4800. TVD *HP Line*

Horizontal Section

Lat 1 BHL

-1955' NL (surf)	629' WL
-5028	-1541
-6983	912 FEL ✓
5273	
-1710 FNL ✓	

SE NE Sec 20-10S-16E ✓

4-1/2"  
MW 10.

Production Liner  
10437. MD  
5180. TVD

Well name:	<b>43013504160000 BW 5G-16-10-16</b>		
Operator:	<b>QEP ENERGY COMPANY</b>		
String type:	Surface	Project ID:	43-013-50416
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 8.330 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 81 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 422 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 480 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
 8 Round LTC: 1.70 (J)  
 Buttress: 1.60 (J)  
 Premium: 1.50 (J)  
 Body yield: 1.50 (B)

Tension is based on air weight.  
 Neutral point: 421 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 4,800 ft  
 Next mud weight: 9.000 ppg  
 Next setting BHP: 2,244 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 480 ft  
 Injection pressure: 480 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	480	9.625	36.00	J-55	ST&C	480	480	8.796	4172
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	208	2020	9.725	480	3520	7.33	17.3	394	22.80 J

Prepared by: Helen Sadik-Macdonald  
 Div of Oil, Gas & Mining

Phone: 801 538-5357  
 FAX: 801-359-3940

Date: November 9, 2010  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 480 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>43013504160000 BW 5G-16-10-16</b>		
Operator:	<b>QEP ENERGY COMPANY</b>		
String type:	Intermediate	Project ID:	43-013-50416
Location:	DUCHESNE COUNTY		

<b>Design parameters:</b>	<b>Minimum design factors:</b>	<b>Environment:</b>
<u>Collapse</u>	<u>Collapse:</u>	H2S considered? No
Mud weight: 9.000 ppg	Design factor 1.125	Surface temperature: 74 °F
Design is based on evacuated pipe.		Bottom hole temperature: 141 °F
		Temperature gradient: 1.40 °F/100ft
		Minimum section length: 100 ft
	<u>Burst:</u>	Cement top: 861 ft
	Design factor 1.00	
<u>Burst</u>		
Max anticipated surface pressure: 4,169 psi	<u>Tension:</u>	<b>Non-directional string.</b>
Internal gradient: 0.120 psi/ft	8 Round STC: 1.80 (J)	
Calculated BHP 4,745 psi	8 Round LTC: 1.70 (J)	
No backup mud specified.	Buttress: 1.60 (J)	
	Premium: 1.50 (J)	
	Body yield: 1.50 (B)	<b>Re subsequent strings:</b>
	Tension is based on air weight.	Next setting depth: 10,437 ft
	Neutral point: 4,148 ft	Next mud weight: 10.000 ppg
		Next setting BHP: 5,422 psi
		Fracture mud wt: 19.250 ppg
		Fracture depth: 4,800 ft
		Injection pressure: 4,800 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	4800	7	26.00	N-80	LT&C	4800	4800	6.151	42672

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2244	5410	2.411	4745	7240	1.53	124.8	519	4.16 J

Prepared by: Helen Sadik-Macdonald, Div of Oil, Gas & Mining  
 Phone: 801 538-5357, FAX: 801-359-3940  
 Date: November 9, 2010, Salt Lake City, Utah

Remarks:  
 Collapse is based on a vertical depth of 4800 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>43013504160000 BW 5G-16-10-16 Lat1</b>		
Operator:	<b>QEP ENERGY COMPANY</b>		
String type:	Production Liner	Project ID:	43-013-50416
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 10.000 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 147 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,000 ft

**Burst**

Max anticipated surface pressure: 1,551 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 2,691 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
 8 Round LTC: 1.80 (J)  
 Buttress: 1.60 (J)  
 Premium: 1.50 (J)  
 Body yield: 1.60 (B)

Tension is based on air weight.  
 Neutral point: 5,133 ft

Liner top: 4,780 ft

**Directional Info - Build & Hold**

Kick-off point 4902 ft  
 Departure at shoe: 5258 ft  
 Maximum dogleg: 12 °/100ft  
 Inclination at shoe: 92.39 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	5637	4.5	11.60	N-80	LT&C	5180	10437	3.875	23215
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2691	6350	2.360	2734	7780	2.85	4.4	223	50.59 J

Prepared by: Helen Sadik-Macdonald  
 Div of Oil, Gas & Mining

Phone: 801 538-5357  
 FAX: 801-359-3940

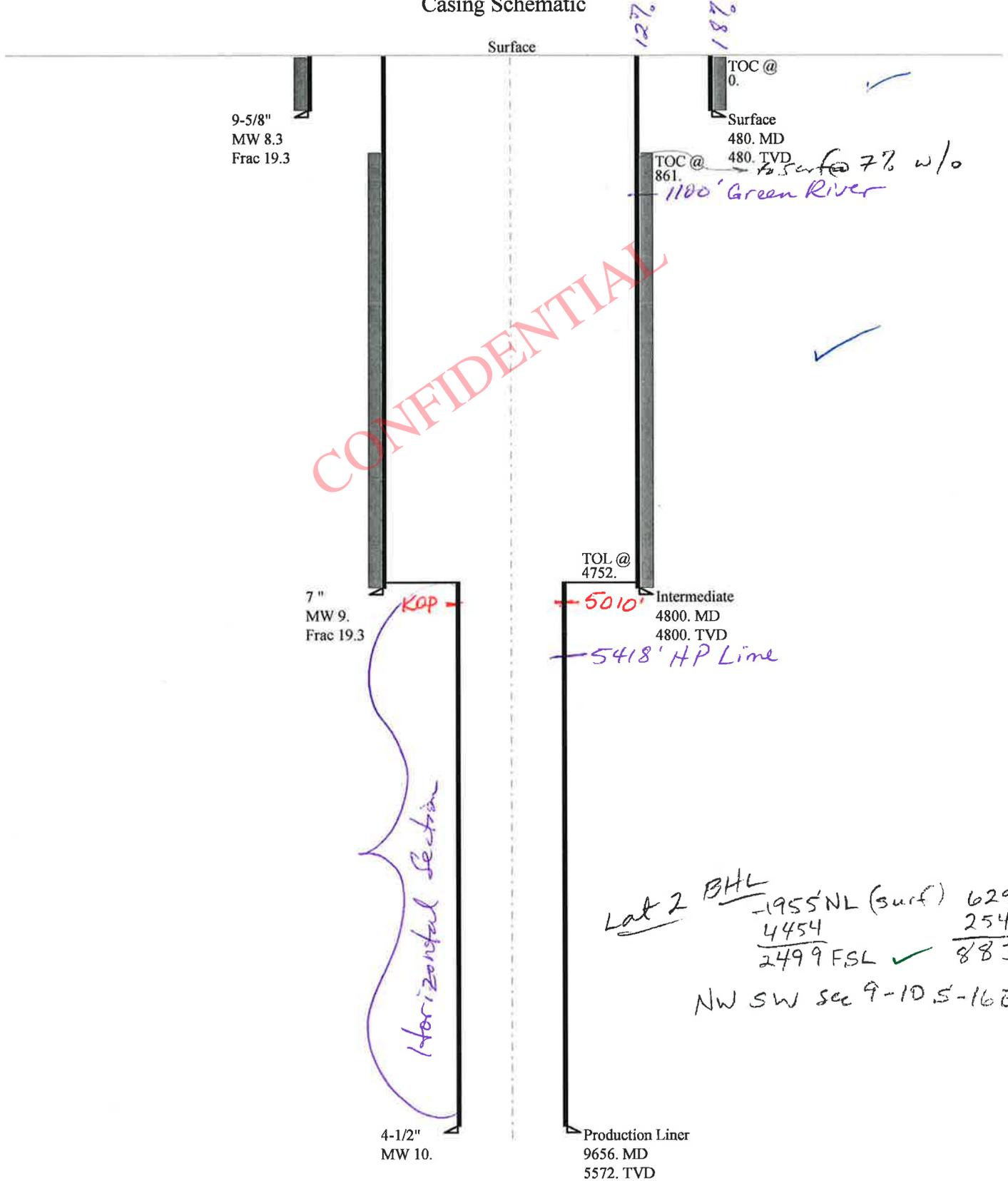
Date: November 10, 2010  
 Salt Lake City, Utah

Remarks:  
 For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 5180 ft, a mud weight of 10 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.  
 Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43013504160000 BW 5G-16-10-16 Lat2

Casing Schematic



Well name:	<b>43013504160000 BW 5G-16-10-16 Lat2</b>	
Operator:	<b>QEP ENERGY COMPANY</b>	
String type:	Production Liner	Project ID: 43-013-50416
Location:	DUCHESNE COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 152 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

**Burst**

Max anticipated surface pressure: 1,669 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 2,894 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 6,651 ft

Liner top: 4,752 ft

**Directional Info - Build & Hold**

Kick-off point 5010 ft  
Departure at shoe: 4462 ft  
Maximum dogleg: 12 °/100ft  
Inclination at shoe: 87.8 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	4856	4.5	11.60	N-80	LT&C	5572	9656	3.875	19999
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2894	6350	2.194	2894	7780	2.69	9	223	24.91 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: November 10, 2010  
Salt Lake City, Utah

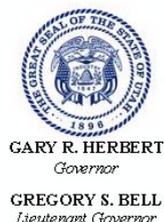
**Remarks:**

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 5572 ft, a mud weight of 10 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*



# 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:** BW 5G-16-10-16  
**API Well Number:** 43013504160000  
**Lease Number:** UTU-65777  
**Surface Owner:** STATE  
**Approval Date:** 12/28/2010

### Issued to:

QEP ENERGY COMPANY, 11002 East 17500 South, Vernal, Ut 84078

### 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 R649-3-2. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

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

### General:

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

### Conditions of Approval:

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.

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

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

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

**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 <https://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

RECEIVED

GREEN RIVER DISTRICT  
VERNAL FIELD OFFICE

FORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 2010

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. ML47000/UTU65777
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator QEP Energy Company		7. If Unit or CA Agreement, Name and No. UTU87711X (Kraken)
3a. Address 11002 East 17500 South, Vernal UT 84078	3b. Phone No. (include area code) 435-781-4331	8. Lease Name and Well No. BW 5G-16-10-16
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1955' FNL, 629' FWL, SWNW, Section 16, T10S, R16E At proposed prod. zone See Attached Additional Information		9. API Well No. 43-013-50416
14. Distance in miles and direction from nearest town or post office* 23 Miles from Myton, UT		10. Field and Pool, or Exploratory Undesignated
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 629	16. No. of acres in lease 680 1280	11. Sec., T. R. M. or Blk. and Survey or Area Section 16, T10S, R16E, SLB&M
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth LATERAL # 1 - 10,412' MD LATERAL # 2- 9,820' MD	12. County or Parish Duchesne
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6223.9 GR	22. Approximate date work will start* 12/01/2010	13. State UT
23. Estimated duration 35 DAYS		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature <i>Jan Nelson</i>	Name (Printed/Typed) Jan Nelson	Date 08/19/2010
Title Permit Agent		
Approved by (Signature) <i>James H. Sparger</i>	Name James H. Sparger	Date JAN 07 2011
Title Acting Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

NOTICE OF APPROVAL

CONFIDENTIAL

RECEIVED

JAN 13 2011

NOS <sup>apd</sup> posted 8/20/2010  
AFMSS# 10BRH0481A

UDOGM

No NOS DIV. OF OIL, GAS & MINING



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: QEP Energy Company  
Well No: BW 5G-16-10-16  
API No: 43-013-50416

Location: SWNW, Sec. 16, T10S, R16E  
Lease No: UTU-65777  
Agreement: Kraken (GR) Unit

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- A synthetic liner with a minimum thickness of 20 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
- The reserve pit shall be fenced upon completion of drilling operations.
- The well site shall be bermed to prevent fluids from leaving the pad.
- A Paleontologist acceptable to the BLM will monitor construction activity for surface disturbing activities described in the APD. During operations, if any vertebrate paleontological resources are discovered, all operations affecting such sites shall be immediately suspended, and all discoveries shall be left intact until authorized to proceed by the Authorized Officer. The appropriate Authorized Officer of the Vernal BLM office shall be notified within 48 hrs of the discovery, and a decision as to the preferred alternative course of action will be rendered.
- Reclamation will be completed in accordance with the Questar Exploration and Production Company, Uintah Basin Division's Reclamation Plan on file with the Vernal Field Office of the BLM.

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- Production casing (casing 7 inch) cement shall be brought up and into the surface.
- For each of the lateral wellbores, a copy of the as drilled directional survey shall be submitted to the BLM Vernal Field Office.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB

or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to [UT\\_VN\\_Welllogs@BLM.gov](mailto:UT_VN_Welllogs@BLM.gov). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location ( $\frac{1}{4}$  $\frac{1}{4}$ , Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for 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 this office 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 shall be submitted along with any necessary water analyses, 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 this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-65777
<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>
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> BW 5G-16-10-16
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>9. API NUMBER:</b> 43013504160000
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078	<b>PHONE NUMBER:</b> 303 308-3068 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1955 FNL 0629 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 16 Township: 10.0S Range: 16.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> WILDCAT  <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: 12/28/2012	<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"/> <b>APD EXTENSION</b>
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 QEP ENERGY COMPANY HEREBY REQUESTS A ONE YEAR EXTENSION FOR THE APD ON THE ABOVE CAPTIONED WELL.

Approved by the  
 Utah Division of  
 Oil, Gas and Mining

Date: 01/03/2012  
 By: 

<b>NAME (PLEASE PRINT)</b> Valyn Davis	<b>PHONE NUMBER</b> 435 781-4369	<b>TITLE</b> Regulatory Affairs Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/27/2011	



**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 43013504160000**

**API:** 43013504160000

**Well Name:** BW 5G-16-10-16

**Location:** 1955 FNL 0629 FWL QTR SWNW SEC 16 TWNP 100S RNG 160E MER S

**Company Permit Issued to:** QEP ENERGY COMPANY

**Date Original Permit Issued:** 12/28/2010

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:** Valyn Davis

**Date:** 12/27/2011

**Title:** Regulatory Affairs Analyst **Representing:** QEP ENERGY COMPANY

<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>1. TYPE OF WELL</b> Oil Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-65777
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078	<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>PHONE NUMBER:</b> 303 308-3068 Ext	<b>8. WELL NAME and NUMBER:</b> BW 5G-16-10-16
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	<b>9. FIELD and POOL or WILDCAT:</b> WILDCAT
	<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: 12/28/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

QEP ENERGY COMPANY HEREBY REQUESTS A ONE YEAR EXTENSION FOR THE APD ON THE ABOVE CAPTIONED WELL.

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Date:** December 27, 2012

**By:** 

<b>NAME (PLEASE PRINT)</b> Valyn Davis	<b>PHONE NUMBER</b> 435 781-4369	<b>TITLE</b> Regulatory Affairs Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/26/2012	



**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 43013504160000**

API: 43013504160000

Well Name: BW 5G-16-10-16

Location: 1955 FNL 0629 FWL QTR SWNW SEC 16 TWNP 100S RNG 160E MER S

Company Permit Issued to: QEP ENERGY COMPANY

Date Original Permit Issued: 12/28/2010

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.

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- 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: Valyn Davis

Date: 12/26/2012

Title: Regulatory Affairs Analyst Representing: QEP ENERGY COMPANY

<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.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-65777
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2. NAME OF OPERATOR: QEP ENERGY COMPANY	8. WELL NAME and NUMBER: BW 5G-16-10-16
3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078	9. API NUMBER: 43013504160000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1955 FNL 0629 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 16 Township: 10.0S Range: 16.0E Meridian: S	9. FIELD and POOL or WILDCAT: WILDCAT  COUNTY: DUCHESNE  STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA	

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/28/2014	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT 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"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT 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.

QEP ENERGY COMPANY HEREBY REQUESTS A ONE YEAR EXTENSION FOR THE APD ON THE ABOVE CAPTIONED WELL.

**Approved by the Utah Division of Oil, Gas and Mining**

**Date:** December 30, 2013

**By:**

NAME (PLEASE PRINT) Valyn Davis	PHONE NUMBER 435 781-4369	TITLE Regulatory Affairs Analyst
SIGNATURE N/A	DATE 12/24/2013	



**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 43013504160000**

API: 43013504160000

Well Name: BW 5G-16-10-16

Location: 1955 FNL 0629 FWL QTR SWNW SEC 16 TWNP 100S RNG 160E MER S

Company Permit Issued to: QEP ENERGY COMPANY

Date Original Permit Issued: 12/28/2010

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: Valyn Davis

Date: 12/24/2013

Title: Regulatory Affairs Analyst Representing: QEP ENERGY COMPANY



# 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>

JUN 17 2015

IN REPLY REFER TO:  
3160 (UTG011)

Jan Nelson  
QEP Energy Company  
11002 E. 17500 S.  
Vernal, UT 84078

RECEIVED

JUL 02 2015

DIV. OF OIL, GAS & MINING

Dear Ms. Nelson:

The referenced Applications for Permit to Drill (APD) have expired. According to our records, no known activity has transpired at the approved location. In view of the foregoing, this office is notifying you that the approval of the referenced applications has expired. If you intend to drill at these locations in the future, a new Application for Permit to Drill must be submitted.

Lease	Well	Aliquot	Sec., T., R.	Date Rec'd	Date Exp'd
UTU-081	RW 8C4-22B	SESE	Sec. 22-T7S-R23E	4/12/2012	11/4/2014
UTU-0566	RW 2C1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 9B1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 9B4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 9C1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 9C4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 10B1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-0566	RW 10B4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-0566	RW 10C1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 10C4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/8/2014
UTU-0566	RW 15B4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-0566	RW 15C1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-0566	RW 15C4-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-0566	RW 16B1-27B	NESE	Sec. 27-T7S-R23E	5/4/2012	10/11/2014
UTU-025960	RW 10BD-21-8-21	NWSE	Sec. 21-T8S-R21E	9/3/2008	12/1/2012
UTU-65777	BW 5G-16-10-16	SWNW	Sec. 16-T10S-R16E	8/19/2010	1/7/2015
UTU-77301	NBZ 7D-30-8-24	SWNE	Sec. 30-T8S-R24E	1/5/2009	1/11/2014

This office requires a letter confirming that no surface disturbance has been made for these drill sites. Any surface disturbance associated with the approved location of these wells is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

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

Sincerely,

/s/ Jerry Kenczka

Jerry Kenczka  
Assistant Field Manager  
Lands & Mineral Resources

cc: UDOGM

bcc: Well File  
I&E Asst.