

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> Ute Tribal 07-08-D4
<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> DUCHESNE
<b>4. TYPE OF WELL</b> Oil Well Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>
<b>6. NAME OF OPERATOR</b> PETROGLYPH OPERATING CO		<b>7. OPERATOR PHONE</b> 208 685-7685
<b>8. ADDRESS OF OPERATOR</b> 960 Broadway Avenue, Ste 500, Bosie, ID, 83703		<b>9. OPERATOR E-MAIL</b> ppowell@pgei.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> 1-109-IND-5351	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" 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 type="checkbox"/> FEE <input checked="" type="checkbox"/>
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b> Duchesne Land LC		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b> P.O. Box 358, Duchesne, UT 84021		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Indian Tribe	<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>	<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2014 FNL 665 FEL	SENE	7	4.0 S	4.0 W	U
Top of Uppermost Producing Zone	2014 FNL 665 FEL	SENE	7	4.0 S	4.0 W	U
At Total Depth	2014 FNL 665 FEL	SENE	7	4.0 S	4.0 W	U

<b>21. COUNTY</b> DUCHESNE	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 665	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 4150
<b>27. ELEVATION - GROUND LEVEL</b> 5850	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completion)</b> 17.75	<b>26. PROPOSED DEPTH</b> MD: 8931 TVD: 8931
	<b>28. BOND NUMBER</b> LPM4138336	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8342

Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
COND	20	14	0 - 35	5.0	Unknown	10.0	Class G	25	1.17	15.8
SURF	12.25	8.625	0 - 495	24.0	J-55 ST&C	10.0	Class G	227	1.17	15.8
PROD	7.875	3.5	0 - 8931	15.5	J-55 LT&C	10.0	Class G	595	1.92	12.5
							Class G	595	1.46	13.4

**ATTACHMENTS**

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

<b>NAME</b> Ed Trotter	<b>TITLE</b> Agent	<b>PHONE</b> 435 789-4120
<b>SIGNATURE</b>	<b>DATE</b> 07/02/2012	<b>EMAIL</b> edtrotter@easilink.com
<b>API NUMBER ASSIGNED</b> 43013515380000		<b>APPROVAL</b>

**CONFIDENTIAL**  
**EIGHT POINT DRILLING PLAN**  
**PETROGLYPH OPERATING COMPANY, INC**  
**UTE TRIBAL 07-08-D4**  
**SE NE, SEC 7, T4S, R4W**  
**DUCHESNE COUNTY, UTAH**

**1. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

Formation		Subsea	MD
Rig KB=15' above GGL		5865	0
Surface Formation = Uinta			
Uinta		5850	15
Green River		3803	2062
Trona		2289	3575.5
Mahogany Shale		2097	3768
"B" Marker	Waterflood Unit Interval	791	5074
"X" Marker		254	5611
Douglas Creek Marker		118	5747
"B" Limestone		-336	6201
Base Castle Peak Limestone		-930	6795
BSCARB		-1287	7152
Wasatch		-1567	7432
Rig TD		8066	8931

**2. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:**

Substance	Formation	SUBSEA	MD
Base of moderately saline ground water*	not present	6100	0
Oil/Gas	Douglas Creek	118	5747
Oil/Gas	Castle Peak	-930	6795
Oil/Gas	Wasatch	-1567	7432

Any water encountered during drilling shall be sampled, analyzed and reported to the BLM Vernal office using State of Utah DOGM Form 7 *Report of Water Encountered during Drilling*. The following analyses shall be performed on any water encountered:

Flow rate (or blowtest)	Temperature	pH	TDS
Dissolved Iron	Dissolved Magnesium	Dissolved Bicarb.	Dissolved Sulfate
Dissolved Calcium	Dissolved Sodium	Dissolved Carbonate	Dissolved Chloride

All depths through the "Base of moderately saline ground water"\* , along with any water encountered below that depth which is less than 10,000 TDS, shall be protected by the surface casing or by lifting the cement of the production casing into the surface casing.

\*Base of Moderately Saline Groundwater from Howells, Longson and Hunt, 1981, Utah State Technical Publication 92: The Base of the Moderately Saline Water in the Uinta Basin, Utah

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**3. PROPOSED CASING PROGRAM:**

String	Hole	Casing	Top - MD	Bottom - MD	Weight lb/ft	Grade	Thread
Conductor	20"	14"	surface	54.5'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	494.5'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	8931'	15.5	J-55	LTC

String	Hole	Casing	Collapse	Burst	Tensile
Surface	12-1/4"	8-5/8"	1,370 psi	2,950 psi	244,000 lb
Production	7-7/8"	5-1/2"	4,040 psi	4,810 psi	248,000 lb

- All casing will be new or inspected.
- The surface and production strings shall have a minimum of one (1) centralizer on each of the bottom three (3) joints.
- The production string shall have a minimum of one (1) centralizer for every three (3) joints from TD to the top of the "B" marker at 5074' MD.

**4. PROPOSED CEMENTING PROGRAM:**

String	Top	Cement Description	Sacks	Excess	Weight (ppg)	Yield (ft <sup>3</sup> /sk)
	Bottom		Vol (ft <sup>3</sup> )			
Conductor	0 54.5	Construction Grade Cement	Sufficient volumes to grout Conductor			
Surface	0 494.5	Class G +2% CaCl <sub>2</sub> +0.25 lb/sk Cello Flake	227 265	30%	15.8	1.17
Production Lead	0 5074	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR <sup>1</sup> / <sub>4</sub> (LCM)	595 1,143	30%	12.5	1.92
Production Tail	5074 8931	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR <sup>1</sup> / <sub>4</sub> (LCM)	595 869	30%	13.4	1.46

- The 8-5/8" surface casing shall be cemented back to surface. In the event that during the primary surface cementing operation the cement does not circulate to surface, or if the cement level should fall back more than 8 feet from surface, then a remedial surface cementing operation shall be performed to insure adequate isolation and stabilization of the surface casing.
- The 5-1/2" production casing shall be cemented back to surface. In the event that during the primary surface cementing operation the cement does not circulate to surface, a remedial surface cementing operation shall be performed only if necessary to lift cement above the Surface Casing Shoe at 480' MD.

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**5. MINIMUM PRESSURE CONTROL AND SAFETY EQUIPMENT:**

- An 8", 2000 PSI, Double Ram BOPE with Hydraulic Closing Unit shall be used.
- A 2000 PSI Working Pressure Annular shall be used.
- The flowline shall have a minimum diameter of 10".
- Auxiliary equipment shall be a Kelly Cock, Bit Float, and a TIW valve with drill pipe threads.
- Spark arrestors shall be equipped on all engine exhausts within 100 feet of the wellbore.
- See attached 2,000 psi BOP schematic diagram.

**BOPE TESTING PROCEDURE:**

- The BOPE shall be tested by a professional tester to conform to Onshore Order #2.

**6. MUD PROGRAM:**

**A. SURFACE HOLE**

- The surface hole will be drilled with an air mist system from 0' to 494.5'. All cutting shall be directed to pit.
- A trailer-mounted compressor with a capacity of 2000 CFM will be used. Compressor will have a safety shut-off valve located less than 15 feet from the driller's controls of the rig.
- The rat and mouse holes will be drilled with the air rig after surface casing is cemented.
- The 40 barrel water truck used with the deduster will be the source of kill fluid in the highly unlikely event of pressure being encountered during drilling of the surface hole.
- Operator requests the following variances from Onshore Order 2 part E during drilling of the surface hole. Operator will use air drilling techniques only on surface hole:
  - Operator requests a variance to regulations requiring the blooie line discharge to be 100' from the wellbore. Due to reduced location size, the blooie line discharge will be approximately 75' from the wellbore and securely anchored.
  - Operator requests a variance to regulations requiring an automatic igniter or continuous pilot light on the blooie line. A mister shall be on the end of the blooie line.
  - Operator requests a variance to regulations requiring compressors be located in the opposite direction from the blooie line; a minimum of 100' from the wellbore. Due to the reduced location size, the compressors shall be located as close as is reasonable to the opposite direction from the blooie line and 75' from the wellbore.
  - Operator requests a variance to regulations requiring a BOPE on the hole when drilling the surface hole. An air bowl shall be utilized on the diverter system in place of a BOPE.

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**DUCHESNE COUNTY, UTAH**

**B. PRODUCTION HOLE**

- The production hole shall be drilled with a freshwater polymer system from 494.5' to 8931'. LSND mud if conditions warrant.
- Clay inhibition and hole stability shall be achieved with a Diammonium Phosphate (DAP) additive or similar source of clay-stabilizing ions. Anticipated mud weight is 8.3-8.4 lbs/gal.
- All cuttings and circulating medium shall be directed into the reserve pit. Total Dissolved Solids (TDS) are anticipated to be less than 3000 PPM.
- Sufficient mud inventory will be maintained on location in either tanks or the reserve pit during the drilling of the production hole to handle any adverse conditions that may arise.
- If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant with barite. Enough material shall be maintained on location to allow for the mud weight to be raised to 10.5 lbs/gal should need arise.
- During drilling operations, pit levels and flow from the well shall be monitored by instrumentation to include at least: a pit volume totalizer (PVT), a stroke counter, and a mud-flow indicator.
- A mud-gas separator shall be available on location.

**C. HAZARDOUS MATERIALS AND POLLUTANTS**

- Chromate additives **shall NOT** be used in the mud system on Indian lands without prior BLM approval to ensure adequate protection of freshwater aquifers.
- Chemicals subject to reporting under SARA Title III in an amounts equal to or greater than 10,000 pounds annually **shall NOT** be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities **shall NOT** be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Hazardous substances specifically listed by the EPA as a hazardous waste, as defined in 40 CFR 261 (D), or any substances that through their use would lead to the generation of a hazardous waste, **shall NOT** be used in association with the drilling, testing, or completion of this well.

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**7. EVALUATION PROGRAM:**

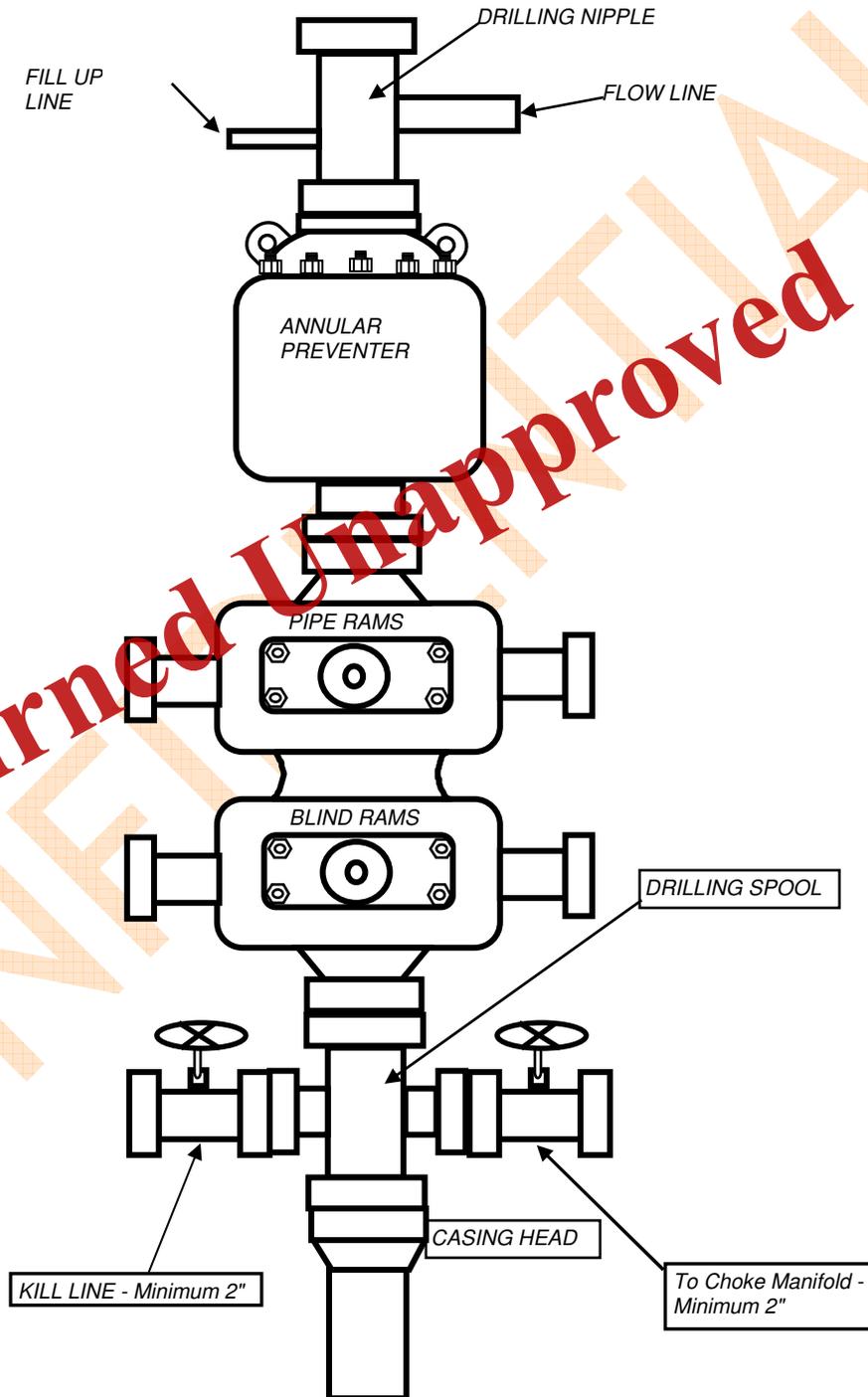
Logs:	Triple Combo	TD to base of surface casing (AIT, DSN, CDL) Base of surface casing to surface (GR)
Cores:	None planned	
DST:	None planned	
Testing:	Operator plans no testing until the completion phase of the well.	

**8. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

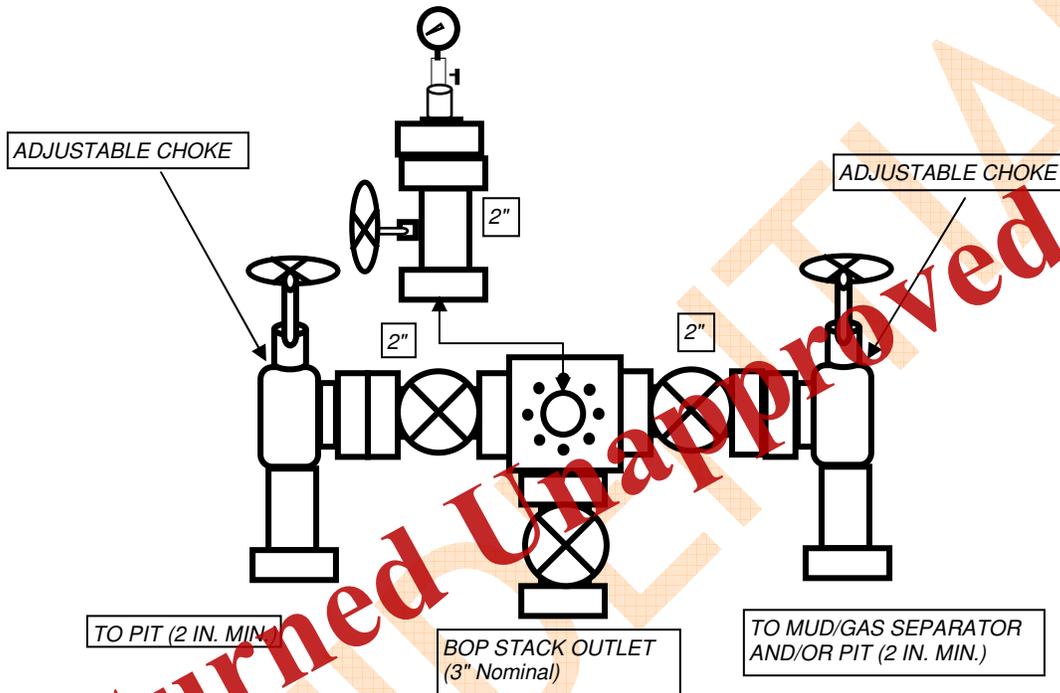
- Operator anticipates Bottom Hole Temperatures below 150°F, the maximum temperature for DAP drilling fluids.
- No H<sub>2</sub>S has been encountered or is known to exist from previous drilling in the area at this depth.
- Maximum pressure for hydrocarbon bearing zones at native conditions in this area is approximately 2232.75 PSI (0.25 PSI/ft gradient).
- This well is NOT in the vicinity of active injection wells. Nearby active injection can cause pressures up to a 0.453 PSI/ft gradient .

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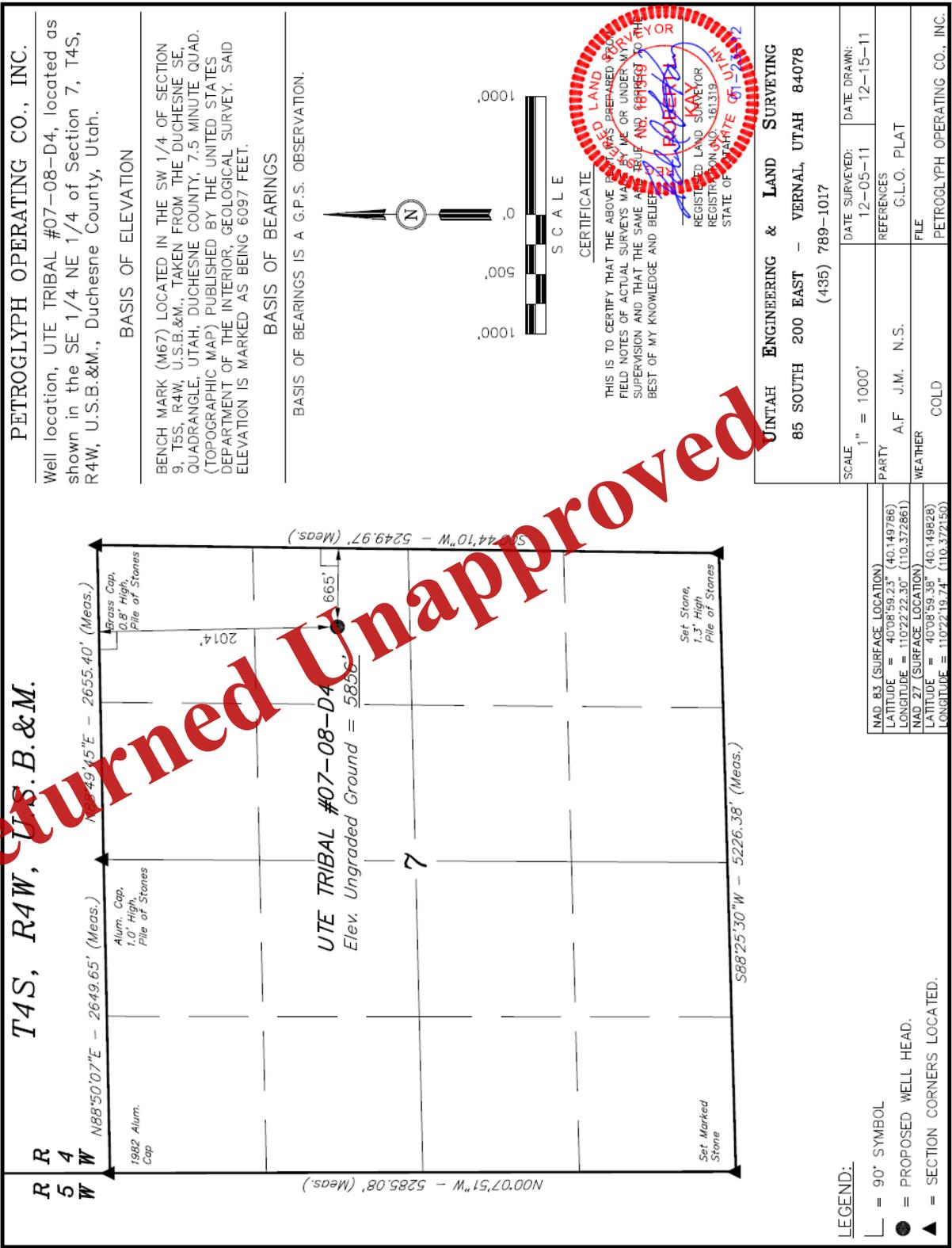
TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER



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**TYPICAL 2,000 p.s.i. CHOKE MANIFOLD**



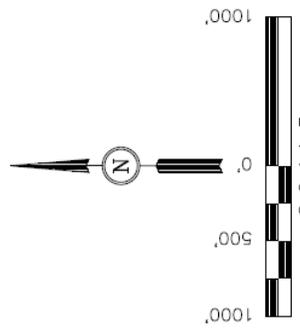
Returned Unapproved



**PETROGLYPH OPERATING CO., INC.**  
 Well location, UTE TRIBAL #07-08-D4, located as shown in the SE 1/4 NE 1/4 of Section 7, T4S, R4W, U.S.B.&M., Duchesne County, Utah.

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

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

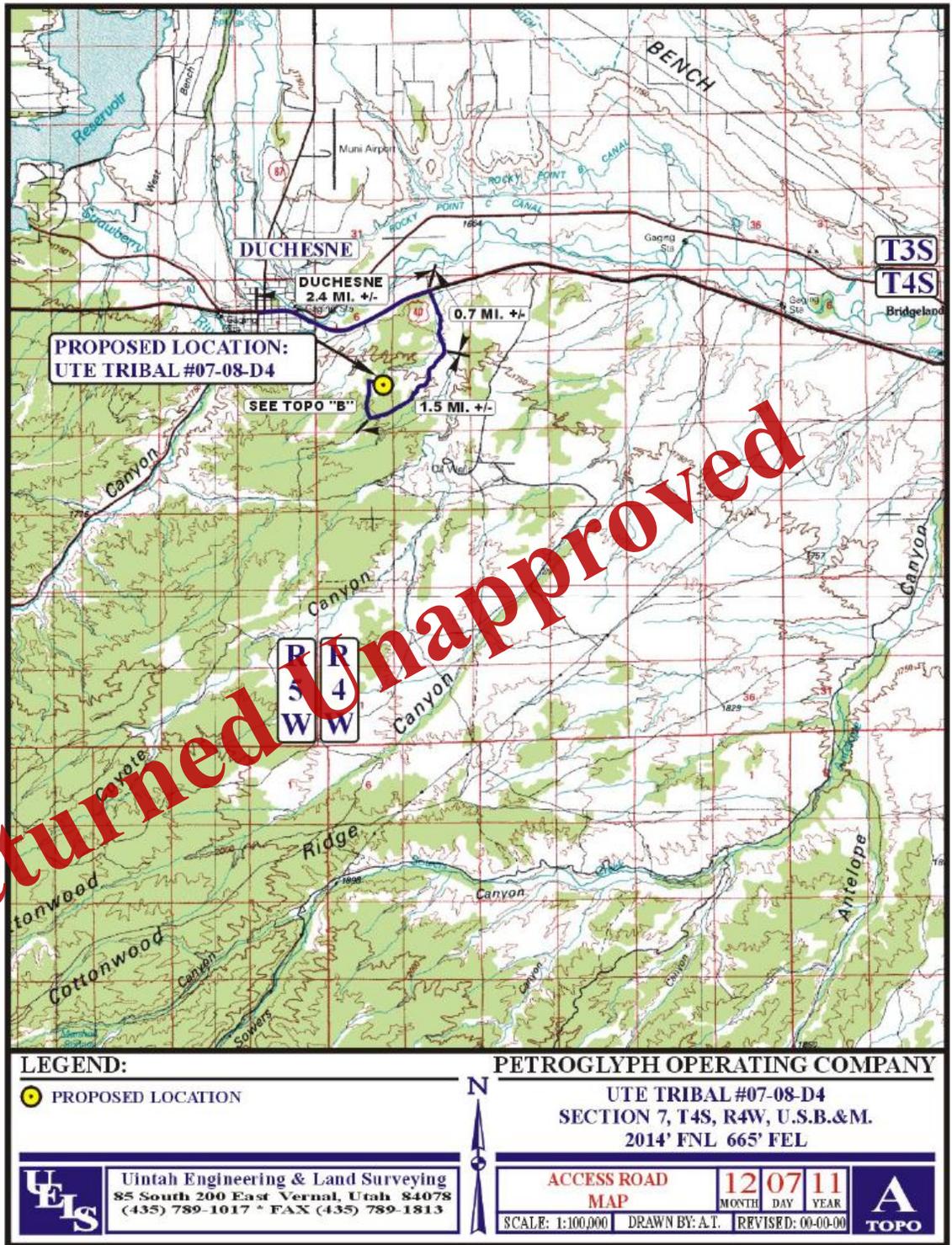


**CERTIFICATE**  
 THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH  
 DATE OF EXPIRATION 01/15/2012

<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>	
85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017	
SCALE: 1" = 1000'	DATE SURVEYED: 12-05-11
PARTY: A.F. J.M. N.S.	DATE DRAWN: 12-15-11
WEATHER: COLD	REFERENCES: G.L.O. PLAT
FILE: PETROGLYPH OPERATING CO., INC.	

<b>NAD 83 (SURFACE LOCATION)</b>	
LATITUDE = 40°08'59.23"	(40.149786)
LONGITUDE = 110°22'22.30"	(110.372861)
<b>NAD 27 (SURFACE LOCATION)</b>	
LATITUDE = 40°08'59.38"	(40.149828)
LONGITUDE = 110°22'19.74"	(110.372150)

- LEGEND:**
- ┌ = 90° SYMBOL
  - = PROPOSED WELL HEAD.
  - ▲ = SECTION CORNERS LOCATED.



Returned Unapproved

**LEGEND:**  
 PROPOSED LOCATION

**PETROGLYPH OPERATING COMPANY**

UTE TRIBAL #07-08-D4  
 SECTION 7, T4S, R4W, U.S.B.&M.  
 2014' FNL 665' FEL

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



<b>ACCESS ROAD MAP</b>	<b>12 07 11</b> MONTH DAY YEAR	
SCALE: 1:100,000	DRAWN BY: A.T. REVISED: 00-00-00	

**Certification**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that presently exist; that the statements made in the Plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Petroglyph Operating Co., Inc. and its contractors and subcontractors in conformity with this Plan and the terms and conditions under which it is approved.

Please be advised that Petroglyph Operating Co., Inc. is considered to be the operator of the **UTE TRIBAL 07-08-D4 Well, located in SE/NE of Section 7, T4S, R4W, Duchesne County, Utah, lease #1-109-IND-5351**; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is provided under Bond #LP4138153.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Agent

**Returned Unapproved**

PETROGLYPH OPERATING CO., INC.

LOCATION LAYOUT FOR

UTE TRIBAL #07-08-D4

SECTION 7, T4S, R4W, U.S.B.&M.

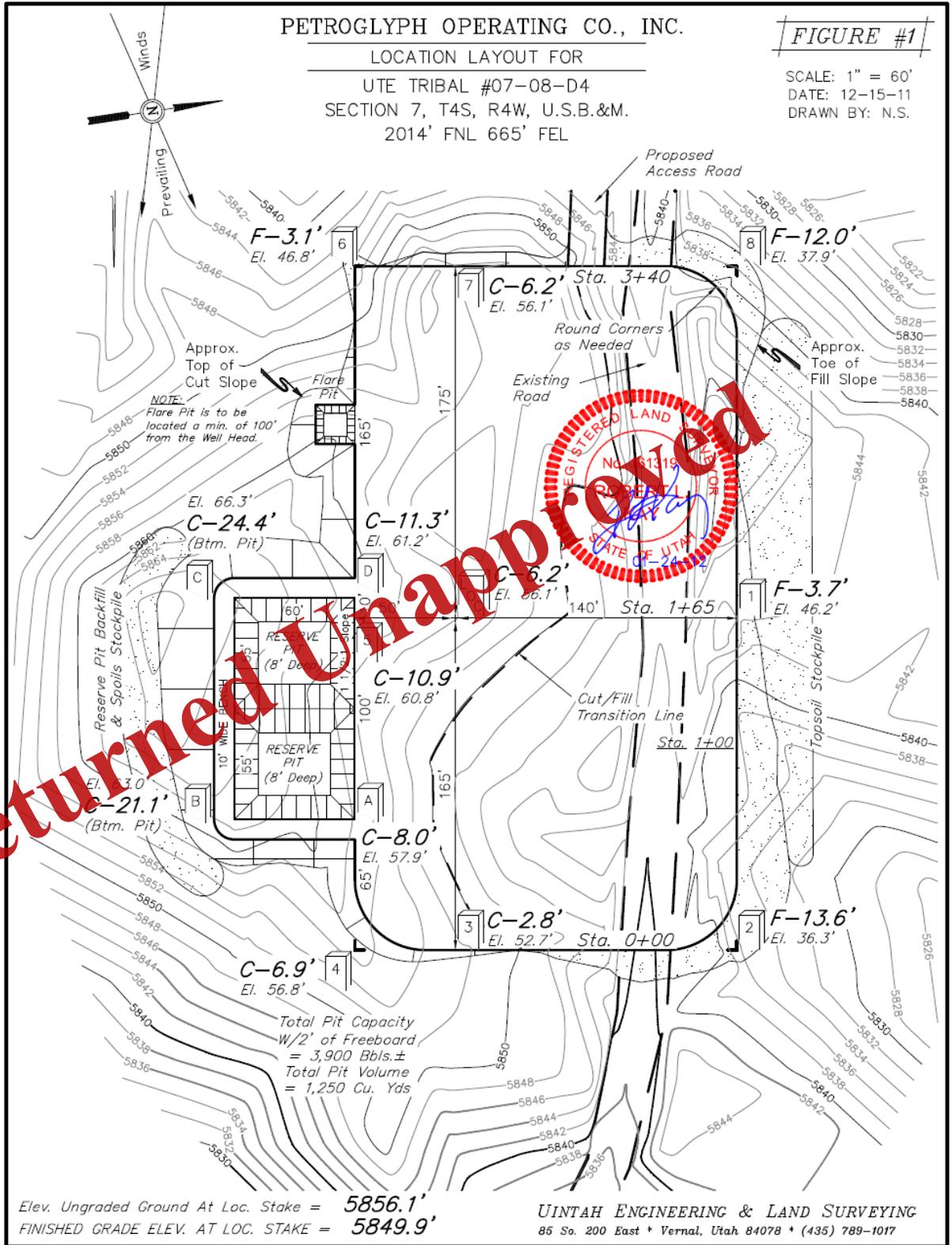
2014' FNL 665' FEL

FIGURE #1

SCALE: 1" = 60'

DATE: 12-15-11

DRAWN BY: N.S.



Elev. Ungraded Ground At Loc. Stake = 5856.1'  
FINISHED GRADE ELEV. AT LOC. STAKE = 5849.9'

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





GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

February 19, 2014

PETROGLYPH OPERATING CO  
960 Broadway Avenue, Ste 500  
Boise, ID 83703

Re: Application for Permit to Drill - DUCHESNE County, Utah

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the Ute Tribal 07-08-D4 well, API 43013515380000 that was submitted July 02, 2012 is being returned unapproved. If you plan on drilling this well in the future, you must first submit a new application.

Should you have any questions regarding this matter, please call me at (801) 538-5312.

Sincerely,

Diana Mason  
Environmental Scientist

Enclosure

cc: Bureau of Land Management, Vernal, Utah



