

**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 16-04A 								
<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> ANTELOPE CREEK								
<b>4. TYPE OF WELL</b> Oil Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> ANTELOPE CREEK								
<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, Boise, ID, 83703						<b>9. OPERATOR E-MAIL</b> ppowell@pgei.com								
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> 1420H623511			<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 checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>								
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>								
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>								
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> 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 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		820 FNL 597 FWL		NWNW		16		5.0 S		3.0 W		U		
Top of Uppermost Producing Zone		1340 FNL 20 FEL		SENE		17		5.0 S		3.0 W		U		
At Total Depth		1340 FNL 20 FEL		SENE		17		5.0 S		3.0 W		U		
<b>21. COUNTY</b> DUCHESNE			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 597			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640								
			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 72			<b>26. PROPOSED DEPTH</b> MD: 6429 TVD: 6335								
<b>27. ELEVATION - GROUND LEVEL</b> 6205			<b>28. BOND NUMBER</b> LPM4138336			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8342								
<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>				
COND	20	14	0 - 53	5.0	Unknown	10.0	Class G	25	1.17	15.8				
SURF	12.25	8.625	0 - 493	24.0	J-55 ST&C	10.0	Class G	226	1.17	15.8				
PROD	7.875	5.5	0 - 6429	15.5	J-55 LT&C	10.0	Class G	491	1.92	12.5				
							Class G	346	1.46	13.4				
<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 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> 10/31/2013				<b>EMAIL</b> edtrotter@easilink.com						
<b>API NUMBER ASSIGNED</b> 43013526310000				<b>APPROVAL</b>				 Permit Manager						

**CONFIDENTIAL**  
**NINE POINT DRILLING PLAN**  
**PETROGLYPH OPERATING COMPANY, INC**  
**UTE TRIBAL 16-04A**  
**NW NW, SEC 16, T5S, R3W**  
**DUCHESNE COUNTY, UTAH**

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

Formation		Subsea	TVD	MD
Rig KB~13' above GGL		6232	0	0
Surface Formation = Uinta				
Uinta		6219	13	13
Green River		4722	1510	1516
Trona		3381	2851	2908
Mahogany Shale		3235	2997	3059
"B" Marker	Waterflood Unit Interval	2140	4092	4184
"X" Marker		1660	4572	4666
Douglas Creek Marker		1518	4714	4808
"B" Limestone		1127	5105	5199
Base Castle Peak Limestone		555	5677	5771
BSCARB		157	6075	6169
Wasatch		-120	NDE	NDE
Formation at TD: Green River	Rig TD	-100	6335	6429

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

Substance	Formation	Subsea	TVD	MD
Base of moderately saline ground water*	Uinta	6000	232	232
Oil/Gas	Douglas Creek	1518	4714	4808
Oil/Gas	Castle Peak	555	5677	5771

Any water encountered during drilling shall be sampled, analyzed and reported to 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	53'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	493'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	6429'	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 4184' 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 53	Construction Grade Cement	Sufficient volumes to grout Conductor			
Surface	0 493	Class G +2% CaCl <sub>2</sub> +0.25 lb/sk Cello Flake	226 264	30%	15.8	1.17
Production Lead	0 4184	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR <sup>1</sup> / <sub>4</sub> (LCM)	491 943	30%	12.5	1.92
Production Tail	4184 6429	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR <sup>1</sup> / <sub>4</sub> (LCM)	346 506	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 cementing operation the cement does not circulate to surface, a remedial cementing operation shall be performed only if necessary to lift cement above the Trona at 2908' 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 493'. 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 140 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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**B. PRODUCTION HOLE**

- The production hole shall be drilled with a freshwater polymer system from 493' to 6429'. 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 8.3-8.8 lbs/gal. although mud weight up to 10lbs/gal may be used if necessary to prevent wellbore wall instability due to the planned inclination of the well.
- 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 mudweight 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. Operator does not plan on using a gas detector on the mud return due to the fact that any abnormal pressure is the result of offset water injection.

**C. HAZARDOUS MATERIALS AND POLLUTANTS**

- Chromate additives **shall NOT** be used in the mud system on Indian lands without prior DOGM 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 only)
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 1607 PSI (0.25 PSI/ft gradient).
- This well is in the vicinity of active injection wells. Nearby active injection can cause pressures up to a 0.433 PSI/ft gradient (2784 PSI).

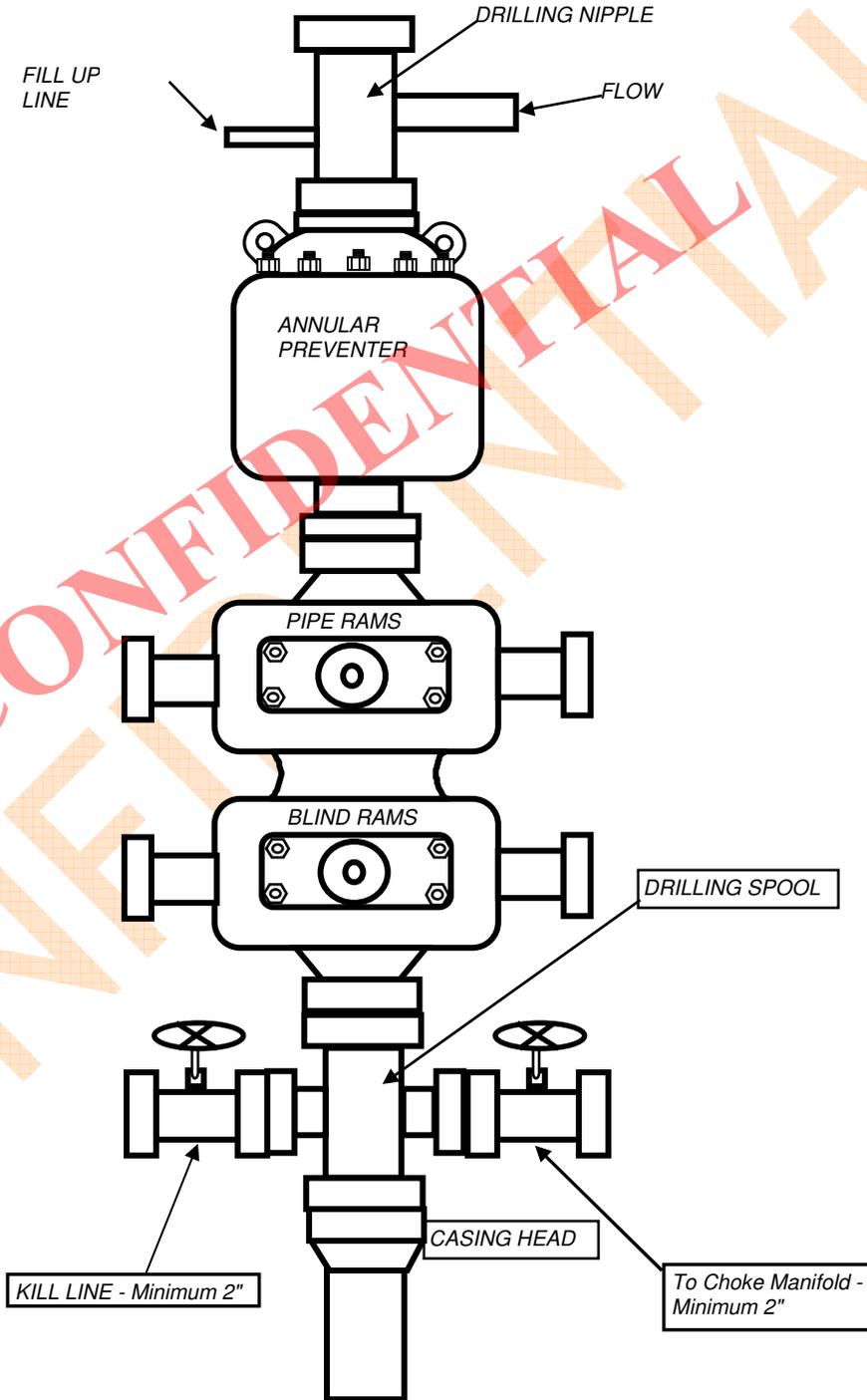
**9. DIRECTIONAL WELL PLAN:**

- Well shall be drilled directionally in order to limit surface disturbance.
- A Positive Displacement Motor with a bent sub of 1.25° to 1.75° will be used to control well path.
- A directional survey shall be taken at least one (1) time per 100' of drilling.
- Anti-collision equipment will not be used as there are no existing wells in the vicinity of the proposed well path.
- While cutting the Waterflood Unit Interval from 4184' to 6169', the actual well path may be allowed to vary up to 100' horizontally from plan in order to prevent excessive slide drilling. Above and below the Waterflood Unit Interval, variances in excess 100' horizontally from plan may be allowed.
- Directional drilling plan is attached.

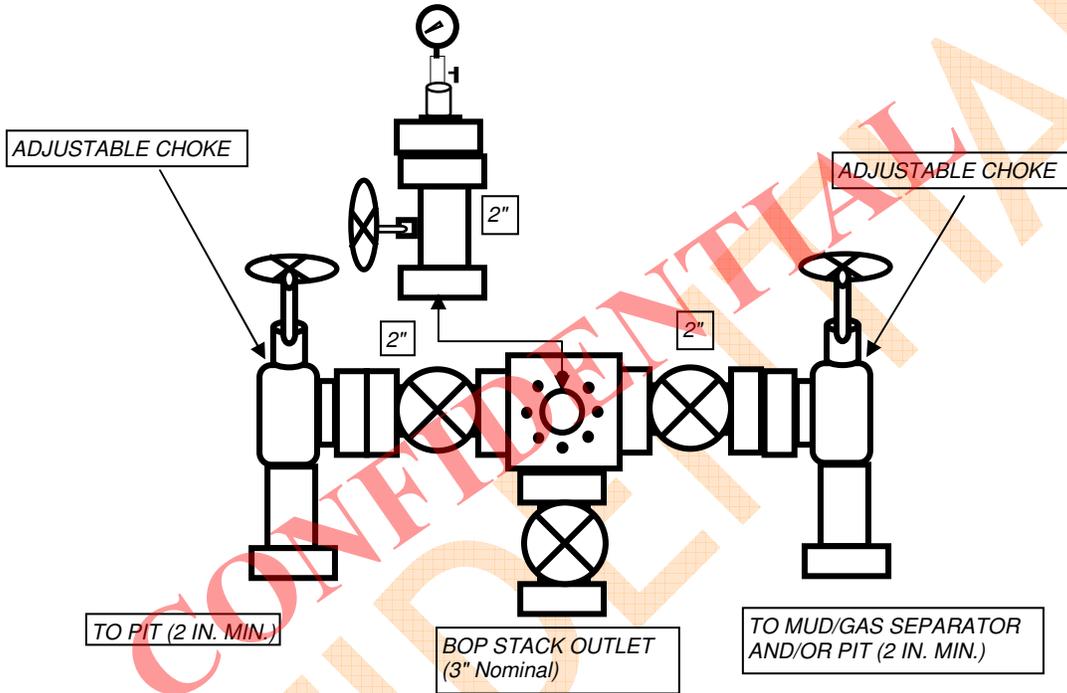


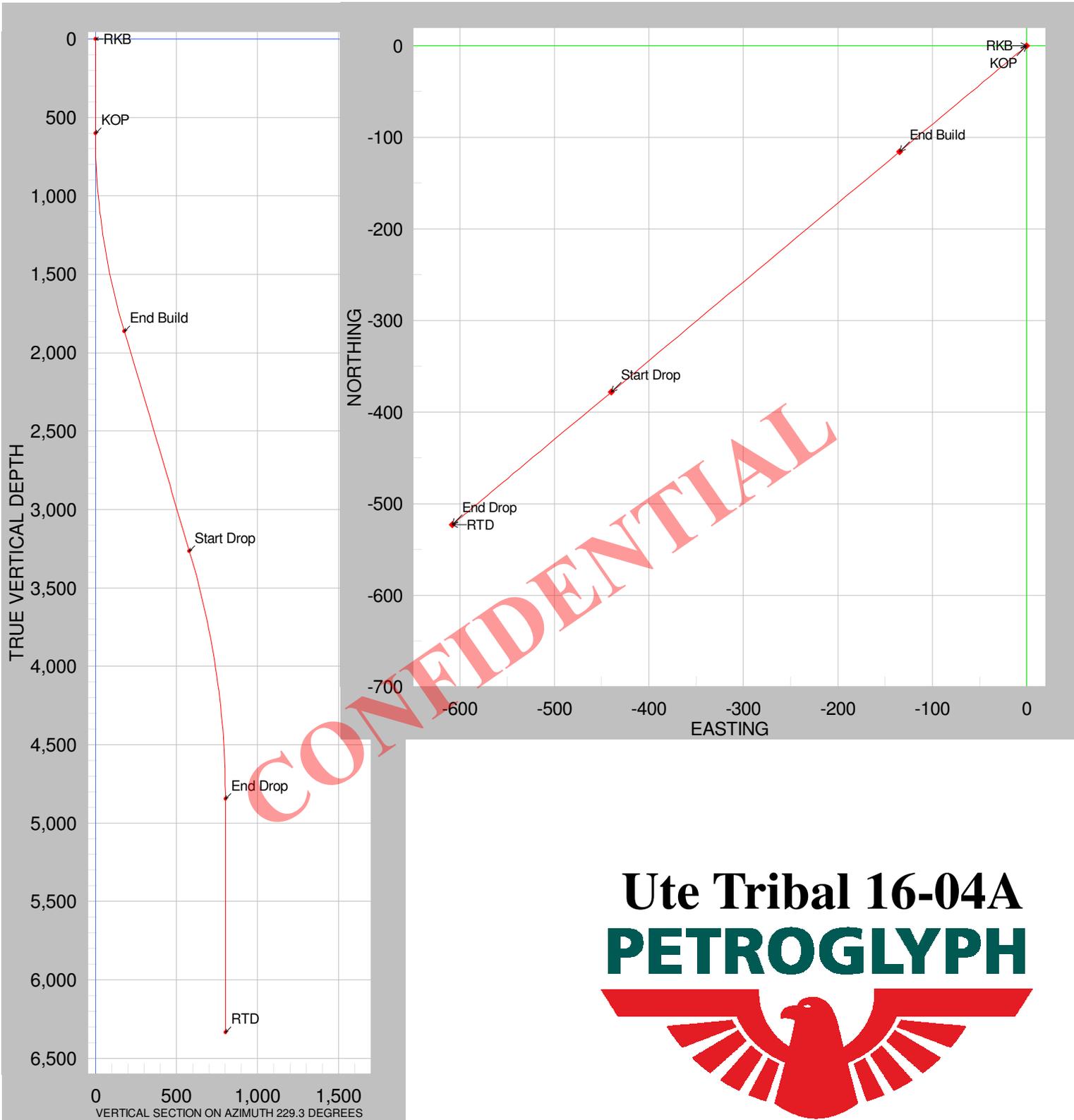
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TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER



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





# Ute Tribal 16-04A PETROGLYPH



#	Reference	Type	MD	Inc	Azi	TVD	N	E	DLS	Vert S
0	RKB	Tie Point	0.00	0.00	0.00	0.00	0.00	0.00		0.00
1	KOP	Vertical	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
2	End Build	Build	1880.00	16.00	229.30	1863.43	-115.79	-134.62	1.25	177.56
3	Start Drop	Tangent	3340.00	16.00	229.30	3266.87	-378.21	-439.71	0.00	579.99
4	End Drop	Drop	4940.00	0.00	0.00	4846.16	-522.95	-607.98	1.00	801.95
5	RTD	Vertical	6429.00	0.00	0.00	6335.16	-522.95	-607.98	0.00	801.95

### 16-04A, Plan 1

<b>Operator</b>	<b>Units</b> feet, %/100ft	13:57 Monday, October 28, 2013 Page 1 of 4
<b>Field</b>	<b>County</b> Duchesne	<b>Vertical Section Azimuth</b> 229.3
<b>Well Name</b> 16-04A	<b>State</b> UT	<b>Survey Calculation Method</b> Minimum Curvature
<b>Plan</b> 1	<b>Country</b> USA	<b>Database</b> Access

<b>Location</b>	SHL: 820' FNL & 597' FWL BHL: 1340' FNL & 20' FWL	<b>MapZone</b>	<b>Lat Long Ref</b>
<b>Site</b>		<b>SurfaceX</b>	<b>Surface Long</b>
<b>Slot Name</b>	<b>UWI</b>	<b>SurfaceY</b>	<b>Surface Lat</b>
<b>Well Number</b>	<b>API</b>	<b>Z Datum</b>	
<b>Project</b>		<b>Surface Z</b>	<b>Ground Level</b>

**DIRECTIONAL WELL PLAN**

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft
*** RKB (at MD = 0.00)										
0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00			
50.00	0.00	0.0	50.00	0.00	0.00	0.00	0.00			
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00			
150.00	0.00	0.0	150.00	0.00	0.00	0.00	0.00			
200.00	0.00	0.0	200.00	0.00	0.00	0.00	0.00			
250.00	0.00	0.0	250.00	0.00	0.00	0.00	0.00			
300.00	0.00	0.0	300.00	0.00	0.00	0.00	0.00			
350.00	0.00	0.0	350.00	0.00	0.00	0.00	0.00			
400.00	0.00	0.0	400.00	0.00	0.00	0.00	0.00			
450.00	0.00	0.0	450.00	0.00	0.00	0.00	0.00			
500.00	0.00	0.0	500.00	0.00	0.00	0.00	0.00			
550.00	0.00	0.0	550.00	0.00	0.00	0.00	0.00			
*** KOP (at MD = 600.00)										
600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00			
650.00	0.63	229.3	650.00	-0.18	-0.21	1.25	0.27			
700.00	1.25	229.3	699.99	-0.71	-0.83	1.25	1.09			
750.00	1.88	229.3	749.97	-1.60	-1.86	1.25	2.45			
800.00	2.50	229.3	799.94	-2.84	-3.31	1.25	4.36			
850.00	3.13	229.3	849.88	-4.44	-5.17	1.25	6.82			
900.00	3.75	229.3	899.79	-6.40	-7.44	1.25	9.81			
950.00	4.38	229.3	949.66	-8.71	-10.13	1.25	13.36			
1000.00	5.00	229.3	999.49	-11.37	-13.22	1.25	17.44			
1050.00	5.63	229.3	1049.28	-14.39	-16.73	1.25	22.07			
1100.00	6.25	229.3	1099.01	-17.77	-20.65	1.25	27.24			
1150.00	6.88	229.3	1148.68	-21.49	-24.99	1.25	32.96			
1200.00	7.50	229.3	1198.29	-25.57	-29.73	1.25	39.21			
1250.00	8.13	229.3	1247.82	-30.00	-34.88	1.25	46.01			
1300.00	8.75	229.3	1297.28	-34.79	-40.44	1.25	53.35			
1350.00	9.38	229.3	1346.66	-39.92	-46.41	1.25	61.22			
1400.00	10.00	229.3	1395.94	-45.41	-52.79	1.25	69.64			
1450.00	10.63	229.3	1445.14	-51.25	-59.58	1.25	78.59			
1500.00	11.25	229.3	1494.23	-57.43	-66.77	1.25	88.07			
1550.00	11.88	229.3	1543.21	-63.97	-74.37	1.25	98.10			
1600.00	12.50	229.3	1592.09	-70.85	-82.37	1.25	108.65			
1650.00	13.13	229.3	1640.84	-78.08	-90.78	1.25	119.74			

### 16-04A, Plan 1

<b>Operator</b>	<b>Units</b> feet, %100ft	13:57 Monday, October 28, 2013 Page 2 of 4
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**DIRECTIONAL WELL PLAN**

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
1700.00	13.75	229.3	1689.47	-85.66	-99.59	1.25	131.36			
1750.00	14.38	229.3	1737.97	-93.58	-108.80	1.25	143.51			
1800.00	15.00	229.3	1786.34	-101.85	-118.41	1.25	156.18			
1850.00	15.63	229.3	1834.56	-110.46	-128.42	1.25	169.39			
*** END BUILD (at MD = 1880.00)										
1880.00	16.00	229.3	1863.43	-115.79	-134.62	1.25	177.56			
1900.00	16.00	229.3	1882.65	-119.38	-138.80	0.00	183.08			
1950.00	16.00	229.3	1930.72	-128.37	-149.24	0.00	196.86			
2000.00	16.00	229.3	1978.78	-137.36	-159.69	0.00	210.64			
2050.00	16.00	229.3	2026.84	-146.35	-170.14	0.00	224.42			
2100.00	16.00	229.3	2074.91	-155.33	-180.59	0.00	238.20			
2150.00	16.00	229.3	2122.97	-164.32	-191.04	0.00	251.99			
2200.00	16.00	229.3	2171.03	-173.31	-201.49	0.00	265.77			
2250.00	16.00	229.3	2219.10	-182.29	-211.94	0.00	279.55			
2300.00	16.00	229.3	2267.16	-191.28	-222.38	0.00	293.33			
2350.00	16.00	229.3	2315.22	-200.27	-232.83	0.00	307.11			
2400.00	16.00	229.3	2363.28	-209.25	-243.28	0.00	320.89			
2450.00	16.00	229.3	2411.35	-218.24	-253.73	0.00	334.68			
2500.00	16.00	229.3	2459.41	-227.23	-264.18	0.00	348.46			
2550.00	16.00	229.3	2507.47	-236.22	-274.63	0.00	362.24			
2600.00	16.00	229.3	2555.54	-245.20	-285.08	0.00	376.02			
2650.00	16.00	229.3	2603.60	-254.19	-295.52	0.00	389.80			
2700.00	16.00	229.3	2651.66	-263.18	-305.97	0.00	403.59			
2750.00	16.00	229.3	2699.73	-272.16	-316.42	0.00	417.37			
2800.00	16.00	229.3	2747.79	-281.15	-326.87	0.00	431.15			
2850.00	16.00	229.3	2795.85	-290.14	-337.32	0.00	444.93			
2900.00	16.00	229.3	2843.92	-299.13	-347.77	0.00	458.71			
2950.00	16.00	229.3	2891.98	-308.11	-358.21	0.00	472.50			
3000.00	16.00	229.3	2940.04	-317.10	-368.66	0.00	486.28			
3050.00	16.00	229.3	2988.10	-326.09	-379.11	0.00	500.06			
3100.00	16.00	229.3	3036.17	-335.07	-389.56	0.00	513.84			
3150.00	16.00	229.3	3084.23	-344.06	-400.01	0.00	527.62			
3200.00	16.00	229.3	3132.29	-353.05	-410.46	0.00	541.40			
3250.00	16.00	229.3	3180.36	-362.04	-420.91	0.00	555.19			
3300.00	16.00	229.3	3228.42	-371.02	-431.35	0.00	568.97			

### 16-04A, Plan 1

<b>Operator</b>		<b>Units</b>	feet, %100ft	13:57 Monday, October 28, 2013 Page 3 of 4	
<b>Field</b>		<b>County</b>	Duchesne	<b>Vertical Section Azimuth</b> 229.3	
<b>Well Name</b>	16-04A	<b>State</b>	UT	<b>Survey Calculation Method</b> Minimum Curvature	
<b>Plan</b>	1	<b>Country</b>	USA	<b>Database</b> Access	

<b>Location</b>	SHL: 820' FNL & 597' FWL BHL: 1340' FNL & 20' FWL		<b>MapZone</b>	<b>Lat Long Ref</b>
<b>Site</b>			<b>SurfaceX</b>	<b>Surface Long</b>
<b>Slot Name</b>	<b>UWI</b>		<b>SurfaceY</b>	<b>Surface Lat</b>
<b>Well Number</b>	<b>API</b>		<b>Z Datum</b>	
<b>Project</b>			<b>Surface Z</b>	<b>Ground Level</b>

**DIRECTIONAL WELL PLAN**

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
*** START DROP (at MD = 3340.00)										
3340.00	16.00	229.3	3266.87	-378.21	-439.71	0.00	579.99			
3350.00	15.90	229.3	3276.49	-380.01	-441.80	1.00	582.74			
3400.00	15.40	229.3	3324.63	-388.80	-452.02	1.00	596.23			
3450.00	14.90	229.3	3372.89	-397.32	-461.93	1.00	609.30			
3500.00	14.40	229.3	3421.27	-405.57	-471.52	1.00	621.94			
3550.00	13.90	229.3	3469.75	-413.54	-480.78	1.00	634.17			
3600.00	13.40	229.3	3518.34	-421.23	-489.73	1.00	645.97			
3650.00	12.90	229.3	3567.03	-428.65	-498.35	1.00	657.34			
3700.00	12.40	229.3	3615.81	-435.79	-506.65	1.00	668.29			
3750.00	11.90	229.3	3664.69	-442.65	-514.63	1.00	678.81			
3800.00	11.40	229.3	3713.66	-449.24	-522.29	1.00	688.91			
3850.00	10.90	229.3	3762.72	-455.54	-529.62	1.00	698.58			
3900.00	10.40	229.3	3811.86	-461.57	-536.62	1.00	707.82			
3950.00	9.90	229.3	3861.08	-467.31	-543.30	1.00	716.63			
4000.00	9.40	229.3	3910.37	-472.78	-549.66	1.00	725.01			
4050.00	8.90	229.3	3959.73	-477.96	-555.68	1.00	732.96			
4100.00	8.40	229.3	4009.16	-482.87	-561.39	1.00	740.48			
4150.00	7.90	229.3	4058.66	-487.49	-566.76	1.00	747.57			
4200.00	7.40	229.3	4108.21	-491.83	-571.81	1.00	754.23			
4250.00	6.90	229.3	4157.82	-495.89	-576.52	1.00	760.45			
4300.00	6.40	229.3	4207.49	-499.66	-580.91	1.00	766.24			
4350.00	5.90	229.3	4257.20	-503.16	-584.97	1.00	771.60			
4400.00	5.40	229.3	4306.96	-506.37	-588.71	1.00	776.52			
4450.00	4.90	229.3	4356.75	-509.29	-592.11	1.00	781.01			
4500.00	4.40	229.3	4406.59	-511.94	-595.18	1.00	785.06			
4550.00	3.90	229.3	4456.46	-514.30	-597.93	1.00	788.68			
4600.00	3.40	229.3	4506.36	-516.37	-600.34	1.00	791.86			
4650.00	2.90	229.3	4556.28	-518.16	-602.42	1.00	794.61			
4700.00	2.40	229.3	4606.23	-519.67	-604.17	1.00	796.92			
4750.00	1.90	229.3	4656.19	-520.89	-605.60	1.00	798.80			
4800.00	1.40	229.3	4706.17	-521.83	-606.69	1.00	800.24			
4850.00	0.90	229.3	4756.16	-522.49	-607.45	1.00	801.24			
4900.00	0.40	229.3	4806.16	-522.86	-607.88	1.00	801.81			

### 16-04A, Plan 1

<b>Operator</b>	<b>Units</b> feet, %/100ft	13:57 Monday, October 28, 2013 Page 4 of 4
<b>Field</b>	<b>County</b> Duchesne	<b>Vertical Section Azimuth</b> 229.3
<b>Well Name</b> 16-04A	<b>State</b> UT	<b>Survey Calculation Method</b> Minimum Curvature
<b>Plan</b> 1	<b>Country</b> USA	<b>Database</b> Access

<b>Location</b>	SHL: 820' FNL & 597' FWL BHL: 1340' FNL & 20' FWL	<b>MapZone</b>	<b>Lat Long Ref</b>
<b>Site</b>		<b>SurfaceX</b>	<b>Surface Long</b>
<b>Slot Name</b>	<b>UWI</b>	<b>SurfaceY</b>	<b>Surface Lat</b>
<b>Well Number</b>	<b>API</b>	<b>Z Datum</b>	
<b>Project</b>		<b>Surface Z</b>	<b>Ground Level</b>

**DIRECTIONAL WELL PLAN**

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft
*** END DROP (at MD = 4940.00)										
4940.00	0.00	0.0	4846.16	-522.95	-607.98	1.00	801.95			
4950.00	0.00	0.0	4856.16	-522.95	-607.98	0.00	801.95			
5000.00	0.00	0.0	4906.16	-522.95	-607.98	0.00	801.95			
5050.00	0.00	0.0	4956.16	-522.95	-607.98	0.00	801.95			
5100.00	0.00	0.0	5006.16	-522.95	-607.98	0.00	801.95			
5150.00	0.00	0.0	5056.16	-522.95	-607.98	0.00	801.95			
5200.00	0.00	0.0	5106.16	-522.95	-607.98	0.00	801.95			
5250.00	0.00	0.0	5156.16	-522.95	-607.98	0.00	801.95			
5300.00	0.00	0.0	5206.16	-522.95	-607.98	0.00	801.95			
5350.00	0.00	0.0	5256.16	-522.95	-607.98	0.00	801.95			
5400.00	0.00	0.0	5306.16	-522.95	-607.98	0.00	801.95			
5450.00	0.00	0.0	5356.16	-522.95	-607.98	0.00	801.95			
5500.00	0.00	0.0	5406.16	-522.95	-607.98	0.00	801.95			
5550.00	0.00	0.0	5456.16	-522.95	-607.98	0.00	801.95			
5600.00	0.00	0.0	5506.16	-522.95	-607.98	0.00	801.95			
5650.00	0.00	0.0	5556.16	-522.95	-607.98	0.00	801.95			
5700.00	0.00	0.0	5606.16	-522.95	-607.98	0.00	801.95			
5750.00	0.00	0.0	5656.16	-522.95	-607.98	0.00	801.95			
5800.00	0.00	0.0	5706.16	-522.95	-607.98	0.00	801.95			
5850.00	0.00	0.0	5756.16	-522.95	-607.98	0.00	801.95			
5900.00	0.00	0.0	5806.16	-522.95	-607.98	0.00	801.95			
5950.00	0.00	0.0	5856.16	-522.95	-607.98	0.00	801.95			
6000.00	0.00	0.0	5906.16	-522.95	-607.98	0.00	801.95			
6050.00	0.00	0.0	5956.16	-522.95	-607.98	0.00	801.95			
6100.00	0.00	0.0	6006.16	-522.95	-607.98	0.00	801.95			
6150.00	0.00	0.0	6056.16	-522.95	-607.98	0.00	801.95			
6200.00	0.00	0.0	6106.16	-522.95	-607.98	0.00	801.95			
6250.00	0.00	0.0	6156.16	-522.95	-607.98	0.00	801.95			
6300.00	0.00	0.0	6206.16	-522.95	-607.98	0.00	801.95			
6350.00	0.00	0.0	6256.16	-522.95	-607.98	0.00	801.95			
6400.00	0.00	0.0	6306.16	-522.95	-607.98	0.00	801.95			
*** RTD (at MD = 6429.00)										
6429.00	0.00	0.0	6335.16	-522.95	-607.98	0.00	801.95			

T5S, R3W, U.S.B.&M.

PETROGLYPH OPERATING CO., INC.

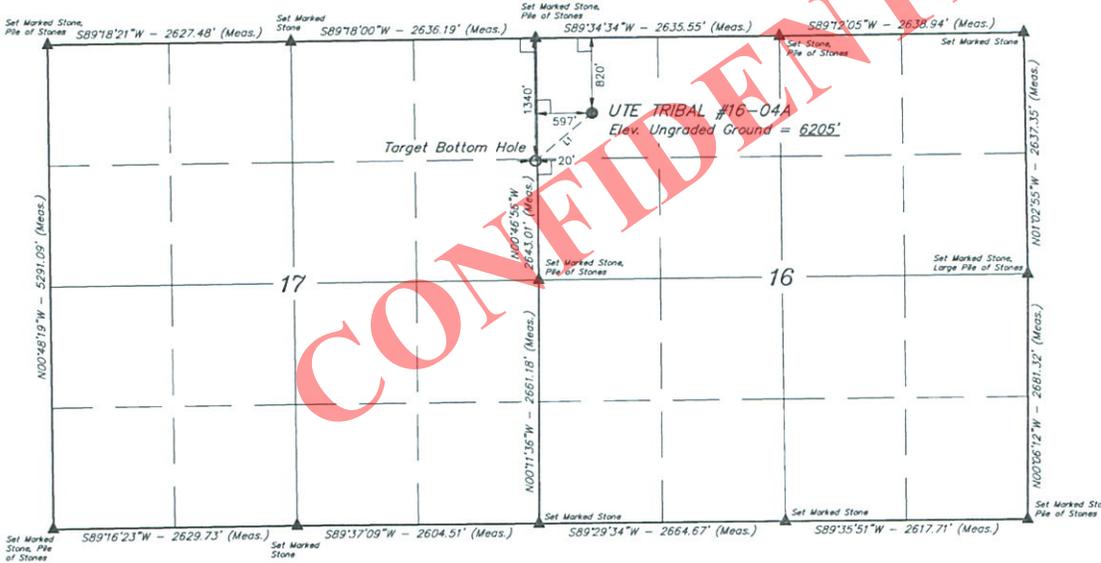
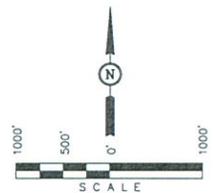
Well location, UTE TRIBAL #16-04A, located as shown in the NW 1/4 NW 1/4 of Section 16, T5S, R3W, U.S.B.&M., Duchesne County, Utah.

BASIS OF ELEVATION

BRASS CAP SET IN CONCRETE BY SUNRISE ENGINEERING LOCATED IN THE SE 1/4 OF SECTION 16, T5S, R3W, U.S.B.&M. SAID ELEVATION IS MARKED AS BEING 6281.9 FEET.

BASIS OF BEARINGS

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



LINE TABLE		
LINE	DIRECTION	LENGTH
LI	S49°18'14"W	803.97'

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

NAD 83 (TARGET BOTTOM HOLE)		NAD 83 (SURFACE LOCATION)	
LATITUDE =	40°03'00.46" (40.050128)	LATITUDE =	40°03'05.25" (40.051542)
LONGITUDE =	110°14'14.88" (110.237467)	LONGITUDE =	110°14'06.85" (110.235264)
NAD 27 (TARGET BOTTOM HOLE)		NAD 27 (SURFACE LOCATION)	
LATITUDE =	40°03'00.60" (40.050167)	LATITUDE =	40°03'05.69" (40.051581)
LONGITUDE =	110°14'12.33" (110.236758)	LONGITUDE =	110°14'04.40" (110.234556)

**CERTIFICATE**

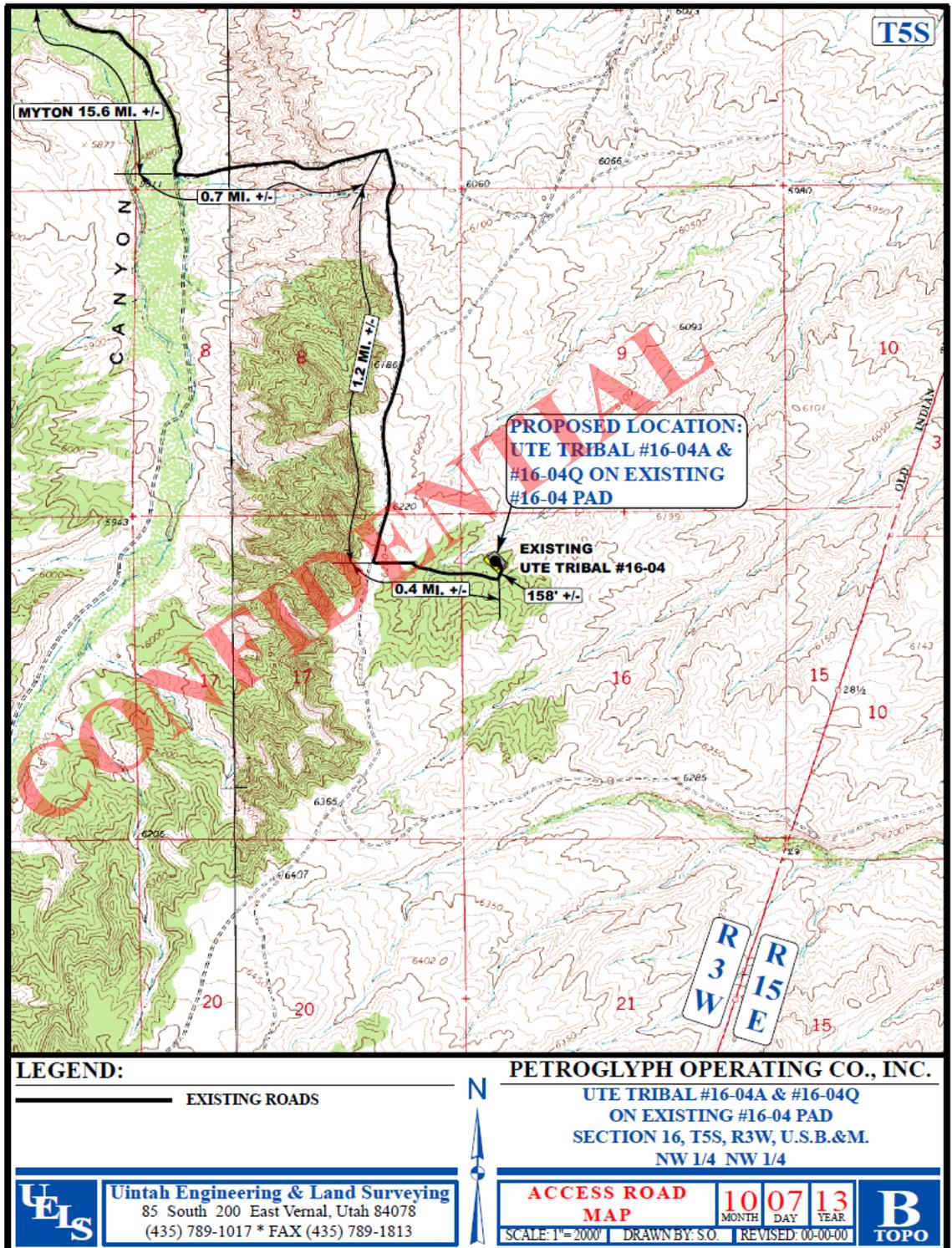
THIS IS TO CERTIFY THAT THE ABOVE SURVEY WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*[Signature]*

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 142319  
STATE OF UTAH 01-12-2011

REVISED: 11-06-13

UNTAH ENGINEERING & LAND SURVEYING		
85 SOUTH 200 EAST - VERNAL UTAH 84078		
(435) 789-1017		
SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	09-25-13	10-03-13
PARTY	REFERENCES	
T.A. J.L. S.F.	G.L.O. PLAT	
WEATHER	FILE	
WARM	PETROGLYPH OPERATING CO., INC.	



**PETROGLYPH OPERATING CO., INC.**  
**P.O. BOX 607**  
**ROOSEVELT, UTAH 84066**

October 30, 2013

Ms. Diana Mason  
State of Utah  
Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, UT 84114-5801

Re: Directional Drilling R649-3-11

Ute Tribal 16-04A: 820' FNL & 597' FWL, NW/NW, Sec. 16, (Surface Hole)  
1340' FNL & 20' FEL, SE/NE, Sec. 17, (Bottom Hole)  
T5S, R3W, U.S.B.&M.,  
Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Petroglyph Operating Co., Inc.'s Application for Permit to Drill regarding the above referenced well on October 30, 2013, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- The Ute Tribal 30-020 is located within the Antelope Creek Unit Area.
- Petroglyph Operating Co., Inc. is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and drilling directionally from this location, Petroglyph Operating Co., Inc. will be able to utilize the existing road and pipelines in the area.
- Furthermore, Petroglyph Operating Co., Inc. hereby certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Petroglyph Operating Co., Inc. requests the permit be granted pursuant to R649-3-11.

Respectfully Submitted,

Ed Trotter,  
Agent  
P.O. Box 1910  
Vernal, UT 84078  
Phone: (435)789-4120  
Fax: (435)789-1420  
E-mail: edtrotter@easilink.com

**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.

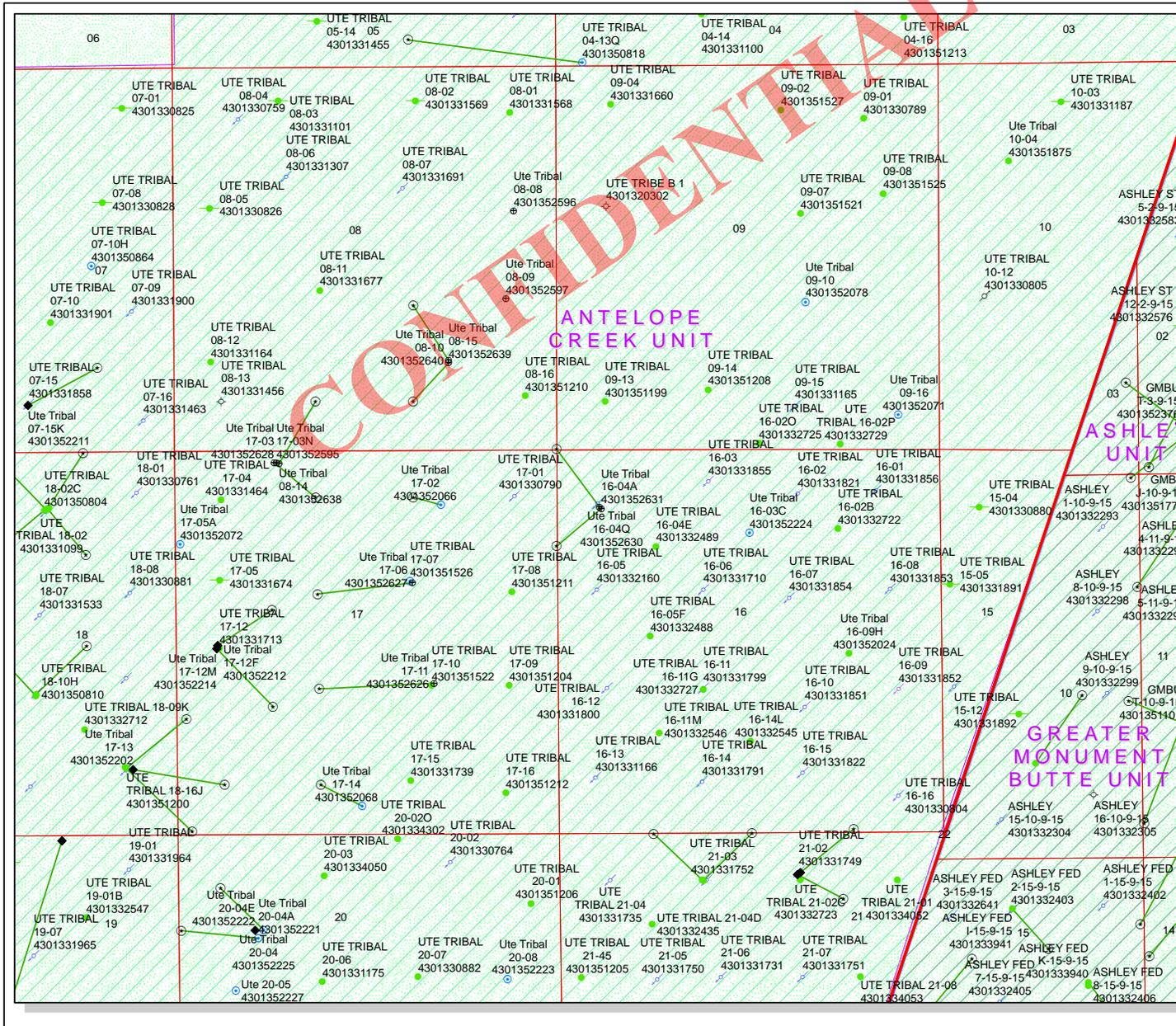
Please be advised that Petroglyph Operating Co., Inc. is considered to be the operator of the **UTE TRIBAL 16-04A Well, located in the NW/NW of Section 16, T5S, R3W, Duchesne County, Utah; Lease #14-20-H62-3511**; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is provided under Bond #LPM4138335.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ed Trotter, as Agent for  
Petroglyph Operating Co., Inc.

CONFIDENTIAL





API Number: 4301352631

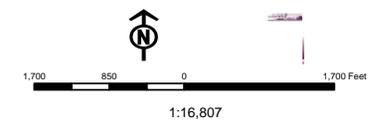
Well Name: Ute Tribal 16-04A

Township: T05.0S Range: R03.0W Section: 16 Meridian: U

Operator: PETROGLYPH OPERATING CO

Map Prepared: 11/6/2013  
Map Produced by Diana Mason

Wells Query		Units STATUS	
◆	APD - Approved Permit	□	ACTIVE
○	DRL - Spudded (Drilling Commenced)	□	EXPLORATORY
⚡	GIW - Gas Injection	□	GAS STORAGE
⚡	GS - Gas Storage	□	NF PP OIL
⊕	LOC - New Location	□	NF SECONDARY
⊖	OPS - Operation Suspended	□	PI OIL
⊖	PA - Plugged Abandoned	□	PP GAS
⊖	PGW - Producing Gas Well	□	PP GEOTHERM
⊖	POW - Producing Oil Well	□	PP OIL
⊖	SGW - Shut-in Gas Well	□	SECONDARY
⊖	SGW - Shut-in Oil Well	□	TERMINATED
⊖	TA - Temp. Abandoned	□	
○	TW - Test Well	□	
⊖	WDW - Water Disposal	□	
⊖	WW - Water Injection Well	□	
⊖	WSW - Water Supply Well	□	
		□	Unknown
		□	ABANDONED
		□	ACTIVE
		□	COMBINED
		□	INACTIVE
		□	STORAGE
		□	TERMINATED



## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/31/2013

API NO. ASSIGNED: 43013526310000

WELL NAME: Ute Tribal 16-04A

OPERATOR: PETROGLYPH OPERATING CO (N3800)

PHONE NUMBER: 435 789-4120

CONTACT: Ed Trotter

PROPOSED LOCATION: NWNW 16 050S 030W

Permit Tech Review: 

SURFACE: 0820 FNL 0597 FWL

Engineering Review: 

BOTTOM: 1340 FNL 0020 FEL

Geology Review: 

COUNTY: DUCHESNE

LATITUDE: 40.05149

LONGITUDE: -110.23536

UTM SURF EASTINGS: 565221.00

NORTHINGS: 4433752.00

FIELD NAME: ANTELOPE CREEK

LEASE TYPE: 2 - Indian

LEASE NUMBER: 1420H623511

PROPOSED PRODUCING FORMATION(S): GREEN RIVER

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: INDIAN - LPM4138336
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 43-8342
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit: ANTELOPE CREEK
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 214-2
- Effective Date: 6/9/2000
- Siting: Suspends General Siting
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason  
15 - Directional - dmason



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

## Permit To Drill

\*\*\*\*\*

**Well Name:** Ute Tribal 16-04A  
**API Well Number:** 43013526310000  
**Lease Number:** 1420H623511  
**Surface Owner:** INDIAN  
**Approval Date:** 11/7/2013

**Issued to:**

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

**Authority:**

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 214-2. 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:**

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

**Reporting Requirements:**

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

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

**Approved By:**

A handwritten signature in black ink, appearing to read "John Rogers", written over a horizontal line.

For John Rogers  
Associate Director, Oil & Gas

RECEIVED

Form 3160-3  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NOV 03 2013

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

BLM

5. Lease Serial No.  
1420H623511

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.  
1420H624650

8. Lease Name and Well No.  
UTE TRIBAL 16-04A

9. API Well No.  
4301252031

10. Field and Pool, or Exploratory  
ANTELOPE CREEK

11. Sec., T., R., M., or Blk. and Survey or Area  
Sec 16 T5S R3W Mer UBM

12. County or Parish  
DUCHESNE

13. State  
UT

1a. Type of Work:  DRILL  REENTER

CONFIDENTIAL

1b. Type of Well:  Oil Well  Gas Well  Other  Single Zone  Multiple Zone

2. Name of Operator  
PETROGLYPH OPERATING CO., INC. Contact: ED H TROTTER  
Call: edtrotter@easlink.com

3a. Address  
P.O. BOX 607  
ROOSEVELT, UT 84066

3b. Phone No. (include area code)  
Ph: 435-789-4120  
Fx: 435-789-1420

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface NWNW 820FNL 597FWL  
At proposed prod. zone SENE 1340FNL 20FEL sec 17

14. Distance in miles and direction from nearest town or post office\*  
16.7 MILES SOUTHWEST OF MYTON, UTAH

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
597

16. No. of Acres in Lease  
640.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.  
72

19. Proposed Depth  
6429 MD  
6335 TVD

21. Elevations (Show whether DF, KB, RT, GL, etc.)  
6205 GL

22. Approximate date work will start  
12/15/2013

17. Spacing Unit dedicated to this well

20. BLM/BIA Bond No. on file  
LPM4138335

23. Estimated duration  
45 DAYS

24. Attachments

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

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

25. Signature  
(Electronic Submission)

Name (Printed/Typed)  
LESTER FARNSWORTH Ph: 435-722-2531

Date  
10/31/2013

Title  
DISTRICT MANAGER

Approved by (Signature)

Name (Printed/Typed)  
Jerry Kenczka

Date  
JUL 01 2014

Title  
Assistant Field Manager  
Lands & Mineral Resources

Office  
VERNAL FIELD OFFICE

Application approval does not warrant or certify 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.

Additional Operator Remarks (see next page)

Electronic Submission #225170 verified by the BLM Well Information System For PETROGLYPH OPERATING CO., INC., sent to the Vernal Committed to AFMSS for processing by LESLIE BUHLER on 11/12/2013 () DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

UDOGM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*



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:	PETROGLYPH OPERATING CO INC	Location:	NWNW, Sec. 16, T5S, R3W
Well No:	UTE TRIBAL 16-04A	Lease No:	14-20-H62-3511
API No:	43-013-52631	Agreement:	N/A

**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**

Construction Activity  
(Notify Ute Tribe Energy & Minerals  
Dept. and BLM Environmental  
Scientist)

- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.

Construction Completion  
(Notify Ute Tribe Energy & Minerals  
Dept. and BLM Environmental  
Scientist)

- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.

Spud Notice  
(Notify BLM Petroleum Engineer)

- Twenty-Four (24) hours prior to spudding the well.

Casing String & Cementing  
(Notify BLM Supv. Petroleum Tech.)

- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: [blm\\_ut\\_vn\\_opreport@blm.gov](mailto:blm_ut_vn_opreport@blm.gov).

BOP & Related Equipment Tests  
(Notify BLM Supv. Petroleum Tech.)

- Twenty-Four (24) hours prior to initiating pressure tests.

First Production Notice  
(Notify BLM 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)**

*Company/Operator:* Petroglyph

*Well Name & Numbers:* Ute Tribal 16-04A and 16-04Q

**CONDITIONS OF APPROVAL:**

- All areas of disturbance (including surface pipelines) must have appropriate surface use agreements or approvals in place with the proper owner and/or agency before such action is started.
- The conditions of approval, as set forth by those owners and/or agencies, shall be adhered to.

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

**SITE SPECIFIC DOWNHOLE COAs:**

apd\_coa Downhole \_Ptyph

- Production casing cement shall be brought up and into the surface.
- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 75 feet.
- All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.
- applicable wells:
  - \_ptyph
  - Ute Tribal
- 1420H623511
  - 16-04A
  - 16-04Q
- 1420H624633
  - 17-06
  - 17-11
- 1420H623514
  - 19-09H

**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 by CD (compact disc). 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.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- 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 (¼¼, 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.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 1420H623511
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> UTE
		<b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> Ute Tribal 16-04A	
<b>2. NAME OF OPERATOR:</b> PETROGLYPH OPERATING CO	<b>9. API NUMBER:</b> 43013526310000	
<b>3. ADDRESS OF OPERATOR:</b> 960 Broadway Avenue, Ste 500 , Boise, ID, 83703	<b>PHONE NUMBER:</b> 208 685-7685 Ext	<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0820 FNL 0597 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 05.0S Range: 03.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 7/10/2014  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
This well was spud on 7/10/2014 at approximately 8:00 A.M. Using a Bucket Rig provided by Craig's Roustabout Service, Vernal Utah, we set 60' of 16" Conductor. For additional information please contact our staff at 435-722-2531.		
		<b>Accepted by the Utah Division of Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> July 22, 2014
<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/15/2014	

<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> 1420H623511
<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> UTE  <b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> UTE TRIBAL 16-04QQ
<b>2. NAME OF OPERATOR:</b> PETROGLYPH OPERATING CO	<b>9. API NUMBER:</b> 43013526310000
<b>3. ADDRESS OF OPERATOR:</b> 960 Broadway Avenue, Ste 500 , Boise, ID, 83703	<b>PHONE NUMBER:</b> 208 685-7685 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0820 FNL 0597 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 05.0S Range: 03.0W Meridian: U	<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK  <b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>7/29/2014</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b> <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input checked="" type="checkbox"/> <b>CHANGE WELL NAME</b> <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

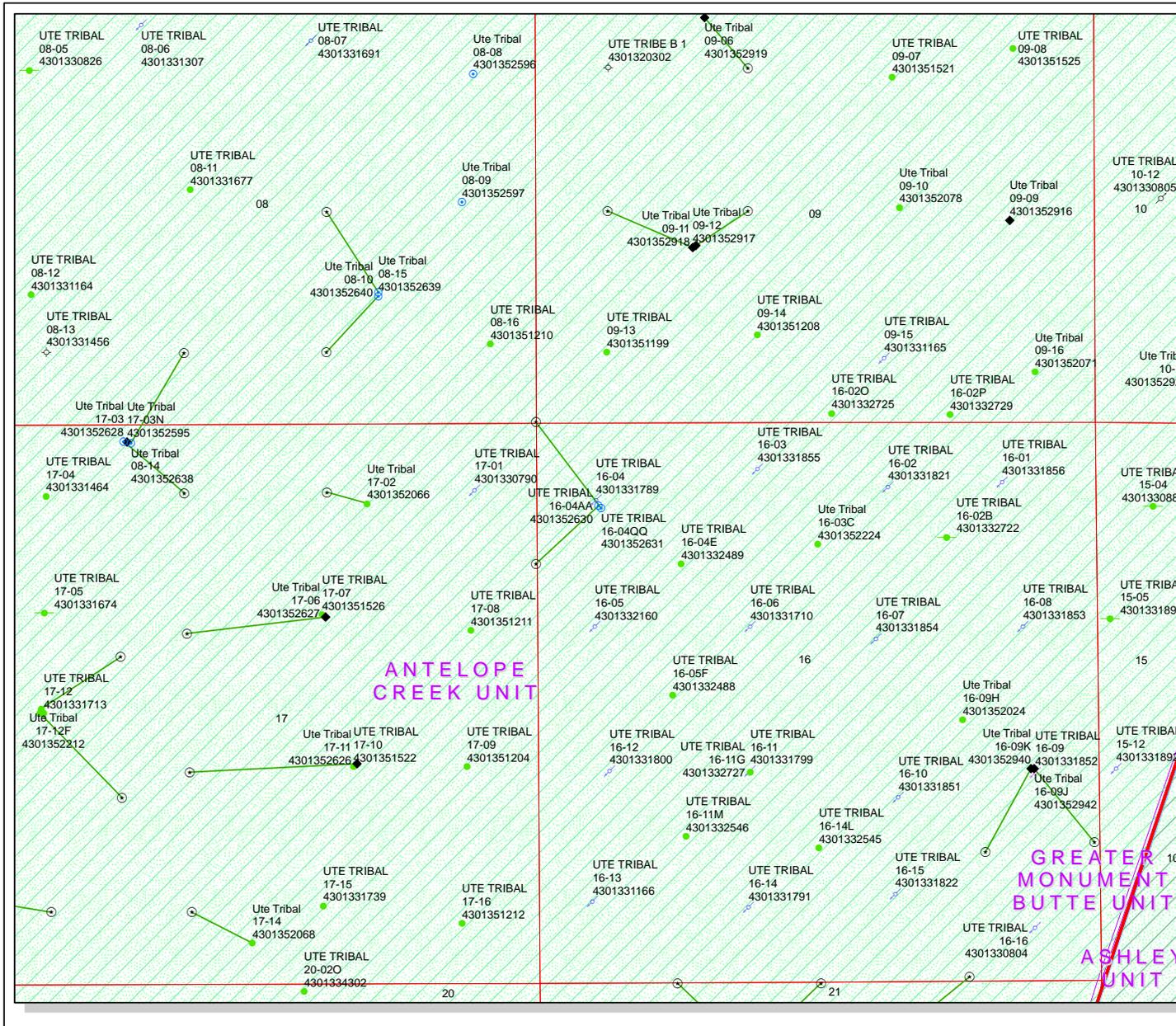
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Please change this well's name to Ute Tribal 16-04QQ and see attached Revised 9 Point Drilling Plan, Revised Directional Plan, Revised Directional Plat & Revised Well Site Layout Diagram. The revisions to our downhole program and change in well name are being made to correct the drilling of the wrong directional plan out of the surface casing of the Ute Tribal 16-04Q. The BHL we plan to reach is actually designated for a well ending in "Q" but will be drilled from the surface location of the well referenced above. Please contact our staff if you have any questions or need any additional materials.

**Approved by the**  
**August 11, 2014**  
**Oil, Gas and Mining**

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

<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/29/2014	



API Number: 4301352631

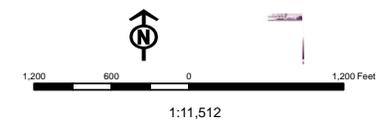
Well Name: UTE TRIBAL 16-04QQ

Township: T05.0S Range: R03.0W Section: 16 Meridian: U

Operator: PETROGLYPH OPERATING CO

Map Prepared: 8/8/2014  
Map Produced by Diana Mason

Wells Query		Units	
Status	Symbol	STATUS	Symbol
APD - Approved Permit	Black diamond	ACTIVE	Green hatched box
DRL - Spudded (Drilling Commenced)	Blue circle with dot	EXPLORATORY	Blue hatched box
GIW - Gas Injection	Red star	GAS STORAGE	Red hatched box
GS - Gas Storage	Blue star	NF PP OIL	Blue hatched box
LOC - New Location	Green circle with dot	NF SECONDARY	Green hatched box
OPS - Operation Suspended	Red circle with dot	PI OIL	Red hatched box
PA - Plugged Abandoned	Black circle with dot	PP GAS	Black hatched box
PGW - Producing Gas Well	Red star	PP GEOTHERML	Red hatched box
POW - Producing Oil Well	Green star	PP OIL	Green hatched box
SGW - Shut-in Gas Well	Red star	SECONDARY	Red hatched box
SGW - Shut-in Oil Well	Green star	TERMINATED	Green hatched box
TA - Temp. Abandoned	Black circle with dot		
TW - Test Well	Blue circle with dot	Fields STATUS	
WDW - Water Disposal	Blue circle with dot	Unknown	White box
WW - Water Injection Well	Blue circle with dot	ABANDONED	Red box
WSW - Water Supply Well	Blue circle with dot	ACTIVE	Green box
		COMBINED	Blue box
		INACTIVE	Red box
		STORAGE	Blue box
		TERMINATED	Red box



T5S, R3W, U.S.B.&M.

PETROGLYPH OPERATING CO., INC.

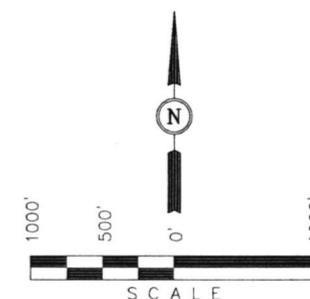
Well location, UTE TRIBAL #16-04QQ, located as shown in the NW 1/4 NW 1/4 of Section 16, T5S, R3W, U.S.B.&M., Duchesne County, Utah.

BASIS OF ELEVATION

BRASS CAP SET IN CONCRETE BY SUNRISE ENGINEERING LOCATED IN THE SE 1/4 NW 1/4 OF SECTION 16, T5S, R3W, U.S.B.&M. SAID ELEVATION IS MARKED AS BEING 6281.9 FEET.

BASIS OF BEARINGS

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



CERTIFICATE

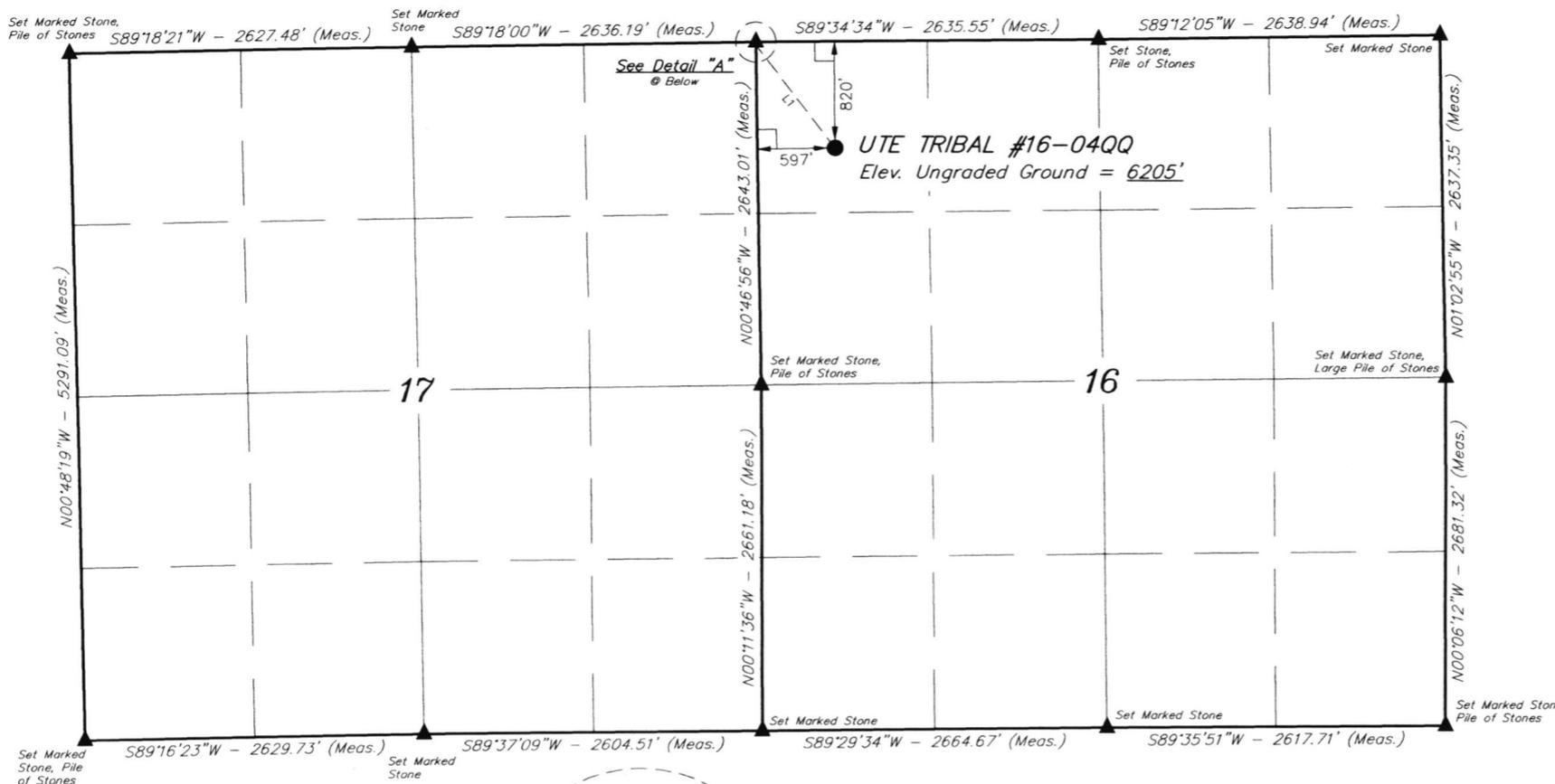
THIS IS TO CERTIFY THAT THE ABOVE DRAWING WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Robert Kay*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH DATE 07-25-14

REV: 07-25-14 J.J.  
 REVISED: 11-06-13

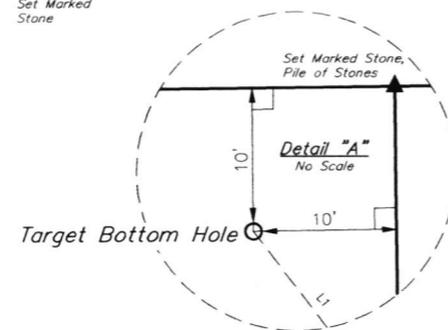
**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

SCALE	1" = 1000'	DATE SURVEYED:	09-25-13	DATE DRAWN:	10-03-13
PARTY	T.A. J.L. S.F.	REFERENCES	G.L.O. PLAT		
WEATHER	WARM	FILE	PETROGLYPH OPERATING CO., INC.		



See Detail "A" @ Below

UTE TRIBAL #16-04QQ  
 Elev. Ungraded Ground = 6205'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N37°28'26"W	1015.30'

NAD 83 (TARGET BOTTOM HOLE)		NAD 83 (SURFACE LOCATION)	
LATITUDE = 40°03'13.60"	(40.053778)	LATITUDE = 40°03'05.55"	(40.051542)
LONGITUDE = 110°14'14.75"	(110.237431)	LONGITUDE = 110°14'06.95"	(110.235264)
NAD 27 (TARGET BOTTOM HOLE)		NAD 27 (SURFACE LOCATION)	
LATITUDE = 40°03'13.74"	(40.053817)	LATITUDE = 40°03'05.69"	(40.051581)
LONGITUDE = 110°14'12.19"	(110.236719)	LONGITUDE = 110°14'04.40"	(110.234556)

LEGEND:

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

**CONFIDENTIAL**  
**NINE POINT DRILLING PLAN**  
**PETROGLYPH OPERATING COMPANY, INC**  
**UTE TRIBAL 16-04QQ**  
**NW NW, SEC 16, T5S, R3W**  
**DUCHESNE COUNTY, UTAH**

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

Formation		Subsea	TVD	MD
Rig KB~13' above GGL		6232	0	0
Surface Formation = Uinta				
Uinta		6219	13	13
Green River		4718	1514	1520
Trona		3363	2869	2933
Mahogany Shale		3214	3018	3088
"B" Marker	Waterflood Unit Interval	2110	4122	4237
"X" Marker		1619	4613	4735
Douglas Creek Marker		1473	4759	4882
"B" Limestone		1084	5148	5272
Base Castle Peak Limestone		510	5722	5846
BSCARB		111	6121	6245
<b>Wasatch</b>		<b>-155</b>	<b>NDE</b>	<b>NDE</b>
Formation at TD: Green River	Rig TD	75	6157	6300

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

Substance	Formation	Subsea	TVD	MD
Base of moderately saline ground water*	Uinta	6000	232	232
Oil/Gas	Douglas Creek	1473	4759	4882
Oil/Gas	Castle Peak	510	5722	5846

Any water encountered during drilling shall be sampled, analyzed and reported to 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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**DUCHESNE COUNTY, UTAH**

**3. PROPOSED CASING PROGRAM:**

String	Hole	Casing	Top - MD	Bottom - MD	Weight lb/ft	Grade	Thread
Conductor	20"	14"	surface	53'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	493'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	6300'	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 4237' 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 ----- 53	Construction Grade Cement	Sufficient volumes to grout Conductor			
Surface	0 ----- 493	Class G +2% CaCl <sub>2</sub> +0.25 lb/sk Cello Flake	226 ----- 264	30%	15.8	1.17
Production Lead	0 ----- 4237	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	497 ----- 955	30%	12.5	1.92
Production Tail	4237 ----- 6300	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	318 ----- 465	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 cementing operation the cement does not circulate to surface, a remedial cementing operation shall be performed only if necessary to lift cement above the Trona at 2933' MD.

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**DUCHESNE COUNTY, UTAH**

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

- An 8", 2000 PSI, Double Ram BOPE with Hydraulic Closing Unit 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 493'. All cuttings 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 140 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 493' to 6300'. 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 8.3-8.8 lbs/gal. although mud weight up to 10lbs/gal may be used if necessary to prevent wellbore wall instability due to the planned inclination of the well.
- 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 mudweight to be raised to 10lbs/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. Operator does not plan on using a gas detector on the mud return due to the fact that any abnormal pressure is the result of offset water injection.

**C. HAZARDOUS MATERIALS AND POLLUTANTS**

- Chromate additives **shall NOT** be used in the mud system on Indian lands without prior DOGM 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 only)

Cores: None planned

DST: None planned

Testing: Operator plans no testing until the completion phase of the well.

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

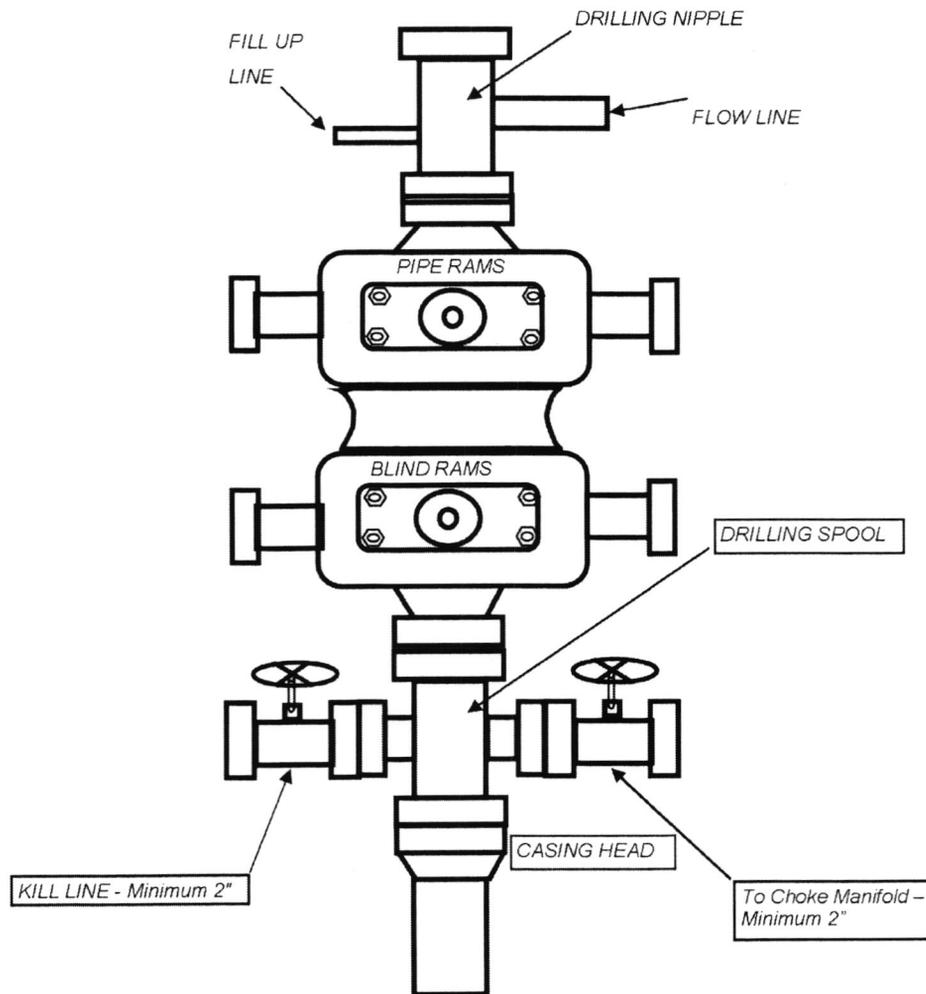
- Operator anticipates Bottom Hole Temperatures below 150°F, the maximum temperature for DAP drilling fluids.
- No H<sub>2</sub>S has been encountered or is known to exist from previous drilling in the area at this depth.
- Maximum pressure for hydrocarbon bearing zones at native conditions in this area is approximately 1575 PSI (0.25 PSI/ft gradient).
- This well is in the vicinity of active injection wells. Nearby active injection can cause pressures up to a 0.433 PSI/ft gradient (2728 PSI).

**9. DIRECTIONAL WELL PLAN:**

- Well shall be drilled directionally in order to limit surface disturbance.
- A Positive Displacement Motor with a bent sub of 1.25° to 1.75° will be used to control well path.
- A directional survey shall be taken at least one (1) time per 100' of drilling.
- Anti-collision equipment will not be used as there are no existing wells in the vicinity of the proposed well path.
- While cutting the Waterflood Unit Interval from 4237' to 6245', the actual well path may be allowed to vary up to 100' horizontally from plan in order to prevent excessive slide drilling. Above and below the Waterflood Unit Interval, variances in excess 100' horizontally from plan may be allowed.
- Directional drilling plan is attached.

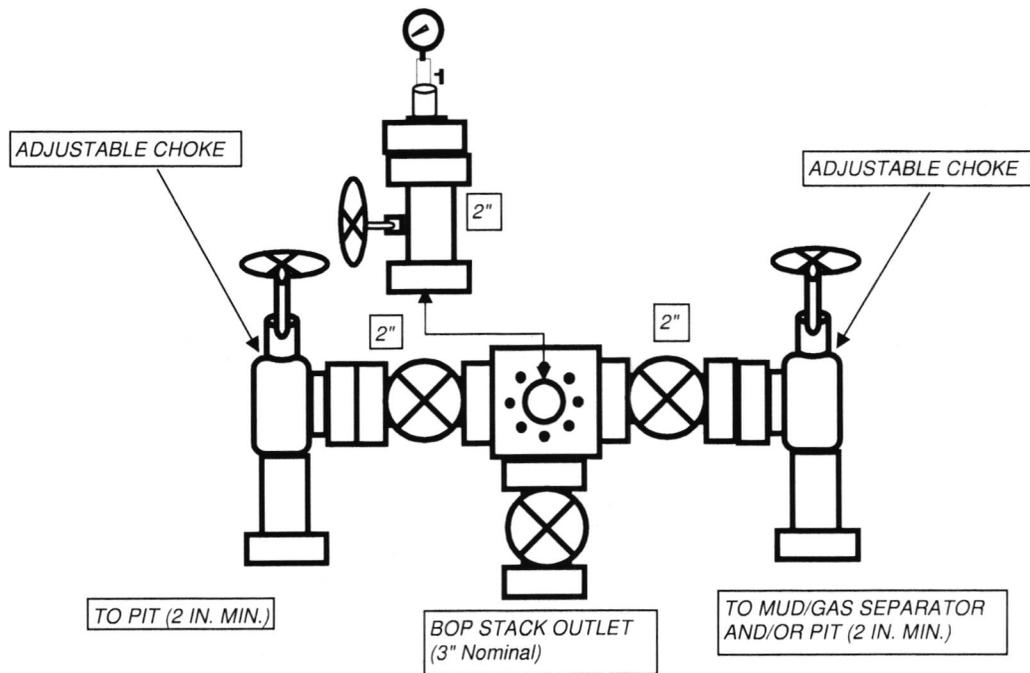
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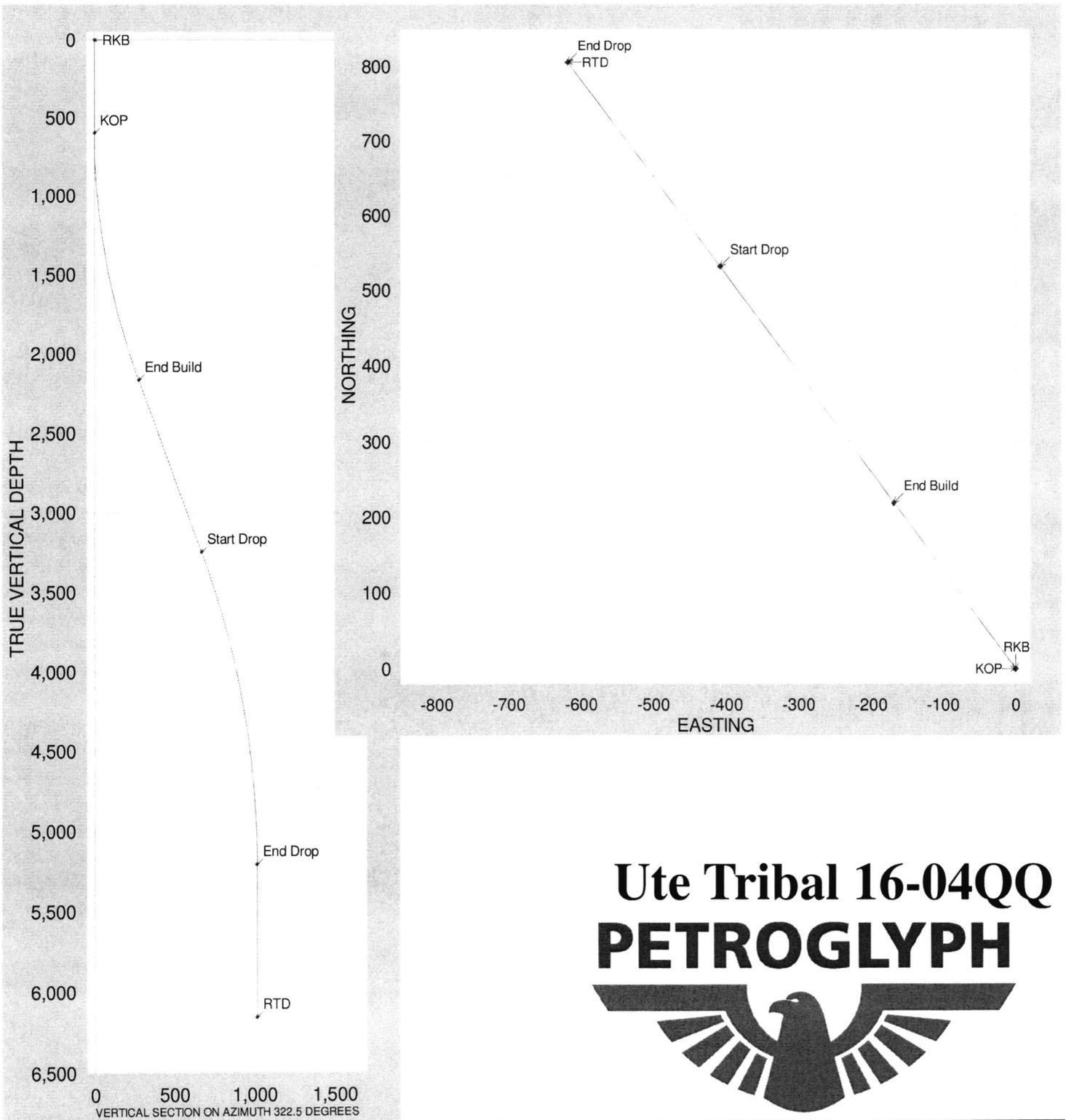
*TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER*



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**UTE TRIBAL 16-04QQ**  
**NW NW, SEC 16, T5S, R3W**  
**DUCHESNE COUNTY, UTAH**

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





# Ute Tribal 16-04QQ PETROGLYPH



#	Reference	Type	MD	Inc	Azi	TVD	N	E	DLS	Vert S
0	RKB	Tie Point	0.00	0.00	0.00	0.00	0.00	0.00		0.00
1	KOP	Vertical	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
2	End Build	Build	2200.00	20.00	322.50	2167.70	219.31	-168.28	1.25	276.43
3	Start Drop	Tangent	3350.00	20.00	322.50	3248.35	531.35	-407.72	0.00	669.75
4	End Drop	Drop	5350.00	0.00	0.00	5207.98	805.48	-618.07	1.00	1015.29
5	RTD	Vertical	6300.00	0.00	0.00	6157.98	805.48	-618.07	0.00	1015.29

SES - Stoner Engineering Software

### 16-04QQ Sundry, Plan 1

<b>Operator</b>	<b>Units</b> feet, %/100ft	09:05 Monday, July 28, 2014 Page 1 of 4
<b>Field</b>	<b>County</b>	<b>Vertical Section Azimuth</b> 322.5
<b>Well Name</b> 16-04QQ Sundry	<b>State</b>	<b>Survey Calculation Method</b> Minimum Curvature
<b>Plan 1</b>	<b>Country</b>	<b>Database Access</b>
<b>Location</b>	<b>MapZone</b>	<b>Lat Long Ref</b>
<b>Site</b>	<b>SurfaceX</b>	<b>Surface Long</b>
<b>Slot Name</b>	<b>SurfaceY</b>	<b>Surface Lat</b>
<b>Well Number</b>	<b>Z Datum</b>	
<b>Project</b>	<b>Surface Z</b>	<b>Ground Level</b>

**DIRECTIONAL WELL PLAN**

<b>MD*</b>	<b>INC*</b>	<b>AZI*</b>	<b>TVD*</b>	<b>N*</b>	<b>E*</b>	<b>DLS*</b>	<b>V. S.*</b>	<b>MapE*</b>	<b>MapN*</b>	<b>SysTVD*</b>
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft

\*\*\* RKB (at MD = 0.00)

0.00	0.00	0.0	0.00	0.00	0.00		0.00			
50.00	0.00	0.0	50.00	0.00	0.00	0.00	0.00			
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00			
150.00	0.00	0.0	150.00	0.00	0.00	0.00	0.00			
200.00	0.00	0.0	200.00	0.00	0.00	0.00	0.00			
250.00	0.00	0.0	250.00	0.00	0.00	0.00	0.00			
300.00	0.00	0.0	300.00	0.00	0.00	0.00	0.00			
350.00	0.00	0.0	350.00	0.00	0.00	0.00	0.00			
400.00	0.00	0.0	400.00	0.00	0.00	0.00	0.00			
450.00	0.00	0.0	450.00	0.00	0.00	0.00	0.00			
500.00	0.00	0.0	500.00	0.00	0.00	0.00	0.00			
550.00	0.00	0.0	550.00	0.00	0.00	0.00	0.00			

\*\*\* KOP (at MD = 600.00)

600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00			
650.00	0.63	322.5	650.00	0.22	-0.17	1.25	0.27			
700.00	1.25	322.5	699.99	0.87	-0.66	1.25	1.09			
750.00	1.88	322.5	749.97	1.95	-1.49	1.25	2.45			
800.00	2.50	322.5	799.94	3.46	-2.66	1.25	4.36			
850.00	3.13	322.5	849.88	5.41	-4.15	1.25	6.82			
900.00	3.75	322.5	899.79	7.79	-5.97	1.25	9.81			
950.00	4.38	322.5	949.66	10.60	-8.13	1.25	13.36			
1000.00	5.00	322.5	999.49	13.84	-10.62	1.25	17.44			
1050.00	5.63	322.5	1049.28	17.51	-13.44	1.25	22.07			
1100.00	6.25	322.5	1099.01	21.61	-16.58	1.25	27.24			
1150.00	6.88	322.5	1148.68	26.15	-20.06	1.25	32.96			
1200.00	7.50	322.5	1198.29	31.11	-23.87	1.25	39.21			
1250.00	8.13	322.5	1247.82	36.50	-28.01	1.25	46.01			
1300.00	8.75	322.5	1297.28	42.32	-32.48	1.25	53.35			
1350.00	9.38	322.5	1346.66	48.57	-37.27	1.25	61.22			
1400.00	10.00	322.5	1395.94	55.25	-42.39	1.25	69.64			
1450.00	10.63	322.5	1445.14	62.35	-47.84	1.25	78.59			
1500.00	11.25	322.5	1494.23	69.87	-53.62	1.25	88.07			
1550.00	11.88	322.5	1543.21	77.82	-59.72	1.25	98.10			
1600.00	12.50	322.5	1592.09	86.20	-66.14	1.25	108.65			
1650.00	13.13	322.5	1640.84	95.00	-72.89	1.25	119.74			

SES - Stoner Engineering Software

**16-04QQ Sundry, Plan 1**

Operator		Units feet, %/100ft		09:05 Monday, July 28, 2014 Page 2 of 4						
Field		County		Vertical Section Azimuth 322.5						
Well Name 16-04QQ Sundry		State		Survey Calculation Method Minimum Curvature						
Plan 1		Country		Database Access						
Location		UWI		MapZone		Lat Long Ref				
Site		API		SurfaceX		Surface Long				
Slot Name				SurfaceY		Surface Lat				
Well Number				Z Datum						
Project				Surface Z		Ground Level				
<b>DIRECTIONAL WELL PLAN</b>										
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft
1700.00	13.75	322.5	1689.47	104.21	-79.97	1.25	131.36			
1750.00	14.38	322.5	1737.97	113.85	-87.36	1.25	143.51			
1800.00	15.00	322.5	1786.34	123.91	-95.08	1.25	156.18			
1850.00	15.63	322.5	1834.56	134.39	-103.12	1.25	169.39			
1900.00	16.25	322.5	1882.64	145.28	-111.48	1.25	183.12			
1950.00	16.88	322.5	1930.57	156.58	-120.15	1.25	197.37			
2000.00	17.50	322.5	1978.33	168.31	-129.15	1.25	212.15			
2050.00	18.13	322.5	2025.94	180.44	-138.46	1.25	227.44			
2100.00	18.75	322.5	2073.37	192.99	-148.08	1.25	243.25			
2150.00	19.38	322.5	2120.63	205.94	-158.02	1.25	259.58			
*** END BUILD (at MD = 2200.00)										
2200.00	20.00	322.5	2167.70	219.31	-168.28	1.25	276.43			
2250.00	20.00	322.5	2214.69	232.87	-178.69	0.00	293.53			
2300.00	20.00	322.5	2261.67	246.44	-189.10	0.00	310.63			
2350.00	20.00	322.5	2308.66	260.01	-199.51	0.00	327.73			
2400.00	20.00	322.5	2355.64	273.57	-209.92	0.00	344.83			
2450.00	20.00	322.5	2402.63	287.14	-220.33	0.00	361.93			
2500.00	20.00	322.5	2449.61	300.71	-230.74	0.00	379.03			
2550.00	20.00	322.5	2496.60	314.28	-241.15	0.00	396.14			
2600.00	20.00	322.5	2543.58	327.84	-251.56	0.00	413.24			
2650.00	20.00	322.5	2590.57	341.41	-261.97	0.00	430.34			
2700.00	20.00	322.5	2637.55	354.98	-272.38	0.00	447.44			
2750.00	20.00	322.5	2684.54	368.54	-282.79	0.00	464.54			
2800.00	20.00	322.5	2731.52	382.11	-293.20	0.00	481.64			
2850.00	20.00	322.5	2778.51	395.68	-303.61	0.00	498.74			
2900.00	20.00	322.5	2825.49	409.25	-314.03	0.00	515.84			
2950.00	20.00	322.5	2872.47	422.81	-324.44	0.00	532.94			
3000.00	20.00	322.5	2919.46	436.38	-334.85	0.00	550.04			
3050.00	20.00	322.5	2966.44	449.95	-345.26	0.00	567.15			
3100.00	20.00	322.5	3013.43	463.51	-355.67	0.00	584.25			
3150.00	20.00	322.5	3060.41	477.08	-366.08	0.00	601.35			
3200.00	20.00	322.5	3107.40	490.65	-376.49	0.00	618.45			
3250.00	20.00	322.5	3154.38	504.22	-386.90	0.00	635.55			
3300.00	20.00	322.5	3201.37	517.78	-397.31	0.00	652.65			

### 16-04QQ Sundry, Plan 1

<b>Operator</b>	<b>Units</b> feet, %/100ft	09:05 Monday, July 28, 2014 Page 3 of 4
<b>Field</b>	<b>County</b>	<b>Vertical Section Azimuth</b> 322.5
<b>Well Name</b> 16-04QQ Sundry	<b>State</b>	<b>Survey Calculation Method</b> Minimum Curvature
<b>Plan</b> 1	<b>Country</b>	<b>Database</b> Access
<b>Location</b>	<b>MapZone</b>	<b>Lat Long Ref</b>
<b>Site</b>	<b>SurfaceX</b>	<b>Surface Long</b>
<b>Slot Name</b>	<b>SurfaceY</b>	<b>Surface Lat</b>
<b>Well Number</b>	<b>Z Datum</b>	
<b>Project</b>	<b>Surface Z</b>	<b>Ground Level</b>

**DIRECTIONAL WELL PLAN**

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft
*** START DROP (at MD = 3350.00)										
3350.00	20.00	322.5	3248.35	531.35	-407.72	0.00	669.75			
3400.00	19.50	322.5	3295.41	544.75	-418.00	1.00	686.65			
3450.00	19.00	322.5	3342.61	557.83	-428.04	1.00	703.13			
3500.00	18.50	322.5	3389.96	570.58	-437.82	1.00	719.20			
3550.00	18.00	322.5	3437.45	583.01	-447.36	1.00	734.86			
3600.00	17.50	322.5	3485.07	595.10	-456.64	1.00	750.11			
3650.00	17.00	322.5	3532.82	606.86	-465.66	1.00	764.93			
3700.00	16.50	322.5	3580.69	618.29	-474.43	1.00	779.34			
3750.00	16.00	322.5	3628.70	629.39	-482.95	1.00	793.33			
3800.00	15.50	322.5	3676.82	640.16	-491.21	1.00	806.91			
3850.00	15.00	322.5	3725.06	650.60	-499.22	1.00	820.06			
3900.00	14.50	322.5	3773.41	660.69	-506.97	1.00	832.79			
3950.00	14.00	322.5	3821.87	670.46	-514.46	1.00	845.09			
4000.00	13.50	322.5	3870.44	679.89	-521.70	1.00	856.98			
4050.00	13.00	322.5	3919.11	688.98	-528.67	1.00	868.44			
4100.00	12.50	322.5	3967.87	697.73	-535.39	1.00	879.47			
4150.00	12.00	322.5	4016.74	706.15	-541.85	1.00	890.08			
4200.00	11.50	322.5	4065.69	714.23	-548.05	1.00	900.26			
4250.00	11.00	322.5	4114.73	721.97	-553.98	1.00	910.02			
4300.00	10.50	322.5	4163.85	729.37	-559.66	1.00	919.35			
4350.00	10.00	322.5	4213.05	736.42	-565.08	1.00	928.24			
4400.00	9.50	322.5	4262.33	743.14	-570.23	1.00	936.71			
4450.00	9.00	322.5	4311.68	749.52	-575.13	1.00	944.75			
4500.00	8.50	322.5	4361.10	755.55	-579.76	1.00	952.35			
4550.00	8.00	322.5	4410.58	761.24	-584.12	1.00	959.53			
4600.00	7.50	322.5	4460.12	766.59	-588.23	1.00	966.27			
4650.00	7.00	322.5	4509.72	771.60	-592.07	1.00	972.58			
4700.00	6.50	322.5	4559.38	776.26	-595.65	1.00	978.46			
4750.00	6.00	322.5	4609.08	780.58	-598.96	1.00	983.90			
4800.00	5.50	322.5	4658.83	784.55	-602.01	1.00	988.91			
4850.00	5.00	322.5	4708.62	788.18	-604.80	1.00	993.48			
4900.00	4.50	322.5	4758.44	791.47	-607.32	1.00	997.63			
4950.00	4.00	322.5	4808.31	794.41	-609.57	1.00	1001.33			
5000.00	3.50	322.5	4858.20	797.00	-611.56	1.00	1004.60			

SES - Stoner Engineering Software

### 16-04QQ Sundry, Plan 1

<b>Operator</b>	<b>Units</b> feet, %/100ft	09:05 Monday, July 28, 2014 Page 4 of 4	
<b>Field</b>	<b>County</b>	<b>Vertical Section Azimuth</b> 322.5	
<b>Well Name</b> 16-04QQ Sundry	<b>State</b>	<b>Survey Calculation Method</b> Minimum Curvature	
<b>Plan</b> 1	<b>Country</b>	<b>Database</b> Access	
<b>Location</b>	<b>MapZone</b>	<b>Lat Long Ref</b>	
<b>Site</b>	<b>SurfaceX</b>	<b>Surface Long</b>	
<b>Slot Name</b>	<b>SurfaceY</b>	<b>Surface Lat</b>	
<b>Well Number</b>	<b>Z Datum</b>		
<b>Project</b>	<b>Surface Z</b>	<b>Ground Level</b>	

**DIRECTIONAL WELL PLAN**

<b>MD*</b>	<b>INC*</b>	<b>AZI*</b>	<b>TVD*</b>	<b>N*</b>	<b>E*</b>	<b>DLS*</b>	<b>V. S.*</b>	<b>MapE*</b>	<b>MapN*</b>	<b>SysTVD*</b>
ft	deg	deg	ft	ft	ft	%/100ft	ft	ft	ft	ft
5050.00	3.00	322.5	4908.12	799.25	-613.29	1.00	1007.44			
5100.00	2.50	322.5	4958.06	801.16	-614.75	1.00	1009.83			
5150.00	2.00	322.5	5008.02	802.71	-615.94	1.00	1011.80			
5200.00	1.50	322.5	5058.00	803.92	-616.87	1.00	1013.32			
5250.00	1.00	322.5	5107.99	804.79	-617.54	1.00	1014.42			
5300.00	0.50	322.5	5157.98	805.31	-617.94	1.00	1015.07			
*** END DROP (at MD = 5350.00)										
5350.00	0.00	0.0	5207.98	805.48	-618.07	1.00	1015.29			
5400.00	0.00	0.0	5257.98	805.48	-618.07	0.00	1015.29			
5450.00	0.00	0.0	5307.98	805.48	-618.07	0.00	1015.29			
5500.00	0.00	0.0	5357.98	805.48	-618.07	0.00	1015.29			
5550.00	0.00	0.0	5407.98	805.48	-618.07	0.00	1015.29			
5600.00	0.00	0.0	5457.98	805.48	-618.07	0.00	1015.29			
5650.00	0.00	0.0	5507.98	805.48	-618.07	0.00	1015.29			
5700.00	0.00	0.0	5557.98	805.48	-618.07	0.00	1015.29			
5750.00	0.00	0.0	5607.98	805.48	-618.07	0.00	1015.29			
5800.00	0.00	0.0	5657.98	805.48	-618.07	0.00	1015.29			
5850.00	0.00	0.0	5707.98	805.48	-618.07	0.00	1015.29			
5900.00	0.00	0.0	5757.98	805.48	-618.07	0.00	1015.29			
5950.00	0.00	0.0	5807.98	805.48	-618.07	0.00	1015.29			
6000.00	0.00	0.0	5857.98	805.48	-618.07	0.00	1015.29			
6050.00	0.00	0.0	5907.98	805.48	-618.07	0.00	1015.29			
6100.00	0.00	0.0	5957.98	805.48	-618.07	0.00	1015.29			
6150.00	0.00	0.0	6007.98	805.48	-618.07	0.00	1015.29			
6200.00	0.00	0.0	6057.98	805.48	-618.07	0.00	1015.29			
6250.00	0.00	0.0	6107.98	805.48	-618.07	0.00	1015.29			
*** RTD (at MD = 6300.00)										
6300.00	0.00	0.0	6157.98	805.48	-618.07	0.00	1015.29			

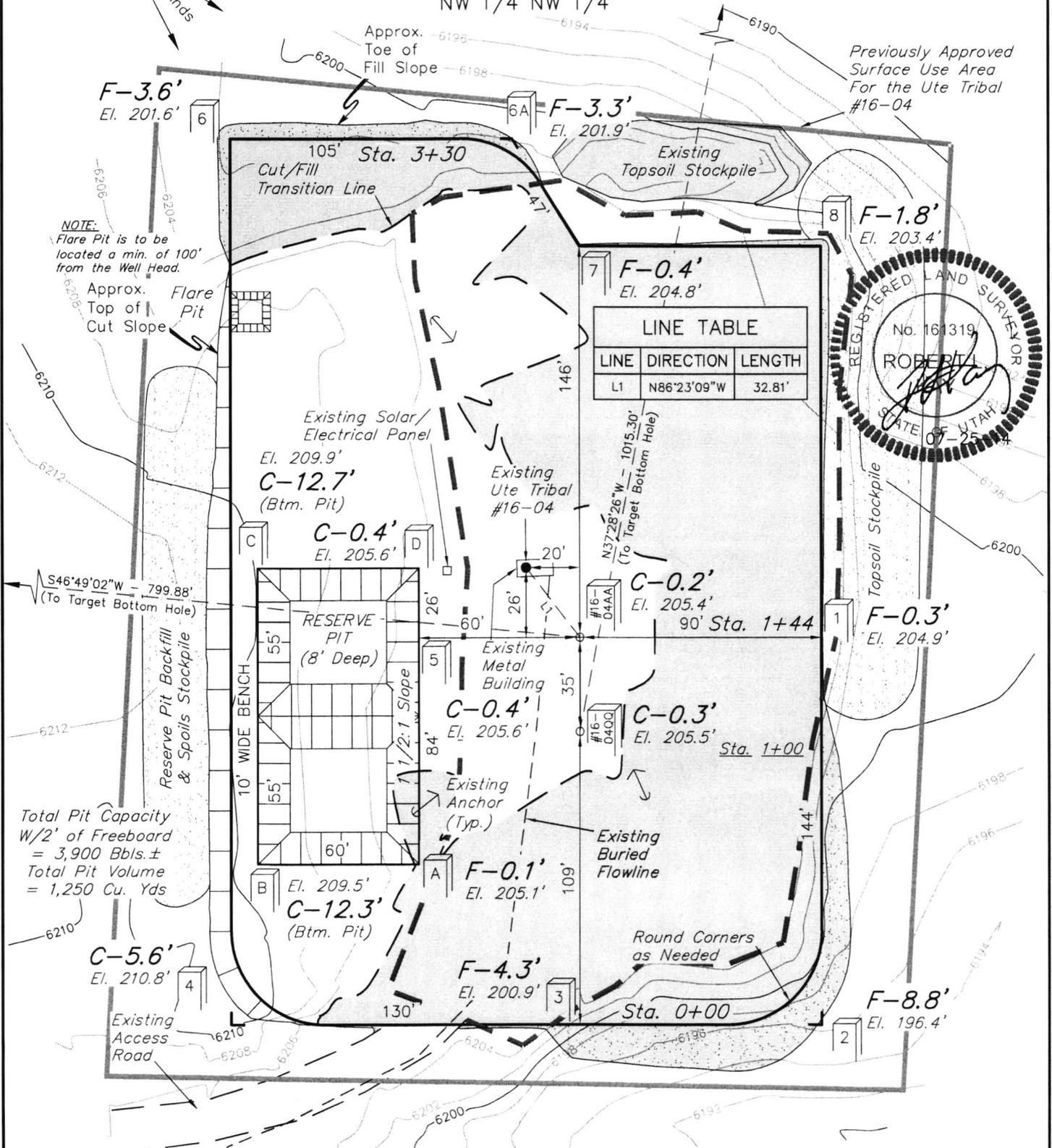
PETROGLYPH OPERATING CO., INC.

LOCATION LAYOUT FOR

UTE TRIBAL #16-04AA & #16-04QQ  
ON EXISTING #16-04 PAD  
SECTION 16, T5S, R3W, U.S.B.&M.  
NW 1/4 NW 1/4

FIGURE #1

SCALE: 1" = 50'  
DATE: 10-03-13  
DRAWN BY: S.F.  
REVISED: 11-01-13  
REV: 07-25-14 J.J.



Elev. Ungraded Ground At #16-04Q Loc. Stake = 6205.4'  
FINISHED GRADE ELEV. AT #16-04Q LOC. STAKE = 6205.2'

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

BLM - Vernal Field Office - Notification Form

Operator Petroglyph Operating Co. Rig Name/# Capstar 334  
Submitted By Geno Rowland Phone Number 970-361-3271  
Well Name/Number Ute Tribal 16-04QQ  
Qtr/Qtr NW/NW Section 16 Township 5S Range 3W  
Lease Serial Number 14-20-H62-3511  
API Number 43-013-526301

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time \_\_\_\_\_ AM  PM

Casing – Please report time casing run starts, not cementing times.

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

Date/Time 8-2-14 18:00 AM  PM

BOPE

- Initial BOPE test at surface casing point
- BOPE test at intermediate casing point
- 30 day BOPE test
- Other

Date/Time \_\_\_\_\_ AM  PM

Remarks Intend to run a 5-1/2" Prod. Casing String to a shoe depth of 6298' MD.

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

FORM 6

**ENTITY ACTION FORM**

Operator: Petroglyph Operating Company Operator Account Number: N 3800  
 Address: P.O. Box 607  
city Roosevelt  
state UT zip 84066 Phone Number: (435) 722-2531

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301352630	Ute Tribal 16-04AA		NWNW	16	5S	3W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	12246	7/15/2014			7/31/14	
<b>Comments:</b> Please add well to existing Ute Tribal 16-02 Tank Battery. GRRV <span style="float: right;">CONFIDENTIAL</span>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301352631	Ute Tribal 16-04QQ		NWNW	16	5S	3W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	12246	7/10/2014			7/31/14	
<b>Comments:</b> Please add well to existing Ute Tribal 16-02 Tank Battery. GRRV <span style="float: right;">CONFIDENTIAL</span>							

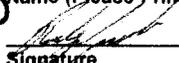
**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<b>Comments:</b>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

**RECEIVED**  
**JUL 30 2014**  
 Div. of Oil, Gas & Mining

Rodrigo Jurado  
 Name (Please Print)  
  
 Signature  
 Regulatory Compliance Spc  
 Title  
 7/30/2014  
 Date

<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> 1420H623511
<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> UTE  <b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> UTE TRIBAL 16-04QQ
<b>2. NAME OF OPERATOR:</b> PETROGLYPH OPERATING CO	<b>9. API NUMBER:</b> 43013526310000
<b>3. ADDRESS OF OPERATOR:</b> 960 Broadway Avenue, Ste 500 , Boise, ID, 83703	<b>PHONE NUMBER:</b> 208 685-7685 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0820 FNL 0597 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 05.0S Range: 03.0W Meridian: U	<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK  <b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>8/26/2014</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input checked="" type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

Please see attached.

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

August 28, 2014

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

**By:** Derik Quist

<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/18/2014	

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: 1420H623511
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.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Indian Tribe
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: 1420H624650
2. NAME OF OPERATOR: Petroglyph Operating Company Inc.		8. WELL NAME and NUMBER: Ute Tribal 16-04QQ
3. ADDRESS OF OPERATOR: P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066		9. API NUMBER: 4301352631
4. LOCATION OF WELL FOOTAGES AT SURFACE: 820' FNL, 597' FWL COUNTY: Duchesne QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 16 5S 3W U STATE: UTAH		10. FIELD AND POOL, OR WILDCAT: Antelope Creek

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 (Submit in Duplicate)  Approximate date work will start: <u>8/26/2014</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input checked="" type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

On or around 8/26/2014, depending on equipment availability, Petroglyph Operating intends to **perforate and fracture treat** the following: 4543-46, 4566-68, 4613-20, 4640-46, 4658-60, 4722-24, 4750-56, 4770-75, 4855-60, 5048-50, 5065-68, 5076-79, 5193-98, 5207-09, 5245-47, 5302-04, 5362-68, 5378-80, 5474-76, 5497-5500, 5544-47, 5555-58, 5567-69, 5595-96, 5619-20, 5656-60, 5736-40, 5764-66, 5771-73, 5785-89, 5888-92, 5931-33, 5952-53, 5974-75, 5995-96, 6018-19, 6048-49, 6069-70, 6102-03, 6141-42, 6163-64 & 6197-98. We will perforate at 4 shot per foot and isolate zones using Halliburton 8K Composite Plugs. We plan complete the following stages:  
 5,888-6,198: 42,000 Gals of fluid containing 75,000#'s of sand,  
 5,474-5,789: 44,800 Gals of fluid containing 80,000#'s of sand,  
 5,193-5,380: 28,000 Gals of fluid containing 50,000#'s of sand,  
 5,048-5,079: 14,000 Gals of fluid containing 25,000#'s of sand,  
 4,722-4,860: 19,600 Gals of fluid containing 35,000#'s of sand,  
 4,543-4,660: 28,000 Gals of fluid containing 50,000#'s of sand.  
 This plan is tentative and will be adjusted as needed during completion operations. Volumes and amounts of sand are only estimates, actual figures will be reported at a later date. All plugs will be drilled out and and the well swabbed if necessary.

NAME (PLEASE PRINT) <u>Rodrigo Jurado</u>	TITLE <u>Regulatory Compliance Specialist</u>
SIGNATURE	DATE <u>8/18/2014</u>

(This space for State use only)

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 1420H623511
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
		<b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK
<b>1. TYPE OF WELL</b> Oil Well		<b>8. WELL NAME and NUMBER:</b> UTE TRIBAL 16-04QQ
<b>2. NAME OF OPERATOR:</b> PETROGLYPH OPERATING CO		<b>9. API NUMBER:</b> 43013526310000
<b>3. ADDRESS OF OPERATOR:</b> 960 Broadway Avenue, Ste 500 , Boise, ID, 83703		<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0820 FNL 0597 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 05.0S Range: 03.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <b>9/30/2014</b>	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<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 checked="" 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 type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <b>The date of first production 09/30/2014.</b>		
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          October 09, 2014</b>		
<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A		<b>DATE</b> 10/6/2014

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 1420H623511
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b> ANTELOPE CREEK
<b>2. NAME OF OPERATOR:</b> PETROGLYPH OPERATING CO		<b>8. WELL NAME and NUMBER:</b> UTE TRIBAL 16-04QQ
<b>3. ADDRESS OF OPERATOR:</b> 960 Broadway Avenue, Ste 500 , Boise, ID, 83703		<b>9. API NUMBER:</b> 43013526310000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0820 FNL 0597 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 05.0S Range: 03.0W Meridian: U		<b>9. FIELD and POOL or WILDCAT:</b> ANTELOPE CREEK
		<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 type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 10/1/2014	<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 checked="" 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 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.

Please see attached.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
February 19, 2015**

<b>NAME (PLEASE PRINT)</b> Rodrigo Jurado	<b>PHONE NUMBER</b> 435 722-5302	<b>TITLE</b> Regulatory & Compliance Spc
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/18/2015	

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>			5. LEASE DESIGNATION AND SERIAL NUMBER: <b>14-20-H62-3511</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.			6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Ute Indian Tribe</b>
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____			7. UNIT or CA AGREEMENT NAME: <b>14-20-H62-4650</b>
2. NAME OF OPERATOR: <b>Petroglyph Operating Company Inc.</b>			8. WELL NAME and NUMBER: <b>Ute Tribal 16-04QQ</b>
3. ADDRESS OF OPERATOR: P.O. Box 607                      CITY <b>Roosevelt</b> STATE <b>UT</b> ZIP <b>84066</b>		PHONE NUMBER: <b>(435) 722-2531</b>	9. API NUMBER: <b>4301352631</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>820' FNL, 597' FWL</b>			10. FIELD AND POOL, OR WILDCAT: <b>Antelope Creek</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWNW 16 5S 3W U</b>			COUNTY: <b>Duchesne</b>  STATE: <b>UTAH</b>

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN  <input checked="" 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/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"/> TEMPORARILY ABANDON  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> WATER SHUT-OFF  <input type="checkbox"/> OTHER: _____
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: <b>10/1/2014</b>			

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

On 8/15/2014 Petroglyph Operating ran GR/CBL and found ETOC @ Surface. On 8/28/2014 we then perforated the following: 4543-46, 4566-68, 4613-20, 4640-46, 4658-60, 4722-24, 4750-56, 4770-75, 4855-60, 5048-50, 5065-68, 5076-79, 5193-98, 5207-09, 5245-47, 5302-04, 5362-68, 5378-80, 5474-76, 5497-5500, 5544-47, 5555-58, 5567-69, 5595-96, 5619-20, 5656-60, 5736-40, 5764-66, 5771-73, 5785-89, 5888-92, 5931-33, 5952-53, 5974-75, 5995-96, 6018-19, 6048-49, 6069-70 & 6102-03. We isolated and fracture treated the following intervals:  
 5,888'-6,103': 806 Bbls of fluid containing 53,024#'s of sand,  
 5,474'-5,789': 940 Bbls of fluid containing 80,000#'s of sand,  
 5,193'-5,380': 639 Bbls of fluid containing 50,000#'s of sand,  
 5,048'-5,079': 429 Bbls of fluid containing 25,000#'s of sand,  
 4,722'-4,860': 511 Bbls of fluid containing 35,202#'s of sand,  
 4,543'-4,660': 739 Bbls of fluid containing 50,000#'s of sand.  
 Isolation plugs used were Halliburton 8K Composite Plugs, fluid used was Dyna LP 22 18# gelled fluid, sand used was 20/40 Mesh Premium White Sand and guns used were Titan 3-1/8", containing 22.7 gram charges, 0.42" EHD, 23.54" TTP @ 4 SPF @ 120\* Phased. All plugs were drilled out and cleaned out to PBSD, 6,241'. The well was swabbed until a good oil cut was see, then ran a pump on 10/1/2014 and put to pump.

NAME (PLEASE PRINT) <b>Rodrigo Jurado</b>	TITLE <b>Regulatory Compliance Specialist</b>
SIGNATURE	DATE <b>2/18/2015</b>

(This space for State use only)

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1a. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3511
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute Indian Tribe
2. NAME OF OPERATOR: Petroglyph Operating Company, Inc.		7. UNIT or CA AGREEMENT NAME 14-20-H62-4650
3. ADDRESS OF OPERATOR: P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066		8. WELL NAME and NUMBER: Ute Tribal 16-04QQ
PHONE NUMBER: (435) 722-2531		9. API NUMBER: 4301352631
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 820' FNL 597' FWL  AT TOP PRODUCING INTERVAL REPORTED BELOW: 103' FNL 46' FWL  AT TOTAL DEPTH: 14' FNL 6' FEL NENE Sec. 17 T5S R3W		10. FIELD AND POOL, OR WILDCAT Antelope Creek
		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 16 5S 3W U
		12. COUNTY Duchesne
		13. STATE UTAH

14. DATE SPUDED: 7/10/2014	15. DATE T.D. REACHED: 8/1/2014	16. DATE COMPLETED: 9/30/2014	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 6,218' RKB
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18. TOTAL DEPTH: MD 6,303 TVD 6,161	19. PLUG BACK T.D.: MD 6,241 TVD 6,099	20. IF MULTIPLE COMPLETIONS, HOW MANY? *	21. DEPTH BRIDGE MD PLUG SET: TVD
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22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) ACTR, SDDSN, Borehole Volume Plot, Cement Bond Log	23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)
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**24. CASING AND LINER RECORD (Report all strings set in well)**

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
26	16 J-55	75	0	73				0	Conductor
12.25	8.625 J-55	24	0	544		G 360	73		
7.875	5.5 J-55	15.5	0	6,285		G 805	255	0	CBL

**25. TUBING RECORD**

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.875	6,119							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) Green River	4,543	6,103	4,410	5,961	4,543 6,103	0.42	432	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

**28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.**

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
4,543'-6,103'	4,064 Bbls of Dynafloc HT 25 Gelled Fluid Containing 293,226#'s of 20/40 Mesh Sand.

29. ENCLOSED ATTACHMENTS: <input checked="" type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION <input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS <input type="checkbox"/> DST REPORT <input checked="" type="checkbox"/> DIRECTIONAL SURVEY <input checked="" type="checkbox"/> OTHER: UDOGM Form 7	30. WELL STATUS:  <b>POW</b>
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31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 9/30/2014		TEST DATE: 11/2/2014		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 84	GAS – MCF: 40	WATER – BBL: 122	PROD. METHOD: Rod Pump
CHOKE SIZE: 32/64	TBG. PRESS. 90	CSG. PRESS. 87	API GRAVITY 39.60	BTU – GAS 1	GAS/OIL RATIO 476	24 HR PRODUCTION RATES: →	OIL – BBL: 84	GAS – MCF: 40	WATER – BBL: 122	INTERVAL STATUS: Open

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

Used for Fuel

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Trona	2,892
				Mahogany Shale	3,050
				Lower Parachute Creek	3,384
				Garden Gulch	3,815
				Middle Garden Gulch	4,224
				Lower Garden Gulch	4,722
				Douglas Creek	4,872
				Lower Douglas Creek	5,261
				Castle Peak	5,829
				Uteland Butte	6,231

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Rodrigo Jurado TITLE Regulatory Compliance Specialist  
 SIGNATURE  DATE 3/2/2015

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
 1594 West North Temple, Suite 1210  
 Box 145801  
 Salt Lake City, Utah 84114-5801

Phone: 801-538-5340  
 Fax: 801-359-3940

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

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**REPORT OF WATER ENCOUNTERED DURING DRILLING**

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Well name and number: Ute Tribal 16-04QQ

API number: 4301352631

Well Location: QQ NWNW Section 16 Township 5S Range 3W County Duchesne

Well operator: Petroglyph Operating Company, Inc.

Address: P.O. Box 607

city Roosevelt state UT zip 84066

Phone: (435) 722-2531

Drilling contractor: Pro Petro

Address: 1422 East 1500 South

city Vernal state UT zip 84078

Phone: (435) 789-1735

Water encountered (attach additional pages as needed):

DEPTH		VOLUME (FLOW RATE OR HEAD)	QUALITY (FRESH OR SALTY)
FROM	TO		
0	540	0	No Water Encountered

Formation tops:            1 \_\_\_\_\_            2 \_\_\_\_\_            3 \_\_\_\_\_  
 (Top to Bottom)            4 \_\_\_\_\_            5 \_\_\_\_\_            6 \_\_\_\_\_  
                                      7 \_\_\_\_\_            8 \_\_\_\_\_            9 \_\_\_\_\_  
                                      10 \_\_\_\_\_           11 \_\_\_\_\_           12 \_\_\_\_\_

If an analysis has been made of the water encountered, please attach a copy of the report to this form.

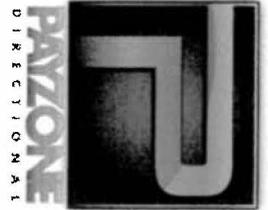
I hereby certify that this report is true and complete to the best of my knowledge.

NAME (PLEASE PRINT) Rodrigo Jurado

TITLE Regulatory Compliance Specialist

SIGNATURE 

DATE 7/18/2014



Job Number: UT141434  
 Company: Petroglyph  
 Lease/Well: 16-0400  
 Location: Section 16 T5S, R3W  
 Rig Name: Capstar 334  
 RKB: 6218.2  
 G.L. or M.S.L.: 6205.2

State/Country: UT/USA  
 Declination: 10.98  
 Grid: True  
 File name: C:\WINSERVE\UT141434.SVY  
 Date/Time: 01-Aug-14 / 19:41  
 Curve Name: Actual

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
896.00	4.57	.83	895.64	12.77	-1.54	10.98	12.87	353.10	1.56
980.00	5.58	4.96	979.31	20.19	-1.14	16.56	20.22	356.76	1.28
1064.00	6.64	6.85	1062.83	29.08	-.21	22.96	29.08	359.58	1.28
1149.00	7.03	4.26	1147.23	39.15	.76	30.26	39.15	1.11	.58
1233.00	7.91	.96	1230.52	50.05	1.24	38.52	50.07	1.42	1.17
1317.00	7.82	356.14	1313.73	61.53	.95	47.71	61.54	.89	.79
1402.00	8.04	346.85	1397.92	73.09	-.79	57.86	73.09	359.38	1.53
1486.00	8.70	341.40	1481.02	84.83	-4.15	69.16	84.93	357.20	1.23
1570.00	8.61	336.97	1564.07	96.64	-8.64	81.21	97.02	354.89	.80
565.00	.00	.00	565.00	.00	.00	.00	.00	.00	.00
657.00	.10	266.66	657.00	-.03	-.49	.28	.49	266.66	.02
749.00	.75	3.25	748.95	.57	-.54	.78	.78	316.53	.83
811.00	2.90	354.19	810.85	3.48	-.74	3.19	3.56	348.02	2.35
	3.43	350.90		6.88	-1.19	6.14	6.98	350.17	.90

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	CLOSURE		Dogleg Severity Deg/100
								Direction	Deg	
1655.00	9.49	330.55	1648.01	108.60	-14.57	94.28	109.57	352.36	1.57	
1739.00	9.14	328.84	1730.90	120.34	-21.43	107.74	122.23	349.90	.53	
1823.00	9.49	328.53	1813.80	131.95	-28.50	121.24	134.99	347.81	.42	
1908.00	10.42	327.21	1897.52	144.39	-36.32	135.84	148.89	345.88	1.13	
1992.00	11.60	323.87	1979.97	157.60	-45.41	151.85	164.01	343.93	1.60	
2076.00	13.07	322.71	2062.03	171.98	-56.15	169.78	180.91	341.92	1.77	
2161.00	14.63	321.45	2144.55	188.02	-68.66	190.13	200.16	339.94	1.87	
2245.00	13.49	320.00	2226.04	203.82	-81.57	210.53	219.54	338.19	1.42	
2329.00	14.31	317.63	2307.58	219.00	-94.86	230.68	238.66	336.58	1.19	
2414.00	13.89	318.16	2390.02	234.36	-108.75	251.34	258.36	335.11	.52	
2498.00	13.67	319.49	2471.60	249.42	-121.92	271.32	277.62	333.95	.46	
2589.00	14.90	321.28	2559.78	266.72	-136.22	293.77	299.49	332.94	1.44	
2681.00	16.30	317.94	2648.39	285.54	-152.27	318.48	323.60	331.93	1.81	
2772.00	18.23	317.42	2735.29	305.50	-170.46	345.42	349.84	330.84	2.13	
2863.00	20.43	316.09	2821.16	327.43	-191.11	375.42	379.12	329.73	2.47	
2954.00	22.49	317.22	2905.84	351.65	-213.95	408.58	411.62	328.68	2.31	
3046.00	21.97	319.77	2991.01	377.70	-237.01	443.32	445.91	327.89	1.19	
3137.00	21.90	319.22	3075.42	403.55	-259.09	477.29	479.56	327.30	.24	
3228.00	20.47	317.62	3160.27	428.15	-280.90	510.12	512.08	326.73	1.69	
3320.00	21.75	317.94	3246.09	452.69	-303.17	543.17	544.83	326.19	1.40	
3411.00	22.59	315.96	3330.36	477.78	-326.61	577.39	578.75	325.64	1.24	
3502.00	22.68	314.64	3414.36	502.67	-351.25	612.19	613.23	325.06	.57	
3593.00	21.80	312.66	3498.59	526.45	-376.16	646.29	647.02	324.45	1.27	
3685.00	21.36	313.32	3584.14	549.52	-400.91	679.73	680.22	323.89	.55	
3776.00	20.65	318.11	3669.10	572.83	-423.68	712.14	712.49	323.51	2.04	
3867.00	17.80	319.30	3755.01	595.33	-443.47	742.06	742.35	323.32	3.16	
3958.00	16.13	317.59	3842.05	615.21	-461.07	768.57	768.81	323.15	1.92	
4050.00	15.21	318.69	3930.63	633.71	-477.65	793.37	793.56	322.99	1.05	
4141.00	15.25	320.44	4018.43	651.90	-493.16	817.25	817.42	322.89	.51	
4232.00	14.15	319.34	4106.45	669.57	-508.03	840.33	840.48	322.81	1.25	
4324.00	13.80	317.85	4195.73	686.23	-522.72	862.51	862.64	322.70	.55	
4415.00	13.27	317.54	4284.20	701.99	-537.05	883.76	883.86	322.58	.59	
4506.00	12.61	316.18	4372.89	716.86	-550.98	904.06	904.14	322.45	.80	
4597.00	11.91	315.13	4461.82	730.68	-564.48	923.28	923.33	322.31	.81	

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Distance FT	CLOSURE		Dogleg Severity Deg/100
								Direction Deg	Direction Deg	
4689.00	10.77	312.86	4552.02	743.26	-577.48	941.20	941.23	322.15	1.33	
4780.00	9.49	317.94	4641.60	754.61	-588.74	957.09	957.10	322.04	1.71	
4871.00	8.00	314.95	4731.54	764.65	-598.25	970.86	970.87	321.96	1.71	
4963.00	6.99	311.57	4822.75	772.89	-606.97	982.73	982.73	321.86	1.20	
5054.00	5.98	318.29	4913.17	780.10	-614.26	992.91	992.92	321.78	1.39	
5145.00	5.19	314.95	5003.74	786.55	-620.33	1001.73	1001.73	321.74	.94	
5236.00	4.58	323.56	5094.41	792.38	-625.40	1009.45	1009.45	321.72	1.05	
5328.00	3.69	319.34	5186.17	797.58	-629.51	1016.08	1016.08	321.72	1.02	
5419.00	3.12	309.28	5277.01	801.37	-633.34	1021.43	1021.43	321.68	.91	
5510.00	2.55	323.65	5367.90	804.57	-636.45	1025.87	1025.87	321.65	1.00	
5601.00	1.63	311.65	5458.84	807.06	-638.62	1029.17	1029.17	321.65	1.11	
5693.00	.71	102.77	5550.83	807.80	-639.04	1030.01	1030.01	321.65	2.48	
5784.00	.35	8.21	5641.82	807.95	-638.45	1029.76	1029.76	321.68	.90	
5875.00	.57	314.38	5732.82	808.55	-638.74	1030.40	1030.40	321.69	.51	
5967.00	.57	266.43	5824.82	808.84	-639.52	1031.12	1031.12	321.67	.50	
6058.00	.70	226.40	5915.81	808.43	-640.38	1031.32	1031.33	321.62	.50	
6149.00	.97	228.07	6006.80	807.53	-641.35	1031.22	1031.23	321.54	.30	
6241.00	1.05	221.04	6098.79	806.37	-642.48	1031.02	1031.03	321.45	.16	
<b>Projected to Bit</b>										
6303.00	1.05	221.04	6160.78	805.52	-643.23	1030.81	1030.82	321.39	.00	

