

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER Ute Tribal 18-16Q				
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT ANTELOPE CREEK				
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME ANTELOPE CREEK				
6. NAME OF OPERATOR PETROGLYPH OPERATING CO						7. OPERATOR PHONE 208 685-7674				
8. ADDRESS OF OPERATOR 960 Broadway Ave, Ste 500, Bosie, ID, 83703						9. OPERATOR E-MAIL bwest@pgei.com				
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) BIA 14-20-H62-3512			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>				
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')				
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute Indian Tribe			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
20. LOCATION OF WELL		FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE		911 FSL 703 FEL		SESE	18	5.0 S	3.0 W	U		
Top of Uppermost Producing Zone		20 FSL 200 FWL		SWSW	17	5.0 S	3.0 W	U		
At Total Depth		20 FSL 200 FWL		SWSW	17	5.0 S	3.0 W	U		
21. COUNTY DUCHESNE			22. DISTANCE TO NEAREST LEASE LINE (Feet) 703			23. NUMBER OF ACRES IN DRILLING UNIT 640				
27. ELEVATION - GROUND LEVEL 6145			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 764			26. PROPOSED DEPTH MD: 6128 TVD: 5960				
28. BOND NUMBER LP4138153			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8342							
Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Cond	20	14	0 - 40	5.0	Unknown	10.0	Class G	25	1.17	15.8
Surf	12.25	8.625	0 - 480	24.0	J-55 ST&C	10.0	Class G	220	1.17	15.8
Prod	7.875	5.5	0 - 6128	15.5	J-55 LT&C	10.0	Class G	462	1.92	12.5
							Class G	338	1.46	13.4
ATTACHMENTS										
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
NAME Ed Trotter				TITLE Agent			PHONE 435 789-4120			
SIGNATURE				DATE 01/27/2012			EMAIL edtrotter@easilink.com			
API NUMBER ASSIGNED 43013512010000				APPROVAL  Permit Manager						

CONFIDENTIAL
EIGHT POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 18-16Q
SE SE, SEC 18, T5S, R3W
DUCHESNE COUNTY, UTAH

1. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Formation		Subsea	TVD	MD
Surface Formation=Uinta				
Unita		6145	0	0
Green River		4698	1447	1555
Trona		3561	2584	2640
Mahogany Shale		3411	2734	2797
"B" Marker	Waterflood Unit Interval	2321	3824	3937
"X" Marker		1817	4328	4464
Douglas Creek Marker		1689	4456	4598
"B" Limestone		1299	4846	5002
Base Castle Peak Limestone		747	5398	5563
BSCARB		339	5806	5976
Wasatch		65	NDE	NDE
Rig TD		185	5960	6128

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

<u>Substance</u>	<u>Formation</u>	<u>SUBSEA</u>	<u>TVD</u>	<u>MD</u>
Base of moderately saline ground water*	not present	6150	-5	-5
Oil/Gas	Douglas Creek	1689	4456	4598
Oil/Gas	B/Castle Peak	747	5398	5563

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

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

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

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



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3. PROPOSED CASING PROGRAM:

String	Hole	Casing	Top - MD	Bottom - MD	Weight lb/ft	Grade	Thread
Conductor	20"	14"	surface	40'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	480'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	6128'	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 two (2) joints from TD to the top of the "B" marker at 3937' MD, and (1) centralizer per 200' from 3937' to 480' MD.

4. PROPOSED CEMENTING PROGRAM:

String	Top	Cement Description	Sacks	Excess	Weight (ppg)	Yield (ft ³ /sk)
	Bottom		Vol (ft ³)			
Conductor	0 40	Construction Grade Cement	Sufficient volumes to grout Conductor			
Surface	0 480	Class G +2% CaCl ₂ +0.25 lb/sk Cello Flake	220 258	30%	15.8	1.17
Production Lead	0 3937	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	462 887	30%	12.5	1.92
Production Tail	3937 6128	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	338 494	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 longstring 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 2640' 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 480'. 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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B. PRODUCTION HOLE

- The production hole shall be drilled with a freshwater polymer/gel system from 480' to 6128'. 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 8.4-8.8 lbs/gal, although mud weight up to 10 lbs/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.
- Sufficient mud inventory will be maintained on location in either tanks or the reserve pit during the drilling of the production hole to handle any adverse conditions that may arise.
- If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant, with barite. Enough material shall be maintained on location to allow for the mud weight to be raised to 10.5 lbs/gal should need arise.
- During drilling operations, pit levels and flow from the well shall be monitored by instrumentation to include at least: a pit volume totalizer (PVT), a stroke counter, and a mud-flow indicator.
- A mud-gas separator shall be available on location. 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 CHEMICALS

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

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7. EVALUATION PROGRAM:

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

8. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:

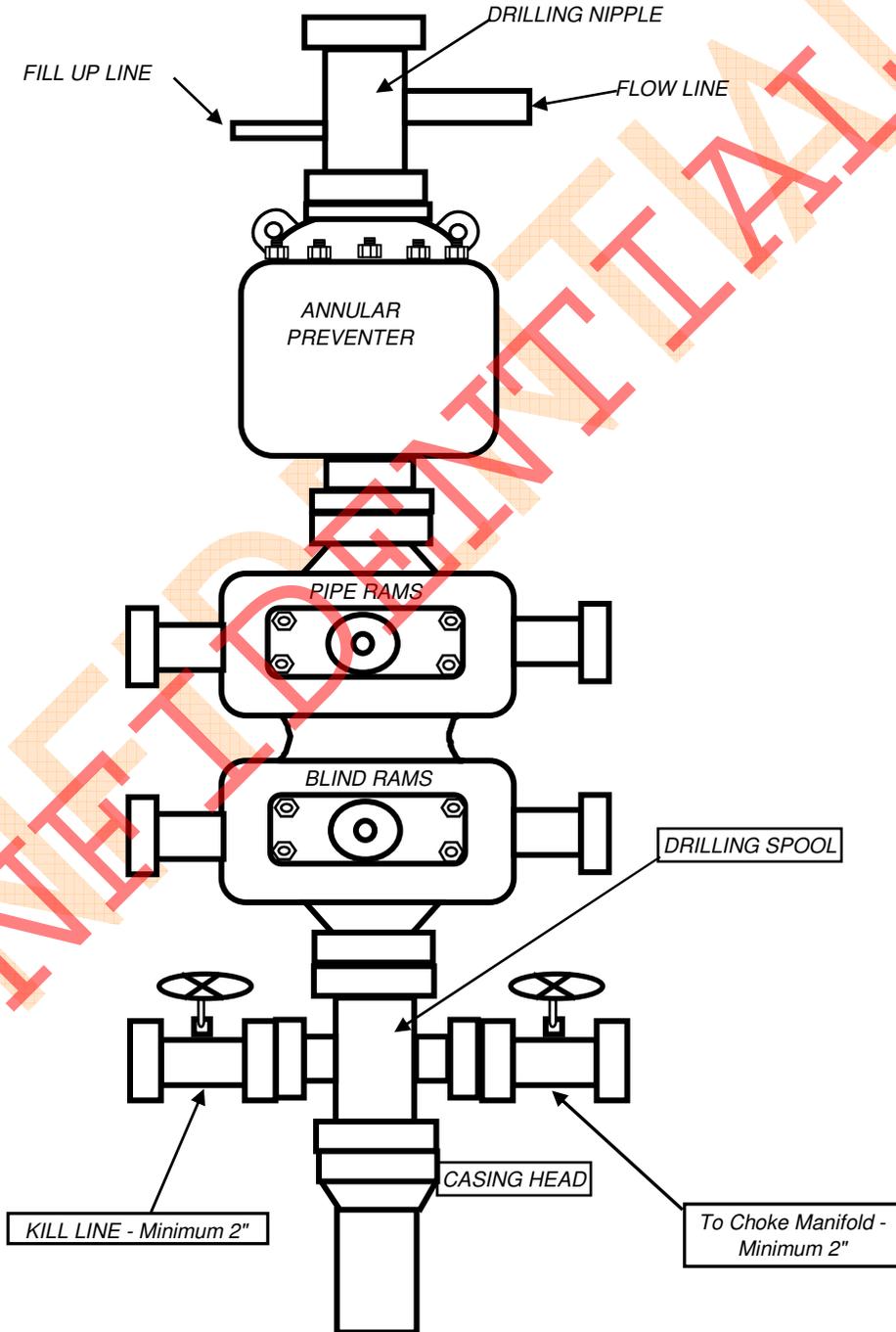
- Operator anticipates Bottom Hole Temperatures below 150°F, the maximum temperature for DAP drilling fluids.
- No H₂S has been encountered or is known to exist from previous drilling in the area at this depth.
- Maximum pressure for hydrocarbon bearing zones at native conditions in this area is approximately 1532 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 (2653 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 3937' to 5976', 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.

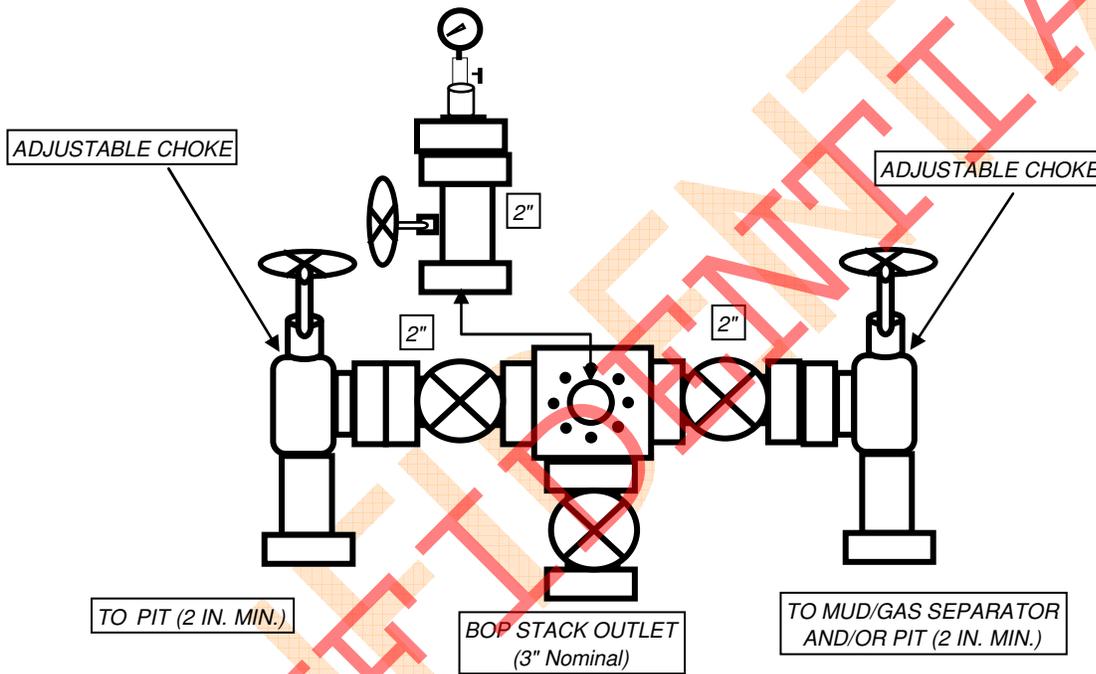
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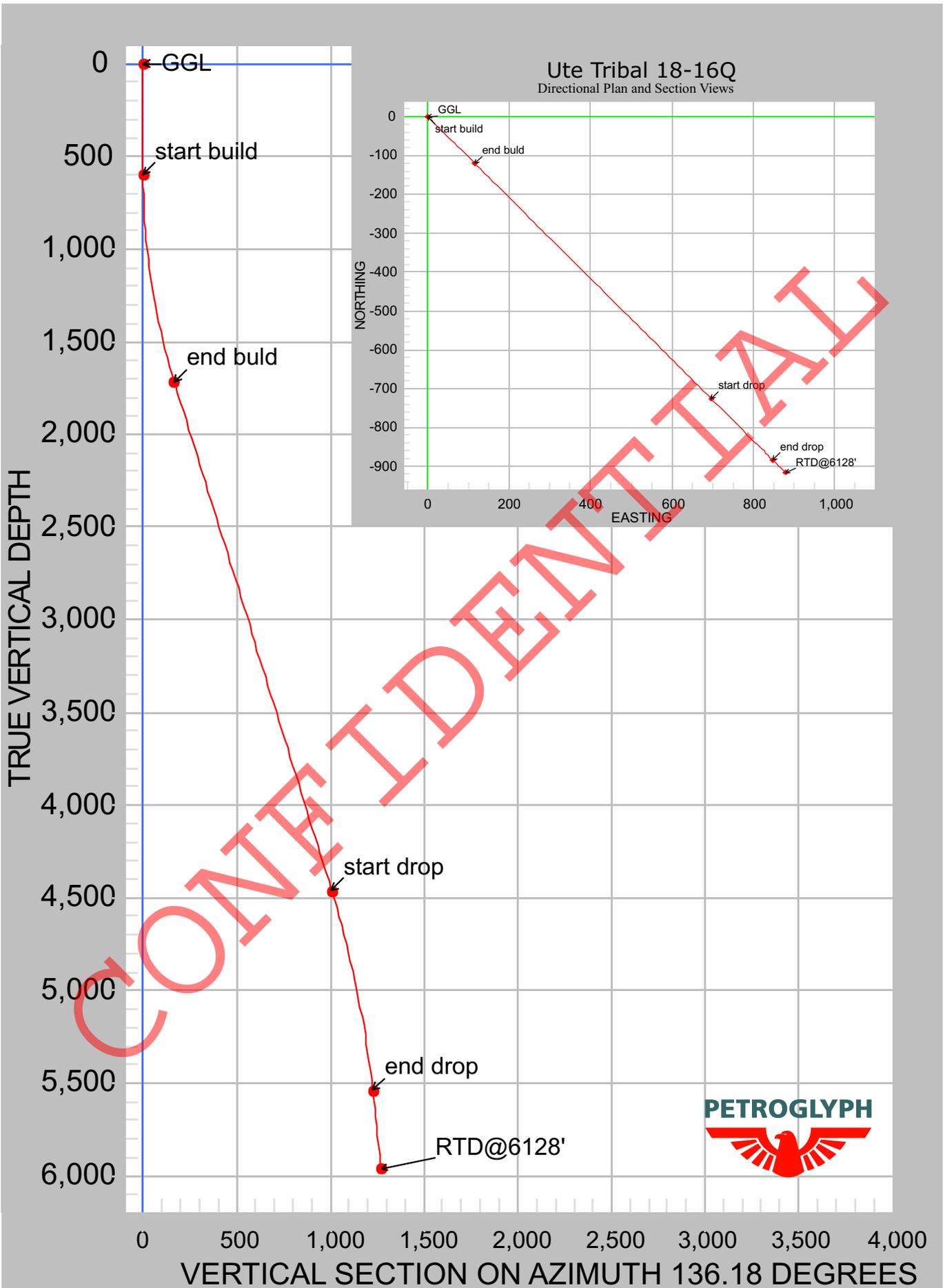
TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER



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





Ute Tribal 18-16Q, Plan 1

Operator Petroglyph Operating Company	Units feet, %100ft	11:30 Wednesday, December 14, 2011 Page 1 of 4
Field Antelope Creek	County Duchesne	Vertical Section Azimuth 136.18
Well Name Ute Tribal 18-16Q	State Utah	Survey Calculation Method Minimum Curvature
Plan 1	Country USA	Database Access

Location 911 FSL 703 FEL S18 T5S R3W	MapZone	Lat Long Ref
Site BHL 20 FSL 200 FWL S17 T5S R3W	SurfaceX	Surface Long
Slot Name	SurfaceY	Surface Lat
Well Number	Z Datum	
Project	Surface Z	Ground Level 6145

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
*** GGL (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			
*** START BUILD (at MD = 600.00)										
600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00			
650.00	0.75	136.2	650.00	-0.24	0.23	1.50	0.33			
700.00	1.50	136.2	699.99	-0.94	0.91	1.50	1.31			
750.00	2.25	136.2	749.96	-2.12	2.04	1.50	2.94			
800.00	3.00	136.2	799.91	-3.78	3.62	1.50	5.23			
850.00	3.75	136.2	849.82	-5.90	5.66	1.50	8.18			
900.00	4.50	136.2	899.69	-8.50	8.15	1.50	11.77			
950.00	5.25	136.2	949.51	-11.56	11.09	1.50	16.02			
1000.00	6.00	136.2	999.27	-15.10	14.49	1.50	20.92			
1050.00	6.75	136.2	1048.96	-19.10	18.33	1.50	26.48			
1100.00	7.50	136.2	1098.57	-23.58	22.63	1.50	32.68			
1150.00	8.25	136.2	1148.10	-28.52	27.37	1.50	39.53			
1200.00	9.00	136.2	1197.54	-33.93	32.56	1.50	47.03			
1250.00	9.75	136.2	1246.87	-39.81	38.20	1.50	55.17			
1300.00	10.50	136.2	1296.09	-46.15	44.29	1.50	63.96			
1350.00	11.25	136.2	1345.19	-52.96	50.82	1.50	73.39			
1400.00	12.00	136.2	1394.16	-60.23	57.79	1.50	83.47			
1450.00	12.75	136.2	1443.00	-67.96	65.21	1.50	94.19			
1500.00	13.50	136.2	1491.70	-76.15	73.07	1.50	105.54			
1550.00	14.25	136.2	1540.24	-84.80	81.38	1.50	117.53			
1600.00	15.00	136.2	1588.62	-93.91	90.12	1.50	130.15			
1650.00	15.75	136.2	1636.83	-103.47	99.30	1.50	143.41			

Ute Tribal 18-16Q, Plan 1

Operator Petroglyph Operating Company	Units feet, %100ft	11:30 Wednesday, December 14, 2011 Page 2 of 4
Field Antelope Creek	County Duchesne	Vertical Section Azimuth 136.18
Well Name Ute Tribal 18-16Q	State Utah	Survey Calculation Method Minimum Curvature
Plan 1	Country USA	Database Access

Location 911 FSL 703 FEL S18 T5S R3W	MapZone	Lat Long Ref
Site BHL 20 FSL 200 FWL S17 T5S R3W	SurfaceX	Surface Long
Slot Name	SurfaceY	Surface Lat
Well Number	Z Datum	
Project	Surface Z	Ground Level 6145

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	16.50	136.2	1684.86	-113.49	108.91	1.50	157.30			
*** END BULD (at MD = 1733.33)										
1733.33	17.00	136.2	1716.78	-120.42	115.56	1.50	166.90			
1750.00	17.00	136.2	1732.72	-123.94	118.94	0.00	171.78			
1800.00	17.00	136.2	1780.53	-134.49	129.06	0.00	186.40			
1850.00	17.00	136.2	1828.35	-145.04	139.18	0.00	201.01			
1900.00	17.00	136.2	1876.16	-155.58	149.30	0.00	215.63			
1950.00	17.00	136.2	1923.98	-166.13	159.42	0.00	230.25			
2000.00	17.00	136.2	1971.79	-176.68	169.55	0.00	244.87			
2050.00	17.00	136.2	2019.61	-187.23	179.67	0.00	259.49			
2100.00	17.00	136.2	2067.42	-197.77	189.79	0.00	274.11			
2150.00	17.00	136.2	2115.24	-208.32	199.91	0.00	288.73			
2200.00	17.00	136.2	2163.05	-218.87	210.03	0.00	303.34			
2250.00	17.00	136.2	2210.87	-229.42	220.16	0.00	317.96			
2300.00	17.00	136.2	2258.68	-239.96	230.28	0.00	332.58			
2350.00	17.00	136.2	2306.50	-250.51	240.40	0.00	347.20			
2400.00	17.00	136.2	2354.31	-261.06	250.52	0.00	361.82			
2450.00	17.00	136.2	2402.13	-271.61	260.64	0.00	376.44			
2500.00	17.00	136.2	2449.94	-282.15	270.76	0.00	391.06			
2550.00	17.00	136.2	2497.76	-292.70	280.89	0.00	405.67			
2600.00	17.00	136.2	2545.58	-303.25	291.01	0.00	420.29			
2650.00	17.00	136.2	2593.39	-313.80	301.13	0.00	434.91			
2700.00	17.00	136.2	2641.21	-324.34	311.25	0.00	449.53			
2750.00	17.00	136.2	2689.02	-334.89	321.37	0.00	464.15			
2800.00	17.00	136.2	2736.84	-345.44	331.50	0.00	478.77			
2850.00	17.00	136.2	2784.65	-355.99	341.62	0.00	493.39			
2900.00	17.00	136.2	2832.47	-366.53	351.74	0.00	508.00			
2950.00	17.00	136.2	2880.28	-377.08	361.86	0.00	522.62			
3000.00	17.00	136.2	2928.10	-387.63	371.98	0.00	537.24			
3050.00	17.00	136.2	2975.91	-398.18	382.10	0.00	551.86			
3100.00	17.00	136.2	3023.73	-408.72	392.23	0.00	566.48			
3150.00	17.00	136.2	3071.54	-419.27	402.35	0.00	581.10			
3200.00	17.00	136.2	3119.36	-429.82	412.47	0.00	595.72			
3250.00	17.00	136.2	3167.17	-440.37	422.59	0.00	610.33			
3300.00	17.00	136.2	3214.99	-450.91	432.71	0.00	624.95			

Ute Tribal 18-16Q, Plan 1

Operator Petroglyph Operating Company	Units feet, %100ft	11:30 Wednesday, December 14, 2011 Page 3 of 4
Field Antelope Creek	County Duchesne	Vertical Section Azimuth 136.18
Well Name Ute Tribal 18-16Q	State Utah	Survey Calculation Method Minimum Curvature
Plan 1	Country USA	Database Access

Location 911 FSL 703 FEL S18 T5S R3W	MapZone	Lat Long Ref
Site BHL 20 FSL 200 FWL S17 T5S R3W	SurfaceX	Surface Long
Slot Name	SurfaceY	Surface Lat
Well Number	Z Datum	
Project	Surface Z	Ground Level 6145

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
3350.00	17.00	136.2	3262.80	-461.46	442.84	0.00	639.57			
3400.00	17.00	136.2	3310.62	-472.01	452.96	0.00	654.19			
3450.00	17.00	136.2	3358.43	-482.56	463.08	0.00	668.81			
3500.00	17.00	136.2	3406.25	-493.11	473.20	0.00	683.43			
3550.00	17.00	136.2	3454.06	-503.65	483.32	0.00	698.05			
3600.00	17.00	136.2	3501.88	-514.20	493.45	0.00	712.66			
3650.00	17.00	136.2	3549.70	-524.75	503.57	0.00	727.28			
3700.00	17.00	136.2	3597.51	-535.30	513.69	0.00	741.90			
3750.00	17.00	136.2	3645.33	-545.84	523.81	0.00	756.52			
3800.00	17.00	136.2	3693.14	-556.39	533.93	0.00	771.14			
3850.00	17.00	136.2	3740.96	-566.94	544.05	0.00	785.76			
3900.00	17.00	136.2	3788.77	-577.49	554.18	0.00	800.38			
3950.00	17.00	136.2	3836.59	-588.03	564.30	0.00	814.99			
4000.00	17.00	136.2	3884.40	-598.58	574.42	0.00	829.61			
4050.00	17.00	136.2	3932.22	-609.13	584.54	0.00	844.23			
4100.00	17.00	136.2	3980.03	-619.68	594.66	0.00	858.85			
4150.00	17.00	136.2	4027.85	-630.22	604.79	0.00	873.47			
4200.00	17.00	136.2	4075.66	-640.77	614.91	0.00	888.09			
4250.00	17.00	136.2	4123.48	-651.32	625.03	0.00	902.71			
4300.00	17.00	136.2	4171.29	-661.87	635.15	0.00	917.32			
4350.00	17.00	136.2	4219.11	-672.41	645.27	0.00	931.94			
4400.00	17.00	136.2	4266.92	-682.96	655.39	0.00	946.56			
4450.00	17.00	136.2	4314.74	-693.51	665.52	0.00	961.18			
4500.00	17.00	136.2	4362.55	-704.06	675.64	0.00	975.80			
4550.00	17.00	136.2	4410.37	-714.60	685.76	0.00	990.42			
4600.00	17.00	136.2	4458.18	-725.15	695.88	0.00	1005.04			
*** START DROP (at MD = 4603.33)										
4603.33	17.00	136.2	4461.37	-725.86	696.56	0.00	1006.01			
4650.00	16.53	136.2	4506.05	-735.57	705.88	1.00	1019.47			
4700.00	16.03	136.2	4554.05	-745.68	715.58	1.00	1033.49			
4750.00	15.53	136.2	4602.16	-755.50	725.00	1.00	1047.09			
4800.00	15.03	136.2	4650.40	-765.01	734.13	1.00	1060.27			
4850.00	14.53	136.2	4698.74	-774.21	742.96	1.00	1073.03			
4900.00	14.03	136.2	4747.19	-783.11	751.50	1.00	1085.37			
4950.00	13.53	136.2	4795.75	-791.71	759.75	1.00	1097.28			

Ute Tribal 18-16Q, Plan 1

Operator Petroglyph Operating Company	Units feet, %100ft	11:30 Wednesday, December 14, 2011 Page 4 of 4
Field Antelope Creek	County Duchesne	Vertical Section Azimuth 136.18
Well Name Ute Tribal 18-16Q	State Utah	Survey Calculation Method Minimum Curvature
Plan 1	Country USA	Database Access

Location 911 FSL 703 FEL S18 T5S R3W	MapZone	Lat Long Ref
Site BHL 20 FSL 200 FWL S17 T5S R3W	SurfaceX	Surface Long
Slot Name	SurfaceY	Surface Lat
Well Number	Z Datum	
Project	Surface Z	Ground Level 6145

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
5000.00	13.03	136.2	4844.42	-800.00	767.70	1.00	1108.77			
5050.00	12.53	136.2	4893.18	-807.98	775.36	1.00	1119.83			
5100.00	12.03	136.2	4942.03	-815.65	782.73	1.00	1130.47			
5150.00	11.53	136.2	4990.98	-823.02	789.80	1.00	1140.68			
5200.00	11.03	136.2	5040.01	-830.08	796.57	1.00	1150.46			
5250.00	10.53	136.2	5089.13	-836.83	803.05	1.00	1159.81			
5300.00	10.03	136.2	5138.33	-843.27	809.23	1.00	1168.74			
5350.00	9.53	136.2	5187.60	-849.40	815.11	1.00	1177.24			
5400.00	9.03	136.2	5236.94	-855.22	820.70	1.00	1185.30			
5450.00	8.53	136.2	5286.36	-860.73	825.98	1.00	1192.94			
5500.00	8.03	136.2	5335.83	-865.92	830.97	1.00	1200.14			
5550.00	7.53	136.2	5385.37	-870.81	835.66	1.00	1206.91			
5600.00	7.03	136.2	5434.97	-875.38	840.05	1.00	1213.25			
5650.00	6.53	136.2	5484.62	-879.64	844.14	1.00	1219.16			
5700.00	6.03	136.2	5534.32	-883.59	847.93	1.00	1224.63			
*** END DROP (at MD = 5703.33)										
5703.33	6.00	136.2	5537.63	-883.84	848.17	1.00	1224.98			
5750.00	6.00	136.2	5584.05	-887.36	851.55	0.00	1229.86			
5800.00	6.00	136.2	5633.77	-891.14	855.17	0.00	1235.08			
5850.00	6.00	136.2	5683.50	-894.91	858.78	0.00	1240.31			
5900.00	6.00	136.2	5733.22	-898.68	862.40	0.00	1245.54			
5950.00	6.00	136.2	5782.95	-902.45	866.02	0.00	1250.76			
6000.00	6.00	136.2	5832.68	-906.22	869.64	0.00	1255.99			
6050.00	6.00	136.2	5882.40	-909.99	873.26	0.00	1261.21			
6100.00	6.00	136.2	5932.13	-913.76	876.88	0.00	1266.44			
*** RTD@6128' (at MD = 6128.33)										
6128.33	6.00	136.2	5960.31	-915.90	878.93	0.00	1269.40			

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

PETROGLYPH OPERATING CO., INC.

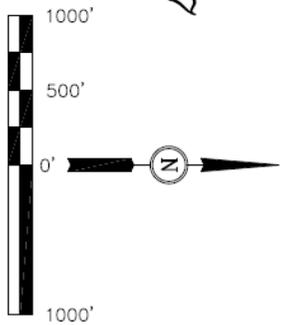
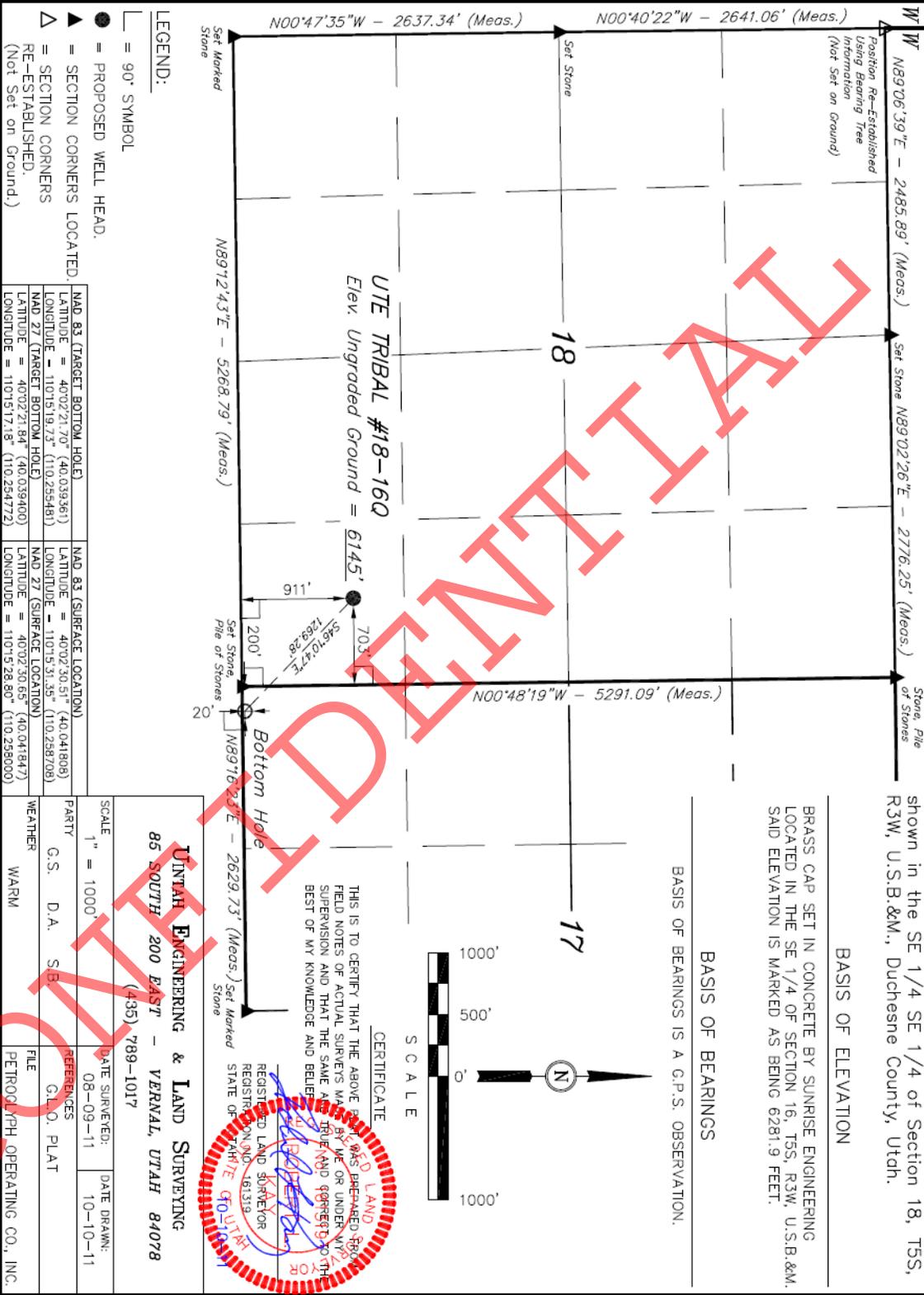
Well location, UTE TRIBAL #18-16Q, located as shown in the SE 1/4 SE 1/4 of Section 16, T5S, R3W, U.S.B.&M., Duchesne County, Utah.

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.



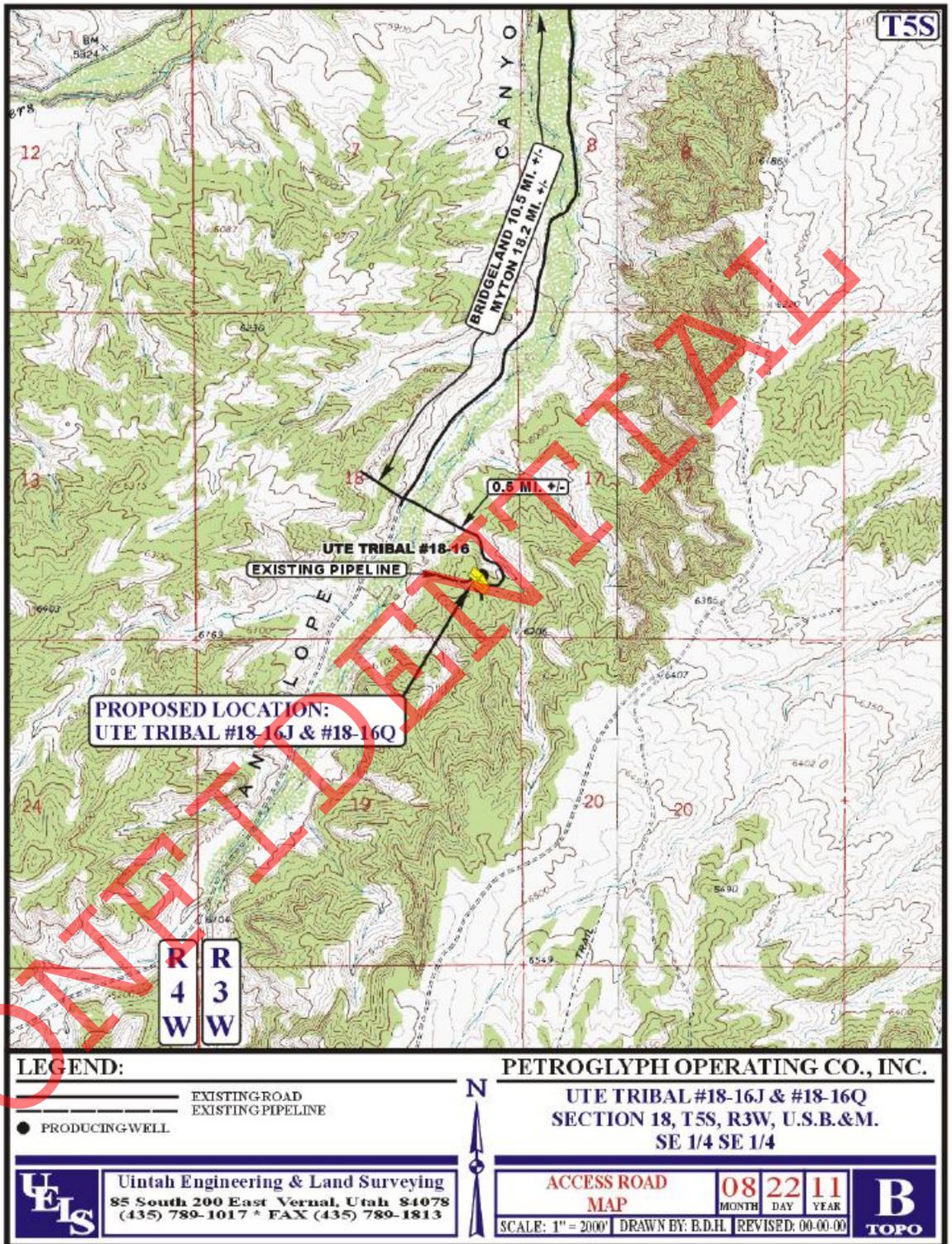
CERTIFICATE
 THIS IS TO CERTIFY THAT THE ABOVE SURVEY WAS PREPARED BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
 KAY G. VERNAL
 REGISTERED LAND SURVEYOR
 STATE OF UTAH
 REGISTRATION NO. 81319

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

- LEGEND:**
- = PROPOSED WELL HEAD.
 - ▲ = SECTION CORNERS LOCATED.
 - △ = SECTION CORNERS RE-ESTABLISHED. (Not Set on Ground.)

NAD 83 (TARGET BOTTOM HOLE)		NAD 83 (SURFACE LOCATION)	
LATITUDE = 40°02'21.70" (40.039361)	LATITUDE = 40°02'30.51" (40.041808)		
LONGITUDE = 110°15'19.73" (110.255481)	LONGITUDE = 110°15'51.35" (110.259708)		
NAD 27 (TARGET BOTTOM HOLE)		NAD 27 (SURFACE LOCATION)	
LATITUDE = 40°02'21.84" (40.039400)	LATITUDE = 40°02'30.65" (40.041847)		
LONGITUDE = 110°15'17.18" (110.254772)	LONGITUDE = 110°15'28.80" (110.259000)		

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	08-09-11	10-10-11
PARTY	REFERENCES	
G.S. D.A. S.B.	G.L.C.O. PLAT	
WEATHER	FILE	
WARM	PETROGLYPH OPERATING CO., INC.	



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

January 10, 2012

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 18-16Q: 911' FSL & 703' FEL, SE/SE, SEC. 18, (Surface Hole)
20' FSL & 200' FWL, SW/SW, 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 January 10, 2012, 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 18-16Q 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 18-16Q Well, located in the SE/SE of Section 18, T5S, R3W, Duchesne County, Utah; Lease #14-20-H62-3512;** and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is provided under Bond #LP4138153.

Date

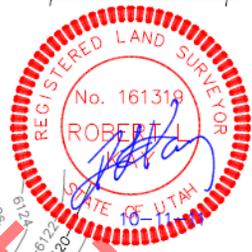
Ed Trotter, as Agent for
Petroglyph Operating Co., Inc.

CONFIDENTIAL

PETROGLYPH OPERATING CO., INC.

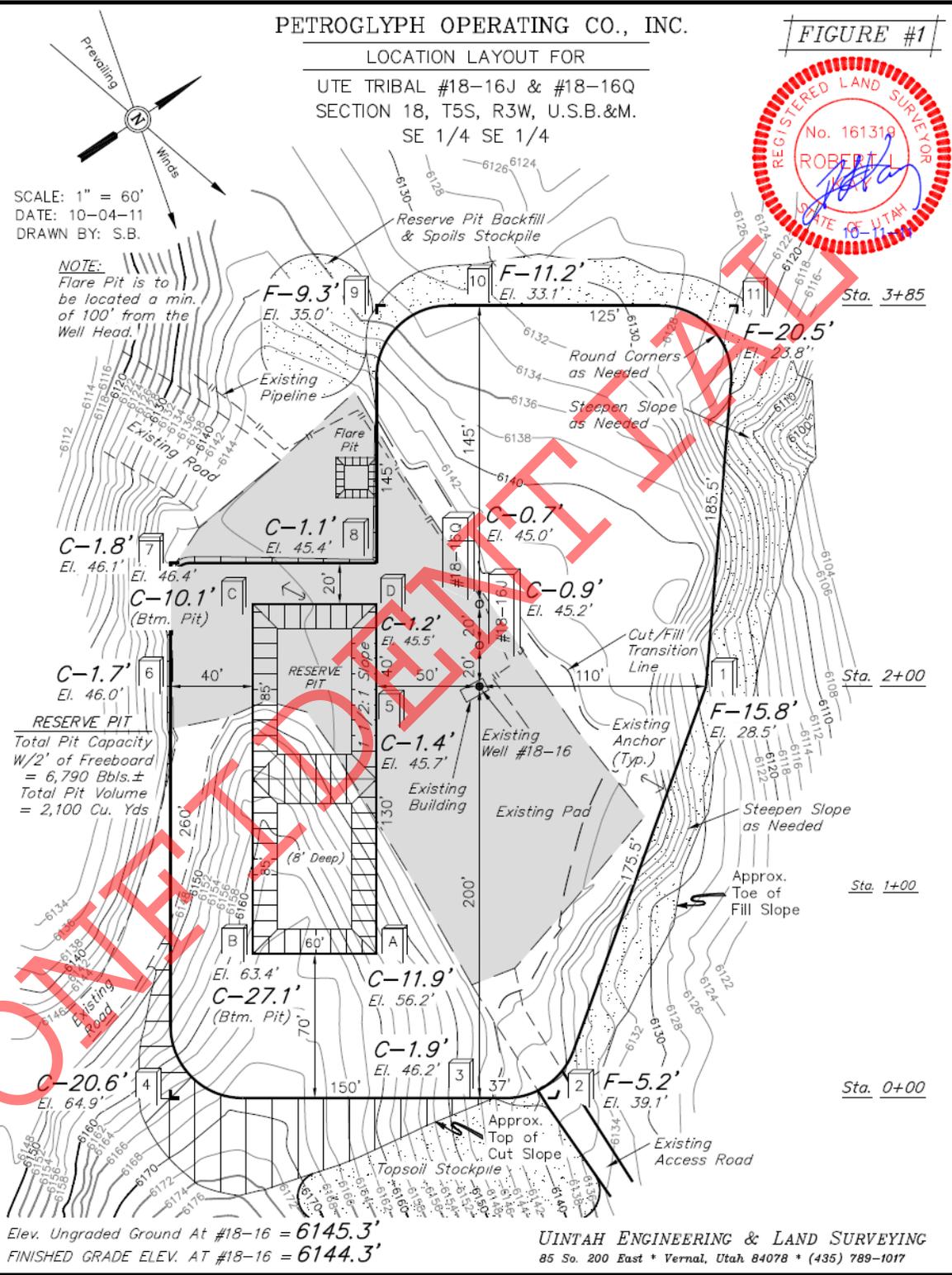
FIGURE #1

LOCATION LAYOUT FOR
 UTE TRIBAL #18-16J & #18-16Q
 SECTION 18, T5S, R3W, U.S.B.&M.
 SE 1/4 SE 1/4



SCALE: 1" = 60'
 DATE: 10-04-11
 DRAWN BY: S.B.

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



Elev. Ungraded Ground At #18-16 = 6145.3'
 FINISHED GRADE ELEV. AT #18-16 = 6144.3'

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

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/27/2012

API NO. ASSIGNED: 43013512010000

WELL NAME: Ute Tribal 18-16Q

OPERATOR: PETROGLYPH OPERATING CO (N3800)

PHONE NUMBER: 435 789-4120

CONTACT: Ed Trotter

PROPOSED LOCATION: SESE 18 050S 030W

Permit Tech Review:

SURFACE: 0911 FSL 0703 FEL

Engineering Review:

BOTTOM: 0020 FSL 0200 FWL

Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.04186

LONGITUDE: -110.25882

UTM SURF EASTINGS: 563229.00

NORTHINGS: 4432666.00

FIELD NAME: ANTELOPE CREEK

LEASE TYPE: 2 - Indian

LEASE NUMBER: BIA 14-20-H62-3512

PROPOSED PRODUCING FORMATION(S): CASTLE PEAK

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: INDIAN - LP4138153
- 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

Commingle 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
ENH REC PROJ:

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



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Ute Tribal 18-16Q
API Well Number: 43013512010000
Lease Number: BIA 14-20-H62-3512
Surface Owner: INDIAN
Approval Date: 2/2/2012

Issued to:

PETROGLYPH OPERATING CO, 960 Broadway Ave, Ste 500, Bosie, 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 CASTLE PEAK 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

API Well No: 43013512010000

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 24 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER

CONFIDENTIAL

1a. Type of Work: DRILL REENTER
1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone

5. Lease Serial No.
14-20-H62-3513
6. If Indian, Allottee or Tribe Name
UTE INDIAN TRIBE
7. If Unit or CA Agreement, Name and No.
BIA 14-20-H62-4650
8. Lease Name and Well No.
UTE TRIBAL 18-16Q

2. Name of Operator
PETROGLYPH OPERATING CO., INC.

API Well No.
43-013-51201

3a. Address **P.O. BOX 607,
ROOSEVELT, UT 84066**
3b. Phone No. (Include area code)
(435)722-2531

10. Field and Pool, or Exploratory
ANTELOPE CREEK

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface **911' FSL, 703' FEL, SE/SE, SEC. 18 (Surface Hole)**
At proposed prod. Zone **20' FSL, 200' FWL, SW/SW, SEC. 17 (Bottom Hole)**

11. Sec., T., R., M., or Blk. and Survey or Area
**SEC. 18, T5S, R3W,
SEC. 17, T5S, R3W,
U.S.B.&M.**

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

12. County or Parish **DUCHESNE** 13. State **UTAH**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any)
703'
16. No. of Acres in lease
640.0

17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **See Topo Map "C"**
19. Proposed Depth
6200'

20. BLM/BIA Bond No. on file
#LP4138153

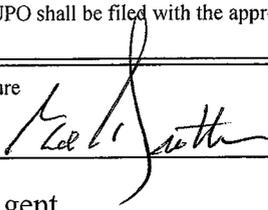
21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6144.3 FEET GRADED GROUND
22. Approximate date work will start*
UPON APPROVAL

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:

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

25. Signature 
Title **Agent**

Name (Printed/Typed)
Ed Trotter
RECEIVED
SEP 06 2012

Date
January 20, 2012

Approved by (Signature) 
Title **Assistant Field Manager
Lands & Mineral Resources**

Name (Printed/Typed)
Jerry Kenczka
Office **VERNAL FIELD OFFICE**

Date
AUG 27 2012

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of Approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

UDOGM

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 an agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Continued on page 2)

NOTICE OF APPROVAL

17.551929A

NOS- 10/11/11

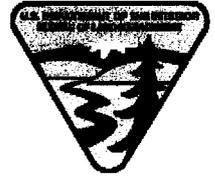


**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE**

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Petroglyph Operating CO., Inc
Well No: Ute Tribal 18-16Q
API No: 43-013-51201

Location: SESE, Sec. 18, T5S, R3W
Lease No: 14-20-H62-5313
Agreement: Antelope Creek

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 .
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)**

Additional Stipulations:

- 1) 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.
- 2) The conditions as set forth by those owners and/or agencies.

General Conditions of Approval:

- A 30' foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- A qualified Archaeologist accompanied by a Tribal Technician will monitor trenching construction of pipeline.
- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipeline.
- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROW's.
- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.
- You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- The Company will implement "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's and/or ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations shall be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.

- All personnel will refrain from collecting artifacts, any paleontological fossils, and from disturbing any significant cultural resources in the area.
- The personnel from the Ute Tribe Energy & Minerals Department will be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.
- All mitigative stipulations contained in the Bureau of Indian Affairs Site Specific Environmental Assessment (EA) will be strictly adhered.
- Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

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

SITE SPECIFIC DOWNHOLE COAs:

- 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.

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

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM_UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at 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
		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-4633
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
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.		7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK
		8. WELL NAME and NUMBER: UTE TRIBAL 18-16Q
1. TYPE OF WELL Oil Well	9. API NUMBER: 43013512010000	
2. NAME OF OPERATOR: PETROGLYPH OPERATING CO	9. FIELD and POOL or WILDCAT: ANTELOPE CREEK	
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Bosie, ID, 83703	PHONE NUMBER: 208 685-7685 Ext	9. FIELD and POOL or WILDCAT: ANTELOPE CREEK
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0703 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 18 Township: 05.0S Range: 03.0W Meridian: U		COUNTY: DUCHESNE
		STATE: 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"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 11/7/2012 <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.		
We spudded this well on 11/7/2012. We set 40' of 16" Conductor.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 09, 2012		
NAME (PLEASE PRINT) Rodrigo Jurado	PHONE NUMBER 435 722-5302	TITLE Regulatory & Compliance Spc
SIGNATURE N/A	DATE 11/8/2012	

BLM - Vernal Field Office - Notification Form

Operator Petroglyph Operating Rig Name/# Craig's/Air rig
Submitted By Rodrigo Jurado Phone Number 435-722-5302
Well Name/Number Ute Tribal 18-16Q
Qtr/Qtr SE/SE Section 18 Township 5S Range 3W
Lease Serial Number 14-20-H62-3513
API Number 43-013-51201

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

Date/Time 11/7/2012 3:00 AM PM

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

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

Date/Time _____ AM PM

BOPE

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

RECEIVED

NOV 06 2012

DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks We intend to spud at the time indicated and run 40' of 16" Conductor. (Sent 11/6/2012 @ 9:50 A.M.)

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
4301351200	Ute Tribal 18-16J		SESE	18	5S	3W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	12084	11/7/2012			11/9/2012	
Comments: Please add to existing Ute Tribal 18-15 Tank Battery BHL: S17DWSW GRRV							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301351201	Ute Tribal 18-16Q		SESE	18	5S	3W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	12084	11/7/2012			11/9/2012	
Comments: Please add to existing Ute Tribal 18-15 Tank Battery BHL: S17SWSW GRRV							

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	
Comments:							

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)

Div. of Oil, Gas & Mining

Rodrigo Jurado

Name (Please Print)

Signature

Regulatory Compliance Spc. 11/8/2012

Title

Date

BLM - Vernal Field Office - Notification Form

Operator Petroglyph Operating Rig Name/# Craig's/Air rig
Submitted By Rodrigo Jurado Phone Number 435-722-5302
Well Name/Number Ute Tribal 18-16Q
Qtr/Qtr SE/SE Section 18 Township 5S Range 3W
Lease Serial Number 14-20-H62-3513
API Number 43-013-51201

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 11/9/2012 6:00 AM PM

BOPE

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

RECEIVED

NOV 08 2012

DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks We intend to run +/- 500' of 8-5/8" J-55 Casing.
(sent 11/8/2012 @ 8:15 A.M.)

BLM - Vernal Field Office - Notification Form

Operator Petroglyph Operating Co. Rig Name/# Aztec 673
Submitted By Geno Rowland Phone Number 970-361-3271
Well Name/Number Ute Tribal 18-16Q
Qtr/Qtr SE/SE Section 18 Township 5S Range 3W
Lease Serial Number 14-20-H62-3515
API Number 43-013-51201

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 _____ AM PM

BOPE

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

RECEIVED

NOV 15 2012

DIV. OF OIL, GAS & MINING

Date/Time 11/15/2012 18:00 AM PM

Remarks Testing an 11"x 3M Townsend BOP from under Surface Point.

BLM - Vernal Field Office - Notification Form

Operator Petroglyph Operating Co. Rig Name/# Aztec 673
Submitted By Geno Rowland Phone Number 970-361-3271
Well Name/Number Ute Tribal 18-16Q
Qtr/Qtr SE/SE Section 18 Township 5S Range 3W
Lease Serial Number 14-20-H62-3513
API Number 43-013-51201

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 11/20/2012 13:00 AM PM

BOPE

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

RECEIVED
NOV 19 2012
DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks Running 5-1/2" Prod. Casing to a shoe depth of 6124' MD.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-4633
SUNDRY NOTICES AND REPORTS ON WELLS 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 In 7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: UTE TRIBAL 18-16Q
2. NAME OF OPERATOR: PETROGLYPH OPERATING CO	9. API NUMBER: 43013512010000
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Bosie, ID, 83703	PHONE NUMBER: 208 685-7685 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0703 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 18 Township: 05.0S Range: 03.0W Meridian: U	9. FIELD and POOL or WILDCAT: ANTELOPE CREEK COUNTY: DUCHESNE STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/9/2013 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <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 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.

On or around 1/9/2013, depending on equipment availability, Petroglyph Operating intends to perforate and frac the following intervals: 3988-92, 4044-48, 4056-59, 4140-45, 4162-75, 4190-98, 4206-12, 4620-30, 4672-76, 4740-47, 4827-38, 4940-45, 4975-80, 5235-46, 5254-58, 5266-68, 5650-52, 5660-66, 5670-80, 5742-56 & 5825-27. We will perforate using Titan 3-1/8" perf guns containing 22.7 gram charges, 0.42" EHD, 23.54" TTP @ 4 spf @ 120* phased. We will frac using Delta 140 15# gelled fluid containing 20/40 mesh sand and isolate zones with Halliburton 8K Composite Plugs.

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

Date: December 31, 2012

By: *Derek Quist*

NAME (PLEASE PRINT) Rodrigo Jurado	PHONE NUMBER 435 722-5302	TITLE Regulatory & Compliance Spc
SIGNATURE N/A	DATE 12/31/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-4633
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 In
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK
2. NAME OF OPERATOR: PETROGLYPH OPERATING CO		8. WELL NAME and NUMBER: UTE TRIBAL 18-16Q
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Bosie, ID, 83703		9. API NUMBER: 43013512010000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0703 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 18 Township: 05.0S Range: 03.0W Meridian: U		9. FIELD and POOL or WILDCAT: ANTELOPE CREEK
		COUNTY: DUCHESNE
		STATE: 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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/17/2013	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS 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. The date of first production for this well was 01/17/2013.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 24, 2013		
NAME (PLEASE PRINT) Rodrigo Jurado	PHONE NUMBER 435 722-5302	TITLE Regulatory & Compliance Spc
SIGNATURE N/A		DATE 1/24/2013

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-4633
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK
2. NAME OF OPERATOR: PETROGLYPH OPERATING CO		8. WELL NAME and NUMBER: UTE TRIBAL 18-16Q
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Boise, ID, 83703		9. API NUMBER: 43013512010000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0703 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 18 Township: 05.0S Range: 03.0W Meridian: U		9. FIELD and POOL or WILDCAT: ANTELOPE CREEK
		COUNTY: DUCHESNE
		STATE: 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: 2/28/2013	<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.

On 12/29/2012 Petroglyph Operating ran GR/CBL & found ETOC @ 192'. On 1/11/13 we perforated the following: 5825-27, 5742-56, 5670-80, 5660-66, 5650-52, 5266-68, 5254-58, 5235-46, 4975-80, 4940-45, 4827-38, 4740-47, 4672-76, 4620-30, 4206-12, 4190-98, 4162-75, 4140-45, 4056-59, 4044-48, 3988-92. Using Halliburton 8K Composite plugs for isolation, we frac'd the following: 5742-5827: 581 Bbls cont 44568#s of sand 5650-5680: 575 Bbls cont 44586#s sand 5235-5268: 426 Bbls cont 25200#s sand 4940-4980: 545 Bbls cont 40060#s sand 4740-4834: 546 Bbls cont 40000#s sand 4620-4676: 484 Bbls cont 35000#s sand 4140-4212: 955 Bbls cont 82000#s sand 3988-4059: 404 Bbls cont 23000#s sand We perf'd w/ Titan 3-1/8" guns cont 22.7 gram charges, 0.42"EHD, 23.54"TTP @ 4 spf @ 120* phased & frac'd w/ Delta 140 15# gelled fluid cont 20/40 mesh sand. Plugs drld & cld out to 6079, then ptp 2/28/2013.

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
March 08, 2013**

NAME (PLEASE PRINT) Rodrigo Jurado	PHONE NUMBER 435 722-5302	TITLE Regulatory & Compliance Spc
SIGNATURE N/A	DATE 3/6/2013	

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

CONFIDENTIAL

AMENDED REPORT FORM 8
(highlight changes)

6. CASE DESIGNATION AND SERIAL NUMBER:
14-20-H62-3513

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____
b. TYPE OF WORK: NEW WELL HORIZ. LATS. DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute Indian Tribe

7. UNIT OR CA AGREEMENT NAME
14-20-H62-4650

8. WELL NAME and NUMBER:
Ute Tribal 18-16Q

2. NAME OF OPERATOR:
Petroglyph Operating Company, Inc.

9. API NUMBER:
4301351201

3. ADDRESS OF OPERATOR: P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066
PHONE NUMBER: (435) 722-2531

10 FIELD AND POOL, OR WILDCAT
Antelope Creek

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 911' FSL, 703' FEL
AT TOP PRODUCING INTERVAL REPORTED BELOW: 262' FSL, 48' FEL
AT TOTAL DEPTH: 7' FNL, 168 FWL NWNW Sec 20 T5S R3W

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
SESE 18 5S 3W U

12. COUNTY Duchesne 13. STATE UTAH

14. DATE SPUNDED: 11/7/2012 15. DATE T.D. REACHED: 11/19/2012 16. DATE COMPLETED: 2/28/2013
ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):
6,144' RKB

18. TOTAL DEPTH: MD 6,134 TVD 5,947 19. PLUG BACK T.D.: MD 6,079 TVD 5,892 20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
ACTR, Spectral Density Dual Spaced Neutron, CBL, Borehole Volume Plot

23. WAS WELL CORED? NO YES (Submit analysis)
WAS DST RUN? NO YES (Submit report)
DIRECTIONAL SURVEY? NO YES (Submit copy)

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
20	16 J-55	75	0	54				Conductor	
12.25	8.625 J-55	24	0	530		G 342	70	0	
7.875	5.5 J-55	15.5	0	6,124		G 790	262	192' 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	5,848							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) Green River	3,988	5,827	3,837	5,640	3,988 5,827	0.42	544	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"/>

27. PERFORATION RECORD

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
3,988'-5,827'	4,516 BBIs of Delta 140 15# gelled fluid containing 334,414#s of 20/40 mesh sand.

29. ENCLOSED ATTACHMENTS:

- ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: UDOGM Form 7

30. WELL STATUS:

POW

RECEIVED

MAR 22 2013

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 1/17/2013	TEST DATE: 3/10/2013	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL - BBL: 81	GAS - MCF: 1	WATER - BBL: 48	PROD. METHOD: Rod Pump
CHOKE SIZE: 34/64	TBG. PRESS. 156	CSG. PRESS. 70	API GRAVITY 38.70	BTU - GAS 1	GAS/OIL RATIO 12	24 HR PRODUCTION RATES: →	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: →	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: →	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: →	INTERVAL STATUS:

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

Used on Lease

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.

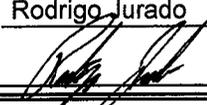
34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Trona	2,670
				Mahogany	2,826
				Garden Gulch	3,570
				B Marker	3,584
				X Marker	4,494
				Y Marker	4,527
				Douglas Creek	4,640
				B Lime	5,034
				Castle Peak	5,596
				Basal Carbonate	6,006

35. ADDITIONAL REMARKS (Include plugging procedure)

All Frac and Perf info is condensed. Please see NOI and Subsequent Frac Sundry for detailed record.

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 3/18/13

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

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well name and number: Ute Tribal 18-16Q

API number: 4301351201

Well Location: QQ SESE Section 18 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: ProPetro Service

Address: 1422 East 1500 South

city Vernal state UT zip 84078

Phone: (435) 789-4729

Water encountered (attach additional pages as needed):

DEPTH		VOLUME (FLOW RATE OR HEAD)	QUALITY (FRESH OR SALTY)
FROM	TO		
0	521	0	SALTY
			A Trickle Encountered at 480'

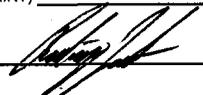
Formation tops: 1 _____ 2 _____ 3 _____
 (Top to Bottom) 4 _____ 5 _____ 6 _____
 7 _____ 8 _____ 9 _____
 10 _____ 11 _____ 12 _____

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 Spc

SIGNATURE 

DATE 11/9/2012

Units of Measurement: Standard

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
 Well Name: **UTE TRIBAL 18-16Q**
 Sample Point: **Well Head 480**
 Sample Date: **11/8/2012**
 Sample ID: **WA-228000**

Sales Rep: **James Patry**
 Lab Tech: **Layne Wilkerson**

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations		Anions	
		mg/L		mg/L	
Test Date:	11/20/2012	Sodium (Na):	2917.86	Chloride (Cl):	3500.00
System Temperature 1 (°F):	300.00	Potassium (K):	17.60	Sulfate (SO4):	44.00
System Pressure 1 (psig):	1300.0000	Magnesium (Mg):	1.70	Bicarbonate (HCO3):	1708.00
System Temperature 2 (°F):	70.00	Calcium (Ca):	1.90	Carbonate (CO3):	
System Pressure 2 (psig):	14.7000	Strontium (Sr):		Acetic Acid (CH3COO)	
Calculated Density (g/ml):	1.003	Barium (Ba):	0.67	Propionic Acid (C2H5COO)	
pH:	9.10	Iron (Fe):	0.45	Butanoic Acid (C3H7COO)	
Calculated TDS (mg/L):	8192.18	Zinc (Zn):	0.00	Isobutyric Acid ((CH3)2CHCOO)	
CO2 in Gas (%):		Lead (Pb):	0.00	Fluoride (F):	
Dissolved CO2 (mg/L):	0.00	Ammonia NH3:		Bromine (Br):	
H2S in Gas (%):		Manganese (Mn):	0.00	Silica (SiO2):	
H2S in Water (mg/L):	0.00				

Notes:

(PTB = Pounds per Thousand Barrels)

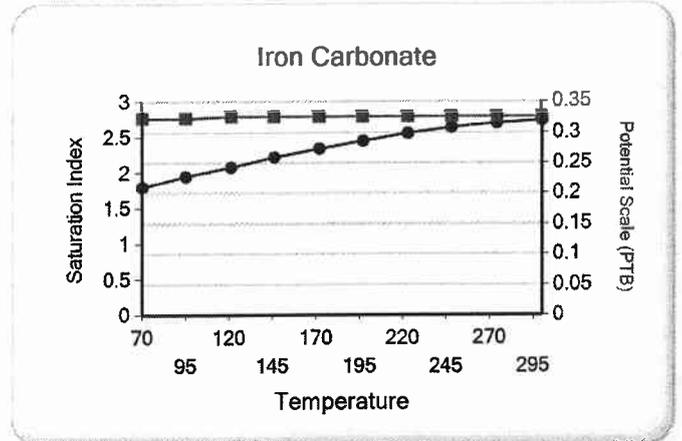
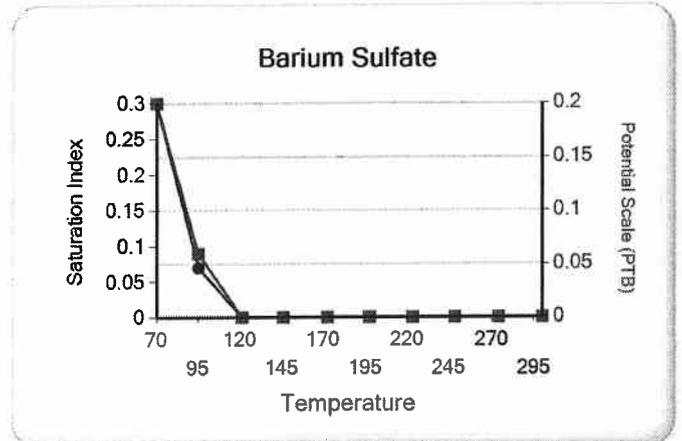
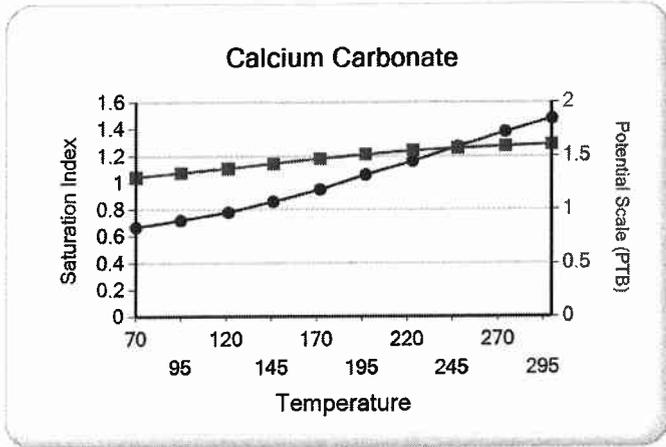
Temp (°F)	PSI	Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70.00	14.00	0.67	1.30	0.30	0.20	0.00	0.00	1.80	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00	157.00	0.72	1.34	0.07	0.06	0.00	0.00	1.95	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121.00	300.00	0.78	1.38	0.00	0.00	0.00	0.00	2.08	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146.00	443.00	0.86	1.43	0.00	0.00	0.00	0.00	2.22	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.00	585.00	0.95	1.48	0.00	0.00	0.00	0.00	2.34	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197.00	728.00	1.06	1.51	0.00	0.00	0.00	0.00	2.45	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223.00	871.00	1.16	1.55	0.00	0.00	0.00	0.00	2.56	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248.00	1014.00	1.27	1.57	0.00	0.00	0.00	0.00	2.64	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274.00	1157.00	1.38	1.59	0.00	0.00	0.00	0.00	2.70	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	1300.00	1.48	1.61	0.00	0.00	0.00	0.00	2.74	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Temp (°F)	PSI	Hemihydrate CaSO4·0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Water Analysis Report

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate



Job Number: UT121030
Company: Petroglyph
Lease/Well: Ute Tribal_18-16Q
Location: Sec. 18, T5S, R3W
Rig Name: Aztec #673
RKB: 6159'
G.L. or M.S.L.: GL-6144'

State/Country: Utah/USA
Declination: 11.21
Grid: True
File name: C:\WINSERVE\UT121030.SVY
Date/Time: 19-Nov-12 / 19:48
Curve Name: Actual

Payzone Directional

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 135.60
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	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
588.00	.20	251.77	588.00	-.32	-.97	-.45	1.03	251.77	.03
649.00	.26	173.91	649.00	-.49	-1.06	-.39	1.17	245.13	.48
710.00	1.27	138.31	709.99	-1.13	-.60	.39	1.28	207.75	1.75
771.00	2.02	128.60	770.97	-2.31	.69	2.14	2.41	163.30	1.31
833.00	2.64	119.68	832.92	-3.70	2.79	4.59	4.63	143.00	1.16
894.00	3.56	120.07	893.83	-5.34	5.65	7.77	7.77	133.42	1.51
956.00	4.61	120.12	955.67	-7.56	9.47	12.02	12.11	128.60	1.69
1018.00	5.67	124.77	1017.42	-10.56	14.14	17.43	17.64	126.74	1.84
1080.00	6.86	127.32	1079.05	-14.55	19.60	24.11	24.41	126.58	1.97
1142.00	8.09	127.46	1140.52	-19.45	26.01	32.09	32.47	126.78	1.98
1204.00	9.54	126.93	1201.78	-25.19	33.58	41.49	41.97	126.87	2.34
1266.00	10.59	126.58	1262.83	-31.67	42.26	52.19	52.81	126.85	1.70
1328.00	11.34	127.98	1323.70	-38.81	51.64	63.86	64.60	126.93	1.28
1391.00	11.82	132.99	1385.42	-47.03	61.24	76.45	77.21	127.52	1.77
1453.00	11.63	136.55	1446.12	-55.89	70.19	89.04	89.72	128.53	1.21
1515.00	11.56	137.76	1506.86	-65.03	78.66	101.50	102.06	129.58	.41
1577.00	11.69	136.68	1567.59	-74.20	87.14	113.98	114.45	130.41	.41
1639.00	12.66	135.72	1628.19	-83.63	96.20	127.06	127.47	131.00	1.60
1701.00	13.75	136.55	1688.55	-93.85	106.01	141.22	141.58	131.52	1.78
1763.00	14.41	136.95	1748.69	-104.83	116.34	156.30	156.61	132.02	1.08
1802.00	15.03	137.61	1786.41	-112.11	123.06	166.21	166.48	132.33	1.65
1888.00	15.86	138.79	1869.30	-129.19	138.32	189.08	189.27	133.04	1.03
1950.00	16.70	138.22	1928.81	-142.21	149.84	206.44	206.58	133.50	1.38
2012.00	18.05	136.74	1987.98	-155.85	162.36	224.94	225.05	133.83	2.29
2074.00	19.29	134.35	2046.72	-170.00	176.27	244.79	244.89	133.96	2.35
2136.00	19.50	133.69	2105.20	-184.31	191.07	265.37	265.48	133.97	.49
2198.00	18.94	132.29	2163.75	-198.23	206.00	285.76	285.88	133.90	1.17
2260.00	19.86	134.14	2222.23	-212.33	221.00	306.33	306.47	133.85	1.78
2322.00	20.19	135.98	2280.48	-227.36	235.99	327.56	327.70	133.93	1.15

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth			Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				N-S FT	E-W FT		Distance FT	Direction Deg	
2384.00	20.08	135.59	2338.69	-242.66	250.88	348.90	349.03	134.05	.28
2446.00	20.43	134.35	2396.86	-257.82	266.06	370.36	370.49	134.10	.89
2508.00	20.13	133.07	2455.01	-272.67	281.59	391.84	391.98	134.08	.86
2570.00	19.70	133.07	2513.31	-287.09	297.02	412.94	413.09	134.03	.69
2633.00	19.82	134.22	2572.60	-301.79	312.43	434.22	434.39	134.01	.65
2695.00	20.48	132.86	2630.80	-316.50	327.92	455.56	455.74	133.99	1.31
2757.00	20.52	135.67	2688.88	-331.65	343.46	477.26	477.45	134.00	1.59
2819.00	20.39	134.66	2746.97	-347.02	358.74	498.93	499.11	134.05	.61
2881.00	20.83	132.55	2805.00	-362.07	374.54	520.74	520.93	134.03	1.39
2943.00	21.40	131.10	2862.84	-376.96	391.18	543.02	543.25	133.94	1.25
3005.00	21.49	130.80	2920.55	-391.81	408.30	565.62	565.89	133.82	.23
3066.00	21.53	130.80	2977.30	-406.43	425.24	587.90	588.23	133.70	.07
3129.00	22.90	132.10	3035.62	-422.20	443.08	611.66	612.03	133.62	2.31
3191.00	23.50	134.50	3092.61	-438.95	460.85	636.06	636.44	133.61	1.81
3253.00	23.20	134.50	3149.53	-456.18	478.38	660.63	661.02	133.64	.48
3315.00	22.70	135.20	3206.62	-473.22	495.52	684.80	685.18	133.68	.92
3377.00	22.10	135.80	3263.94	-490.07	512.08	708.43	708.80	133.74	1.04
3439.00	21.75	135.89	3321.46	-506.68	528.20	731.58	731.93	133.81	.57
3501.00	20.96	136.02	3379.20	-522.91	543.90	754.15	754.50	133.87	1.28
3563.00	20.00	136.86	3437.28	-538.63	558.85	775.84	776.17	133.94	1.62
3625.00	19.78	136.90	3495.58	-554.02	573.27	796.93	797.23	134.02	.36
3687.00	19.91	137.08	3553.90	-569.41	587.63	817.97	818.25	134.10	.23
3749.00	19.73	138.09	3612.23	-584.93	601.81	838.98	839.24	134.19	.62
3811.00	19.69	140.42	3670.60	-600.77	615.45	859.84	860.06	134.31	1.27
3873.00	19.69	140.90	3728.97	-616.93	628.69	880.65	880.83	134.46	.26
3935.00	19.60	140.95	3787.36	-633.11	641.83	901.41	901.54	134.61	.15
3998.00	19.00	140.38	3846.82	-649.22	655.03	922.15	922.25	134.74	1.00
4060.00	18.11	139.19	3905.60	-664.28	667.76	941.82	941.90	134.85	1.56
4122.00	17.31	138.79	3964.66	-678.52	680.14	960.65	960.71	134.93	1.31
4184.00	16.66	138.57	4023.96	-692.12	692.10	978.73	978.79	135.00	1.05
4246.00	16.00	138.27	4083.45	-705.16	703.66	996.15	996.19	135.06	1.07
4308.00	15.03	137.35	4143.19	-717.45	714.80	1012.72	1012.75	135.11	1.61
4370.00	14.24	136.99	4203.18	-728.94	725.45	1028.38	1028.41	135.14	1.28
4432.00	13.60	136.64	4263.36	-739.81	735.65	1043.29	1043.32	135.16	1.04
4494.00	12.90	136.40	4323.71	-750.13	745.43	1057.50	1057.52	135.18	1.13
4556.00	12.30	136.60	4384.22	-759.94	754.74	1071.02	1071.05	135.20	.97
4618.00	11.69	136.40	4444.86	-769.28	763.61	1083.90	1083.93	135.21	.99
4680.00	11.70	135.90	4505.58	-778.35	772.32	1096.47	1096.49	135.22	.16
4742.00	11.34	138.50	4566.33	-787.43	780.73	1108.84	1108.87	135.24	1.02
4804.00	11.38	140.29	4627.11	-796.70	788.68	1121.03	1121.04	135.29	.57
4866.00	10.94	138.93	4687.94	-805.84	796.45	1133.00	1133.01	135.34	.83
4928.00	11.03	137.94	4748.80	-814.68	804.29	1144.80	1144.81	135.37	.34
4990.00	11.47	138.57	4809.61	-823.70	812.34	1156.88	1156.89	135.40	.74
5052.00	10.50	139.32	4870.48	-832.61	820.10	1168.67	1168.68	135.43	1.58
5114.00	9.67	139.63	4931.52	-840.86	827.16	1179.50	1179.51	135.47	1.34
5176.00	9.01	140.77	4992.70	-848.59	833.60	1189.53	1189.54	135.51	1.11
5239.00	8.25	141.91	5054.98	-855.97	839.51	1198.94	1198.94	135.56	1.24
5301.00	7.69	144.59	5116.38	-862.85	844.66	1207.46	1207.46	135.61	1.08
5362.00	6.59	151.67	5176.91	-869.26	848.68	1214.85	1214.86	135.69	2.31
5424.00	5.98	153.43	5238.54	-875.28	851.82	1221.35	1221.35	135.78	1.03

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5487.00	5.80	148.94	5301.21	-880.94	854.93	1227.57	1227.58	135.86	.78
5548.00	4.83	151.71	5361.94	-885.84	857.74	1233.04	1233.05	135.92	1.64
5610.00	4.39	154.00	5423.74	-890.27	860.01	1237.79	1237.82	135.99	.77
5672.00	4.00	155.58	5485.58	-894.37	861.95	1242.08	1242.12	136.06	.66
5735.00	3.78	157.56	5548.43	-898.29	863.65	1246.07	1246.12	136.13	.41
5796.00	3.56	153.87	5609.31	-901.85	865.25	1249.73	1249.80	136.19	.53
5858.00	3.30	155.40	5671.19	-905.20	866.84	1253.24	1253.32	136.24	.44
5920.00	2.90	158.20	5733.10	-908.28	868.17	1256.37	1256.46	136.29	.69
5982.00	2.90	160.40	5795.02	-911.22	869.27	1259.24	1259.35	136.35	.18
6045.00	2.60	167.50	5857.95	-914.11	870.12	1261.90	1262.02	136.41	.72
Project to TD									
6134.00	2.60	164.60	5946.86	-918.03	871.09	1265.38	1265.53	136.50	.15