

**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> State 3H-16-7-21				
<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> BRENNAN BOTTOM				
<b>4. TYPE OF WELL</b> Oil Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>				
<b>6. NAME OF OPERATOR</b> SUMMIT OPERATING, LLC						<b>7. OPERATOR PHONE</b> 435 940-9001				
<b>8. ADDRESS OF OPERATOR</b> 1245 Brickyard Road, Suite 210, Salt Lake City, UT, 84106						<b>9. OPERATOR E-MAIL</b> david@summitcorp.net				
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> ML-40904			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>				
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>				
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>				
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input checked="" 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		604 FNL 1322 FWL		NWNW	16	7.0 S	21.0 E	S		
Top of Uppermost Producing Zone		663 FNL 1322 FWL		NWNW	16	7.0 S	21.0 E	S		
At Total Depth		1775 FSL 1322 FWL		NWSW	16	7.0 S	21.0 E	S		
<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 604			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 320				
<b>27. ELEVATION - GROUND LEVEL</b> 4812			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 1320			<b>26. PROPOSED DEPTH</b> MD: 9478 TVD: 6774				
<b>28. BOND NUMBER</b> NZS633487			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Vernal City							
<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	17.5	14	0 - 60	48.0	Unknown	8.4	Unknown	36	1.15	15.8
SURF	12.25	9.625	0 - 500	36.0	J-55 ST&C	9.0	Hi Lift "G"	102	2.11	12.5
							Class G	123	1.17	15.8
PROD	8.75	7	0 - 6000	23.0	N-80 LT&C	9.2	Hi Lift "G"	287	3.99	11.0
			6000 - 7060	26.0	P-110 LT&C	9.2	35/65 Poz	167	1.53	13.5
L1	6.125	4.5	6850 - 9475	11.6	J-55 LT&C	8.6	No Used	0	0.0	0.0
<b>ATTACHMENTS</b>										
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
<b>NAME</b> Ellis Peterson			<b>TITLE</b> Sr Petroleum Engineer			<b>PHONE</b> 435 940-9001				
<b>SIGNATURE</b>			<b>DATE</b> 04/04/2011			<b>EMAIL</b> ellis@summitcorp.net				
<b>API NUMBER ASSIGNED</b> 43047515520000			<b>APPROVAL</b>  Permit Manager							

# SUMMIT OPERATING, LLC

1245 Brickyard Road, Suite 210 • Salt Lake City, Utah 84106  
Phone: 435.940.9001 • Fax: 435.940.9001

## APD DRILLING PLAN

**State 3H-16-7-21  
NWNW, Section 16, T7S, R21E  
Uintah County, Utah**

**Lease: UT ST ML-40904**

### Plan Summary:

This horizontal development well will be drilled as a vertical bore hole and then plugged back and redrilled horizontally in either the Green River H4a or G1 Limestone Formation depending on results of the vertical penetration. The well will be permitted in accordance with the following drilling plan under the expectation of it being a horizontal H4a Formation producer.

The planned location is as follows:

Surface Hole Location: 604' FNL, 1322' FWL, Section 16, T7S, R21E, S.L.B.&M.

Bottom Hole Location: 1775' FSL, 1322' FWL, Section 16, T7S, R21E, S.L.B.&M

Conductor casing will be set at approximately 60 feet and cemented to surface. A 12-1/4" hole will be drilled to 500' where 9-5/8" surface casing will be set and cemented to surface. After setting surface casing, an 8-3/4" vertical hole will be drilled to 6930' and logs will run for evaluation of the prospective producing formations. The vertical wellbore will then be plugged back with cement to 6250'. A deviated 8-3/4" bore hole will be drilled with an angle build rate of 11.6°/100' on a 180° azimuth until the deviation from vertical is approximately 85° and the H4a Lime is penetrated. A string of 7" production casing will be run to the new TD and cemented from TD to surface casing. A 6-1/8" horizontal lateral will then be drilled approximately 2375' in the H4a Limestone on a 180° azimuth and a 4-1/2" production liner with external packers and stimulation sleeves will be positioned from the end of the lateral back to the production casing.

Drilling activities at this well are expected to commence as early as July, 2011.

Summit Operating, LLC  
 APD Drilling Program  
 State 3H-16-7-21

**Well Name:** State 3H-16-7-21  
**Surface Location:** 604' FNL, 1322' FWL, NWNW, Section 16, T7S, R21E, S.L.B.&M. Uintah County, Utah  
**TD Bottom-Hole Location:** 1775' FSL, 1322' FWL, NWSW, Section 16, T7S, R21E, S.L.B.&M. Uintah County, Utah  
**Elevations:** 4812' (Est. Graded Elevation) 4829' (Est. KB)

**I. Geology:**

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

<u>Formation</u>	<u>TVD Tops (KB)</u>	<u>Horizontal MD Tops (KB)</u>	<u>Contents</u>	<u>Pressure Gradient</u>
Duchesne River	17'	17'		
Uinta	502'	502'		
Green River	3156'	3156'		
Green River Tgr3	5866'	5866'		
Douglas Creek	6316'	6316'		
Green River G1 Lime	6556'	6566'	O/W/G	0.39 psi/ft
Green River H4a Lime	6813'	7053'	O/W/G	0.39 psi/ft
Wasatch	6890'	NP		
Total Depth	6774'	9478'		

**II. Well Control:**

A 3M BOP system will be in place and tested prior to drilling out the surface casing shoe. A schematic diagram of the BOPE, including BOP diagram and choke manifold, is attached.

A. The BOPE will as a minimum include the following:

Wellhead Equipment (3M minimum):

<u>BOPE Item</u>	<u>Flange Size and Rating</u>
Annular Preventer	11" 3M
Double Ram (Pipe - top, Blind - bottom)	11" 3M
Drilling Spool w/ 2 side outlets (one 3" min. and one 2" min.)	11" 3M x 11 3M
Casing Head (9-5/8" SOW w/ two 2" LPO's)	11" 3M

Auxiliary Equipment (3M minimum):

<u>BOPE Item</u>
Choke Line (3" minimum) with 2 valves
Kill Line (2" minimum) with two valves and one check valve
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles available
Safety valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

Note: All BOPE connections subjected to well pressures will be flanged, welded, or clamped.

- B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All chokes will be straight lines, or use tee blocks or be targeted with running tees if there are turns, and all choke lines will be anchored. All valves (except chokes) in the kill line choke manifold and choke line will be full opening and allow straight through flow. Pressure gauges will be designed for drilling fluid service.
- C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.
- D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.
- E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.
- F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.
- G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.
- H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.
- I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.
- Ram type preventers and associated equipment will be isolated and tested to 3000 psi. The annular preventer will be tested to 1500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

**III. Casing and Cementing:**

A. Casing Program (all new casing):

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Connection</u>	<u>Coupling Diameter</u>	<u>Setting Depth</u>
17.50"	14"					0' - 60' GL
12.25"	9.625"	36.0	J-55	STC	10.625"	0' - 500' KB
8.75"	7"	23.0/26.0	N-80/P-110	LTC	7.656"	0' - 7060' KB
6.125"	4.5"	11.6	J-55	LTC	5.000	6850' - 9475' KB

	<u>Surface</u>	<u>Production</u>	<u>Liner</u>
Casing O.D. (in)	9.625	7.000	4.500
Casing Grade	J-55	N-80/P-110	J-55
Weight of Pipe (lbs/ft)	36	23.0 - 26.0	11.6
Connection	STC	LTC	LTC
Top Setting Depth - MD (ft)	0	0	6850
Top Setting Depth - TVD (ft)	0	0	6755
Bottom Setting Depth - MD (ft)	500	7060	9475
Bottom Setting Depth - TVD (ft)	500	6814	6774
Maximum Mud Weight - Inside (ppg)	9.0	9.2	8.6
Maximum Mud Weight - Outside (ppg)	9.0	9.2	8.6
Design Cement Top - TVD (ft)	0	450	N/A
Design Cement Top - MD (ft)	0	450	N/A
Max. Hydrostatic Inside w/ Dry Outside (psi)	234	3260	3048
Casing Burst Rating (psi)	3520	9960	5350
<b>Burst Safety Factor (1.10 Minimum)</b>	<b>15.04</b>	<b>3.06</b>	<b>1.76</b>
Max. Hydrostatic Outside w/ Dry Inside (psi)	234	3260	3048
Collapse Rating	2020	6210	4960
<b>Collapse Safety Factor (1.125 Minimum)</b>	<b>8.63</b>	<b>1.90</b>	<b>1.63</b>
Casing Weight in Air 1000 lbs	18.0	165.6	30.5
Body Yield 1000 lbs	564.0	830.0	184.0
Joint Strength 1000 lbs	394.0	693.0	174.0
<b>Tension Safety Factor (1.70 Minimum)</b>	<b>21.89</b>	<b>4.18</b>	<b>5.70</b>

Casing having same or greater burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

B. Cementing Program

<u>Casing Size</u>	<u>Cement Slurry</u>	<u>Quantity (sks)</u>	<u>Density (ppg)</u>	<u>Yield (ft<sup>3</sup>/sk)</u>
14"	Ready-mix	1.5 yds		
9.625"	Lead: Extended cement	102	12.5	2.11
	Tail: Class G w/ 2% CaCl <sub>2</sub>	123	15.8	1.17
7.000"	Lead: Extended cement	287	11.0	3.99
	Tail: 50:50 Poz:Prem w/ add.	167	13.5	1.53

**Surface Casing:** 9-5/8" surface casing will be cemented from setting depth (500') to surface and topped out with premium cement if necessary. Slurry volume for cementing surface casing will be gauge hole volume plus 100%. Surface casing hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

**Production Casing:** 7" production casing will be run and cemented in one stage from a setting depth of 7060' to 500'. Slurry volumes will be based on callipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, and centralizers as needed across pay zones. The lead cement will be an extended light cement to cover from 500 to 5800', and the tail cement will be 35:65 poz:premium cement to cover from 5800' to 7060'. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

**Production Liner:** 4-1/2" production liner will be run in the horizontal lateral. The liner will not be cemented. Liner hardware is expected to include a sealing liner hanger assembly, external casing packers, and stimulation sleeves. Final liner hardware selection and placement will depend on the horizontal drilling results.

Actual cement slurries for all casing will be based on final service company recommendations.

The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

A pressure integrity test of the casing shoe will be performed before drilling more than 20 feet of new hole below the surface casing string to a minimum of the mud weight equivalent anticipated for controlling the pore pressure to the next casing depth or at total depth of the well.

IV. Mud Program:

<u>Depth</u>	<u>Mud Weight (ppg)</u>	<u>Mud Type</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0 – 500'	8.4 – 9.0	Water/Spud Mud	26 – 38	N/C
500' – 7060'	8.6 – 9.2	Water/LSND	32 - 45	8 – 15 cc
7060' – 9475'	8.4 – 8.6	Water w/ Polymer Sweeps	26 - 28	N/C

- A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.
- B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.
- C. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtrate, and pH.
- D. The need to vent combustible or noncombustible gas is not expected.
- E. Abnormal pressure is not expected so a mud-gas separator (gas buster) will not be installed.

**V. Evaluation:**

- A. Mud Log: A mud logging unit will be in operation from approximately 300 feet above the Tgr3 (5864') to TD on both the vertical and horizontal well bores. Samples will be caught, cleaned, bagged, and marked as required.
- B. Drill Stem Tests: No DST's are expected.
- C. Coring: Rotary side-wall cores may also be taken at select intervals in conjunction with open-hole logging operations.
- D. Wireline Logs: Wireline logs will be run in the vertical well bore as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

**VI. Expected Bottom-Hole Pressure and Abnormal Conditions:**

- A. Hydrogen Sulfide: Hydrogen Sulfide (H<sub>2</sub>S) gas has not been present in other wells in this area and is therefore not expected to be present in this well.
- B. Pressure: No abnormal pressures are expected to be encountered based on data from offset wells. The pressure gradient for the formations in this well is expected to be approximately 0.39 psi/ft.
- C. Temperature: No abnormally high temperatures are expected. Bottom-hole temperature is expected to be approximately 150 °F.

End

**REPORTING AND NOTIFICATIONS**

UDOGM has regulatory authority for this drilling operation. The phone number for the Salt Lake City office is 801-538-5340. The following are notification and reporting requirements:

**Notifications:**

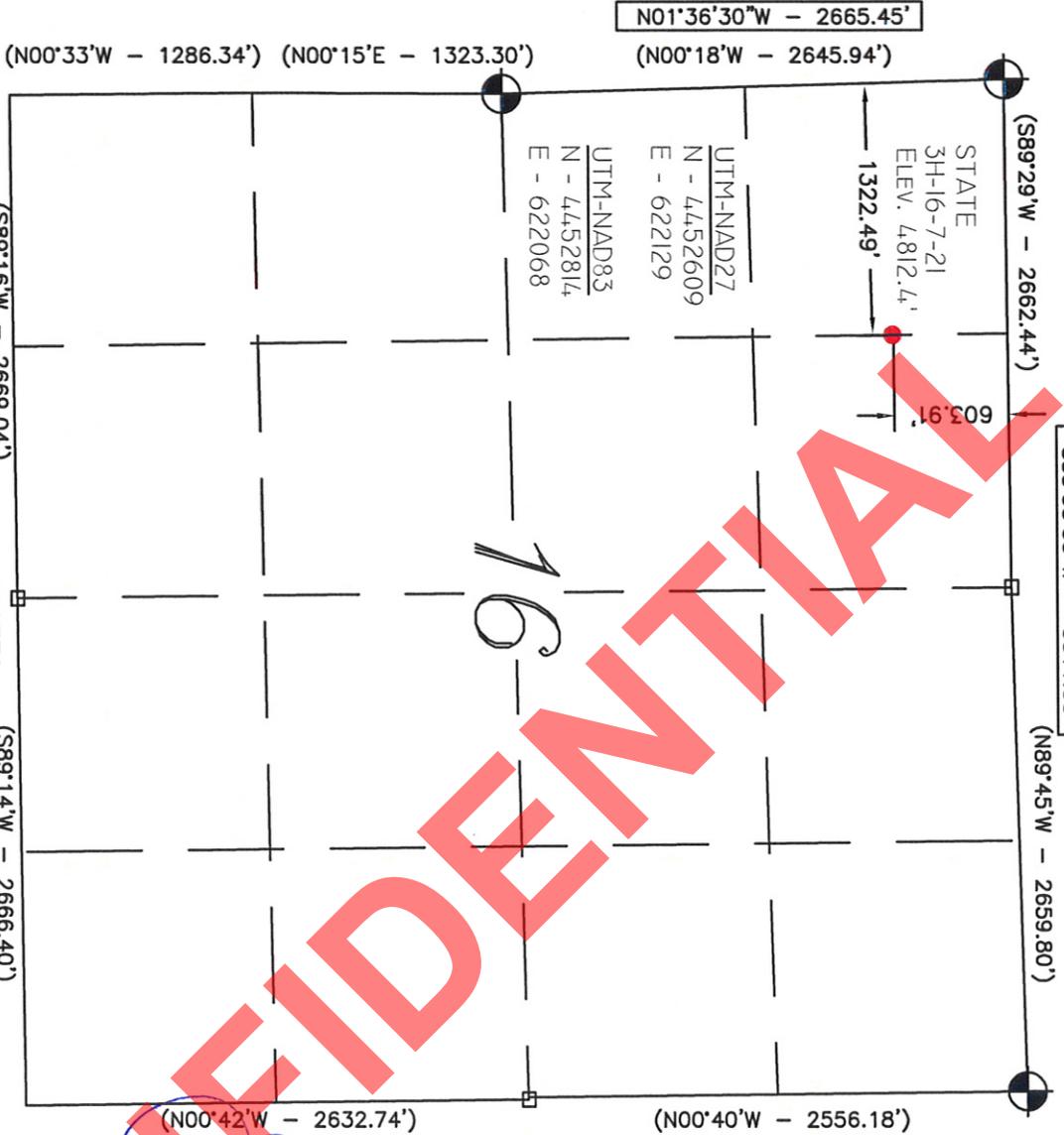
- Within 24 hours of spudding;
- 24 hours prior to cementing or testing casing;
- 24 hours prior to testing BOPE;
- Within 24 hours of any emergency changes to the approved drilling program;
- Prior to commencing operations to P&A the well.

**Reporting:**

- Entity Action Form (Form 6) within five days of spudding the well;
- Report for any water encountered during drilling (Form 7);
- Monthly status report for the drilling well (Form 9) by fifth day of month;
- Sundry Notices (Form 9) for change of plans or other operational actions.

# Township 7 South

## Range 21 East



- Legend**
- Drill Hole Location
  - Brass Cap (Found)
  - Bearing Change
  - ( ) GLO
  - GPS Measured

**NOTES:**

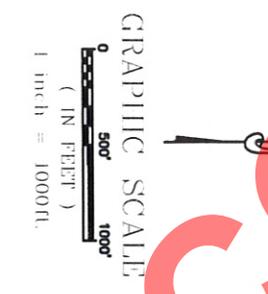
1. Dimensions are GPS measured unless noted otherwise.
2. UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 and 83 Datum.

NAD27

AT / LONG
4,0°13'00.8" N
109°33'53.1" W

NAD83

AT / LONG
4,0°13'00.7" N
109°33'55.6" W



**Location:**  
The well location was determined using a Trimble 5700 GPS survey grade unit.

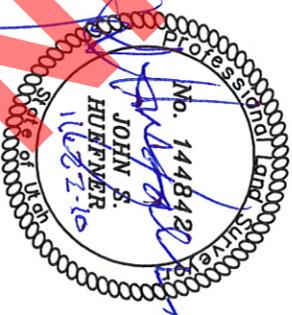
**Basis of Bearing:**  
The Basis of Bearing is GPS Measured between the NW Corner and West Quarter Corner of Section 16, T7S, R21E, S.L.B.&M.

**GLO Bearing:**  
The Bearings indicated are per the recorded plat obtained from the U.S. Land Office.

**Basis of Elevation:**  
Basis of Elevation of 4788.00' being at the Northwest Section corner of Section 16, Township 7 South, Range 21 East, Salt Lake Base and Meridian, as shown on the Brennan Basin Quadrangle 7.5 Minute series map.

**Description of Location:**  
Proposed Drill Hole located in the NW/4 NW/4 of Section 16, T7S, R21E, S.L.B.&M., being South 603.91' from North Line and East 1322.49' from West Line of Section 16, T7S, R21E, Salt Lake Base & Meridian.

**Surveyor's Certificate:**  
I, John S. Huelfner, a Professional Land Surveyor, holding Certificate No. 144842 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my personal direction and supervision as shown hereon.



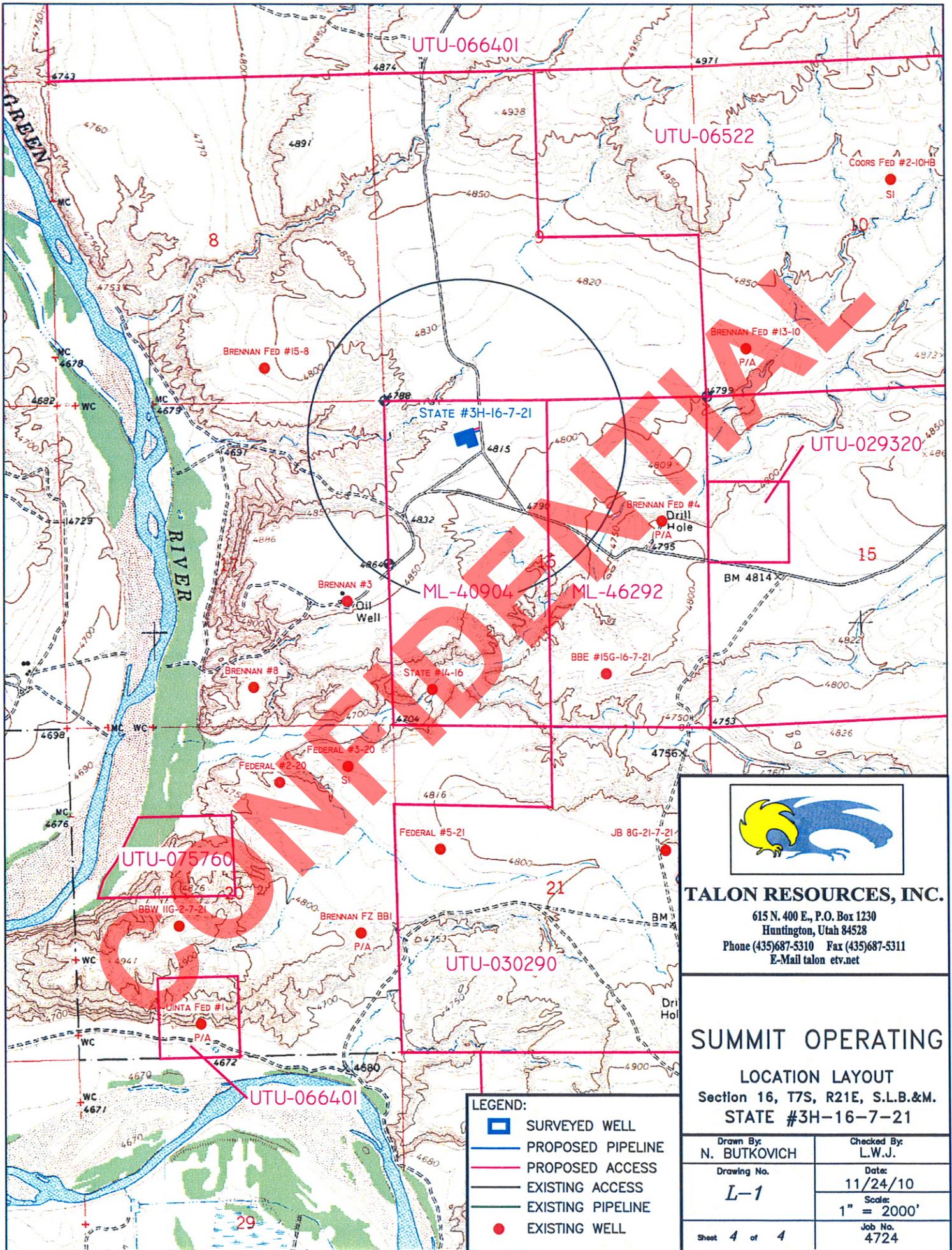


**TALON RESOURCES, INC.**  
615 North 400 East P.O. Box 1230  
Huntingdon, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talonresv.net

**SUMMIT OPERATING**

**LOCATION LAYOUT**  
Section 16, T7S, R21E, S.L.B.&M.  
STATE 3H-16-7-21

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>J.S.H.</b>	Date: <b>11/22/10</b>
		Scale: <b>1" = 1000'</b>
Drawing No. <b>A-1</b>	Sheet <b>1</b> of <b>4</b>	



**TALON RESOURCES, INC.**  
 615 N. 400 E., P.O. Box 1230  
 Huntington, Utah 84528  
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**SUMMIT OPERATING**

**LOCATION LAYOUT**  
 Section 16, T7S, R21E, S.L.B.&M.  
 STATE #3H-16-7-21

**LEGEND:**

	SURVEYED WELL
	PROPOSED PIPELINE
	PROPOSED ACCESS
	EXISTING ACCESS
	EXISTING PIPELINE
	EXISTING WELL

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>L.W.J.</b>
Drawing No. <b>L-1</b>	Date: <b>11/24/10</b>
	Scale: <b>1" = 2000'</b>
Sheet <b>4</b> of <b>4</b>	Job No. <b>4724</b>

# Summit Operating, LLC

Uintah County, UT (NAD83)

State 3H-16-7-21

State 3H-16-7-21

H4a Lateral OH

Plan: Plan #2

## Standard Planning Report

24 March, 2011

CONFIDENTIAL

**Scientific Drilling International**  
Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well State 3H-16-7-21
<b>Company:</b>	Summit Operating, LLC	<b>TVD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Project:</b>	Uintah County, UT (NAD83)	<b>MD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Site:</b>	State 3H-16-7-21	<b>North Reference:</b>	True
<b>Well:</b>	State 3H-16-7-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H4a Lateral OH		
<b>Design:</b>	Plan #2		

<b>Project</b>	Uintah County, UT (NAD83)		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 Utah - HARN		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	State 3H-16-7-21, Sec 16 T7S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,608,940.39 usft	<b>Latitude:</b>	40° 13' 0.700 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,040,898.56 usft	<b>Longitude:</b>	109° 33' 55.600 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.93 °

<b>Well</b>	State 3H-16-7-21, 604' FNL & 1322' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,608,940.39 usft	<b>Latitude:</b>	40° 13' 0.700 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,040,898.56 usft	<b>Longitude:</b>	109° 33' 55.600 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,812.00 ft

<b>Wellbore</b>	H4a Lateral OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2010/12/01	11.20	66.05	52,492

<b>Design</b>	Plan #2				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	180.00	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,321.00	0.00	0.00	6,321.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,054.01	85.03	180.00	6,813.07	-451.14	0.00	11.60	11.60	0.00	180.00	
7,121.02	91.00	180.00	6,815.39	-518.07	0.00	8.91	8.91	0.00	0.00	
9,100.00	91.00	180.00	6,780.85	-2,496.75	0.00	0.00	0.00	0.00	0.00	
9,478.25	91.00	180.00	6,774.25	-2,874.94	0.00	0.00	0.00	0.00	0.00	

Scientific Drilling International

Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well State 3H-16-7-21
<b>Company:</b>	Summit Operating, LLC	<b>TVD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Project:</b>	Uintah County, UT (NAD83)	<b>MD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Site:</b>	State 3H-16-7-21	<b>North Reference:</b>	True
<b>Well:</b>	State 3H-16-7-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H4a Lateral OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
502.00	0.00	0.00	502.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Uinta</b>									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,156.00	0.00	0.00	3,156.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River</b>									
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

**Scientific Drilling International**  
Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well State 3H-16-7-21
<b>Company:</b>	Summit Operating, LLC	<b>TVD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Project:</b>	Uintah County, UT (NAD83)	<b>MD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Site:</b>	State 3H-16-7-21	<b>North Reference:</b>	True
<b>Well:</b>	State 3H-16-7-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H4a Lateral OH		
<b>Design:</b>	Plan #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,866.00	0.00	0.00	5,866.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River Tgr3</b>										
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,316.00	0.00	0.00	6,316.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Douglas Creek</b>										
6,321.00	0.00	0.00	6,321.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	9.16	180.00	6,399.66	-6.30	0.00	6.30	11.60	11.60	0.00	0.00
6,500.00	20.76	180.00	6,496.11	-32.08	0.00	32.08	11.60	11.60	0.00	0.00
6,565.91	28.41	180.00	6,556.00	-59.49	0.00	59.49	11.60	11.60	0.00	0.00
<b>Green River G1 Lime</b>										
6,600.00	32.36	180.00	6,585.40	-76.73	0.00	76.73	11.60	11.60	0.00	0.00
6,700.00	43.96	180.00	6,663.89	-138.41	0.00	138.41	11.60	11.60	0.00	0.00
6,800.00	55.56	180.00	6,728.37	-214.62	0.00	214.62	11.60	11.60	0.00	0.00
6,900.00	67.16	180.00	6,776.21	-302.24	0.00	302.24	11.60	11.60	0.00	0.00
7,000.00	78.76	180.00	6,805.46	-397.69	0.00	397.69	11.60	11.60	0.00	0.00
7,053.21	84.94	180.00	6,813.00	-450.34	0.00	450.34	11.60	11.60	0.00	0.00
<b>Green River H4a Lime</b>										
7,054.01	85.03	180.00	6,813.07	-451.14	0.00	451.14	11.60	11.60	0.00	0.00
7,060.00	85.56	180.00	6,813.56	-457.10	0.00	457.10	8.91	8.91	0.00	0.00
<b>7"</b>										
7,100.00	89.13	180.00	6,815.41	-497.05	0.00	497.05	8.91	8.91	0.00	0.00
7,121.02	91.00	180.00	6,815.39	-518.07	0.00	518.07	8.91	8.91	0.00	0.00
7,200.00	91.00	180.00	6,814.01	-597.04	0.00	597.04	0.00	0.00	0.00	0.00
7,300.00	91.00	180.00	6,812.27	-697.02	0.00	697.02	0.00	0.00	0.00	0.00
7,400.00	91.00	180.00	6,810.52	-797.01	0.00	797.01	0.00	0.00	0.00	0.00
7,500.00	91.00	180.00	6,808.78	-896.99	0.00	896.99	0.00	0.00	0.00	0.00
7,600.00	91.00	180.00	6,807.03	-996.98	0.00	996.98	0.00	0.00	0.00	0.00
7,700.00	91.00	180.00	6,805.29	-1,096.96	0.00	1,096.96	0.00	0.00	0.00	0.00
7,800.00	91.00	180.00	6,803.54	-1,196.95	0.00	1,196.95	0.00	0.00	0.00	0.00
7,900.00	91.00	180.00	6,801.80	-1,296.93	0.00	1,296.93	0.00	0.00	0.00	0.00
8,000.00	91.00	180.00	6,800.05	-1,396.92	0.00	1,396.92	0.00	0.00	0.00	0.00
8,100.00	91.00	180.00	6,798.30	-1,496.90	0.00	1,496.90	0.00	0.00	0.00	0.00
8,200.00	91.00	180.00	6,796.56	-1,596.89	0.00	1,596.89	0.00	0.00	0.00	0.00
8,300.00	91.00	180.00	6,794.81	-1,696.87	0.00	1,696.87	0.00	0.00	0.00	0.00
8,400.00	91.00	180.00	6,793.07	-1,796.86	0.00	1,796.86	0.00	0.00	0.00	0.00
8,500.00	91.00	180.00	6,791.32	-1,896.84	0.00	1,896.84	0.00	0.00	0.00	0.00
8,600.00	91.00	180.00	6,789.58	-1,996.83	0.00	1,996.83	0.00	0.00	0.00	0.00
8,700.00	91.00	180.00	6,787.83	-2,096.81	0.00	2,096.81	0.00	0.00	0.00	0.00

**Scientific Drilling International**  
 Planning Report

<b>Database:</b>	Rockies-R5000.1	<b>Local Co-ordinate Reference:</b>	Well State 3H-16-7-21
<b>Company:</b>	Summit Operating, LLC	<b>TVD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Project:</b>	Uintah County, UT (NAD83)	<b>MD Reference:</b>	GL 4812' & RKB 17' @ 4829.00ft
<b>Site:</b>	State 3H-16-7-21	<b>North Reference:</b>	True
<b>Well:</b>	State 3H-16-7-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H4a Lateral OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	91.00	180.00	6,786.09	-2,196.80	0.00	2,196.80	0.00	0.00	0.00
8,900.00	91.00	180.00	6,784.34	-2,296.78	0.00	2,296.78	0.00	0.00	0.00
9,000.00	91.00	180.00	6,782.60	-2,396.77	0.00	2,396.77	0.00	0.00	0.00
9,100.00	91.00	180.00	6,780.85	-2,496.75	0.00	2,496.75	0.00	0.00	0.00
9,200.00	91.00	180.00	6,779.11	-2,596.73	0.00	2,596.73	0.00	0.00	0.00
9,300.00	91.00	180.00	6,777.36	-2,696.72	0.00	2,696.72	0.00	0.00	0.00
9,400.00	91.00	180.00	6,775.62	-2,796.70	0.00	2,796.70	0.00	0.00	0.00
9,478.25	91.00	180.00	6,774.25	-2,874.94	0.00	2,874.94	0.00	0.00	0.00

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
500.00	500.00	9 5/8"	9.625	12.250	
7,060.00	6,813.56	7"	7.000	8.750	
9,478.25	6,774.25	4 1/2"	4.500	6.250	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
502.00	502.00	Uinta		0.00		
3,156.00	3,156.00	Green River		0.00		
5,866.00	5,866.00	Green River Tgr3		0.00		
6,316.00	6,316.00	Douglas Creek		0.00		
6,565.91	6,556.00	Green River G1 Lime		0.00		
7,053.21	6,813.00	Green River H4a Lime		0.00		

# SUMMIT OPERATING, LLC

1245 Brickyard Road, Suite 210 • Salt Lake City, Utah 84106  
Phone: 435.940.9001 • Fax: 435.940.9001

## APD SURFACE USE PLAN

**State 3H-16-7-21  
NWNW, Section 16, T7S, R21E  
Uintah County, Utah**

**Lease: UT ST ML-40904**

### Operator Contact Information:

Ellis Peterson  
Summit Operating, LLC  
1245 Brickyard Road, Suite 210  
Salt Lake City, Utah 84106

### Driving Directions to Well Site:

From intersection of Highway 40 and 45 in Naples, Utah

Go south and southeast for 13 miles on Highway 45 (6 miles past Green River). Turn right on County Road 3240 and go 6 miles (stay left at 2.9, 1.4, and 1.7 miles). Turn right and go 5 miles and then turn right and go 0.3 miles to well site on left (west) side of road.

### Access:

Existing roads will be used for access to this well along with construction of 150 feet of new proposed access road. The proposed placement of the access road will be a straight section connecting the Northeast corner of the drilling pad to the adjacent existing road as shown on drawings L-1 and A-2.

Uintah County Road Department will be contacted as needed concerning the use of or construction affecting the County roads. Surface disturbance and access will be limited to the approved location and access road. The access road will be constructed as necessary to allow safe access during drilling and completion operations.

If the well is oil productive, the access road will be upgraded, surfaced, and maintained as needed to allow all season access. Maximum disturbed road width will be 40 feet and the maximum travel surface width will be 18 feet. The road is expected to have virtually no grade, it will be crowned at 2%, and have water ditches on one or both sides. No turnouts will be required. The road as planned will not cross any drainage requiring culvert or diversion and it will not require significant cuts or fills.

### Surface and Mineral Ownership:

The surface and minerals at the drill site are owned by the State of Utah and administered by the School and Institutional Trust Lands Administration (SITLA). The office number for SITLA is 801-538-5100.

**Staking and Onsite Inspection:**

All surveying and staking was completed in November, 2010 and all maps and drawings reflecting the survey are being submitted with the APD package. A pre-drilling onsite inspection of the location will be conducted with representatives of UDOGM, Summit Operating, and SITLA following submission of the APD package to UDOGM.

**Wellsite Layout:**

See attached drawings for depictions of the well pad, reserve pit, access onto pad, cross-section, cut and fill, and soil piles.

**Water Supply:**

All water needed for drilling purposes will be municipal water from Vernal, Utah obtained from Dalbo/A-1 Tank located at 355 South, 1000 East, Vernal, Utah, 84078.

**Construction Materials:**

All construction material for the location and access road will be borrow material accumulated during construction at the site. Any additional required road gravel or pit lining material will be obtained from private resources.

Top soil from the construction site will be stock piled for use during eventual reclamation on the uphill side of the drilling pad as shown on the attached A-2 plat. Excess spoils from the reserve pit and drilling pad construction will be stored either on the west side of the drilling pad as shown on the A-2 plat or alternatively placed just east of the reserve pit.

**Waste Handling:**

A reserve pit will be constructed in cut as illustrated on the attached A-2 plat and C-1 cross-section. This reserve pit will be lined with a minimum 12-mil liner and used to store water for drilling. It will also be used to hold non-flammable materials such as drill cuttings, salt, drilling fluids, stimulation and completion fluids, and chemicals. A fence surrounding three sides of the pit will be in place during drilling and completion operations, after which a fourth side will be added to enclose the pit. Produced water will be confined to the reserve pit or a temporary storage tank for a period of not more than 90 days after initial production. All produced water will be hauled to a commercial disposal site.

All trash will be contained in a trash cage and hauled away to an approved disposal site as necessary.

**Ancillary Facilities:**

The only ancillary facilities will be temporary trailers, garbage containers, and portable toilets which will be located on the pad site through drilling and completion operations.

**Production Facility:**

Final plans are not yet developed regarding production facilities. If the well is a producer, production facilities including two or three 400-Bbl tanks, a heater treater, and a housed gas meter will be installed. The flow line will be buried from the wellhead to the heater treater after which the oil, water and gas lines will be bundled and insulated on surface with a heat trace system.

**Reclamation:**

Interim reclamation will begin within a year after production is established and will be accomplished on all disturbed areas of the road and well pad not required for travel, service equipment access, or production. Interim reclamation consists of ripping areas where the soil has become compacted by the operation of equipment and vehicles, spreading the reserved topsoil, and seeding the prepared areas.

The reserve pit will be closed after materials in the pit have sufficiently dried. To permanently close the pit, the sides of the pit liner will be cut and folded over the pit contents and then buried with the native material originally dug to create the pit. The pit will be closed within 12 months following drilling and completion of the well. If necessary to allow timely closure of the pit, pit fluids will be pumped off and properly disposed and the remaining pit contents may be treated with solidifier.

If the well should prove unproductive or upon final abandonment, all disturbed areas will be subject to final reclamation. Final reclamation will include the following:

- Removal of gravel or stone that may have been hauled in to surface the road or pad
- Reserving any topsoil that was spread during interim reclamation
- Recontouring all disturbed areas to the original contour or a contour that blends with the surrounding topography
- Spreading reserved topsoil over all disturbed areas
- Seeding all disturbed areas with a seed mix acceptable to the surface owner

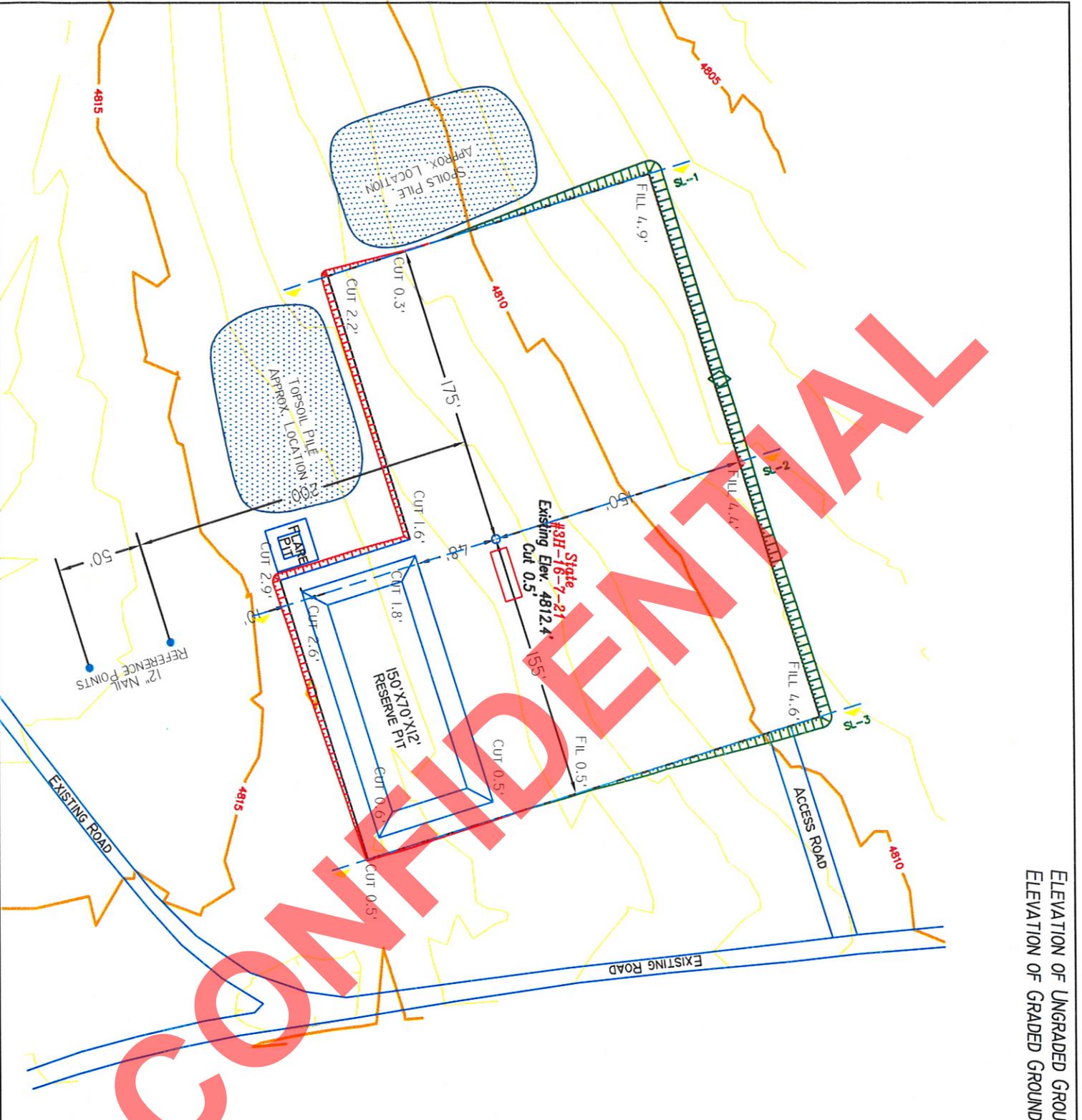
**Cultural Resources:**

A cultural resource inventory was conducted by Montgomery Archaeological Consultants Inc. (MOAC) during November 2010 at the proposed well site. The inventory found no cultural resources. A copy of the Cultural Resource Inventory for the State 3H-16-7-21 location was submitted to SITLA by MOAC. In the unlikely event that cultural resources are encountered during construction activities, work will be suspended pending evaluation of the discovery and permission to proceed by proper authority.

**Paleontological Resources:**

A paleontological survey was conducted by Uinta Paleontological Associates Inc. (Uinta Paleo) during November 2010 at the proposed well site. No evidence of fossils was found at the location and the Quaternary Eolian deposits on surface are unlikely to yield fossils. A copy of the paleontological survey report for the State 3H-16-7-21 location was submitted to SITLA by Uinta Paleo. If fossils are discovered, Uinta Paleo and SITLA will be notified immediately to evaluate the discovery.

End



ELEVATION OF UNGRADED GROUND AT LOCATION STAKE = 4812.4'  
 ELEVATION OF GRADED GROUND AT LOCATION STAKE = 4811.9'

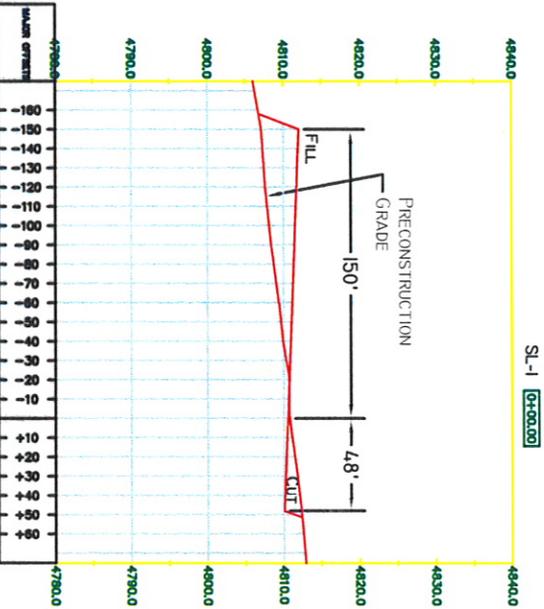
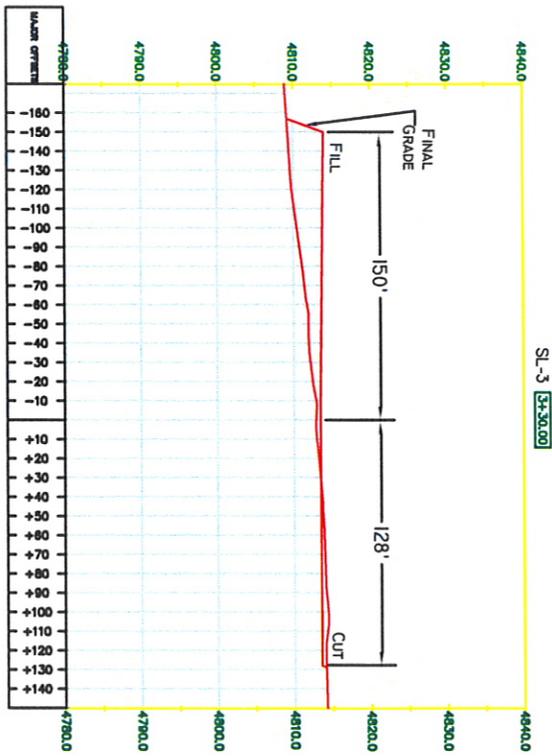
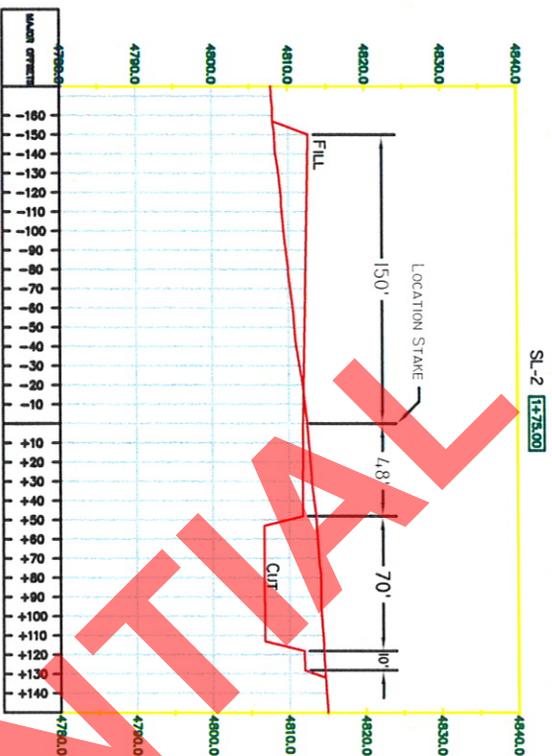


**TALON RESOURCES, INC.**  
 615 North 400 East P.O. Box 1230  
 Huntington, Utah 84528  
 Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon@traxnet

**SUMMIT OPERATING**

**LOCATION LAYOUT**  
 Section 16, T7S, R21E, S11B&M.  
 STATE #3H-16-7-21

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>L.W.J.</b>
Drawing No. <b>A-2</b>	Date: <b>11/19/10</b>
	Scale: <b>1" = 80'</b>
Sheet <b>2</b> of <b>4</b>	Job No. <b>4724</b>



CUT/FILL  
SLOPE = 1 1/2 : 1  
PIT SLOPE = 1 : 1

X-Section  
Scale  
1" = 10'  
1" = 40'

APPROXIMATE YARDAGES

- (6") TOPSOIL STRIPPING = 1,555 CU. YDS.
- TOTAL CUT (INCLUDING PIT) = 5,735 CU. YDS.
- TOTAL FILL = 4,295 CU. YDS.

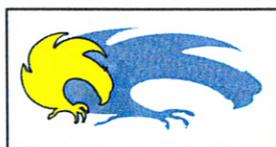
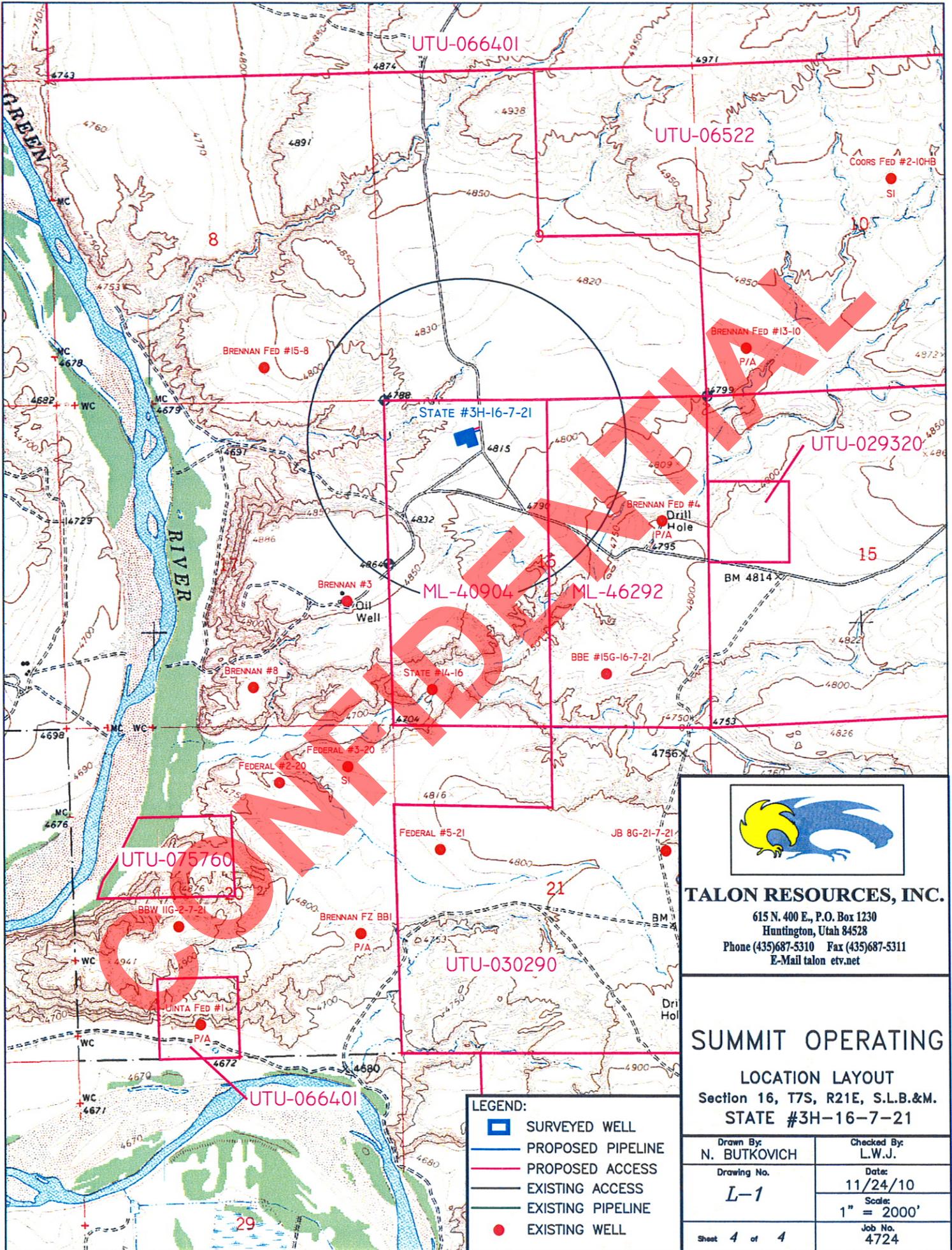


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E-Mail talon@tr.net

**SUMMIT OPERATING**

TYPICAL CROSS SECTION  
Section 16, T75, R21E, S.L.B.&M.  
STATE #3H-16-7-21

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>L.W.J.</b>
Drawing No. <b>C-1</b>	Date: <b>11/19/10</b>
Scale: <b>1" = 100'</b>	Job No. <b>47724</b>
Sheet <b>3</b> of <b>4</b>	



**TALON RESOURCES, INC.**  
 615 N. 400 E., P.O. Box 1230  
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 E-Mail talon etv.net

**SUMMIT OPERATING**

**LOCATION LAYOUT**  
 Section 16, T7S, R21E, S.L.B.&M.  
 STATE #3H-16-7-21

**LEGEND:**

- SURVEYED WELL
- PROPOSED PIPELINE
- PROPOSED ACCESS
- EXISTING ACCESS
- EXISTING PIPELINE
- EXISTING WELL

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>L.W.J.</b>
Drawing No. <b>L-1</b>	Date: <b>11/24/10</b>
	Scale: <b>1" = 2000'</b>
Sheet <b>4</b> of <b>4</b>	Job No. <b>4724</b>



SUMMIT OPERATING

State #3H-16-7-21

DRAFT

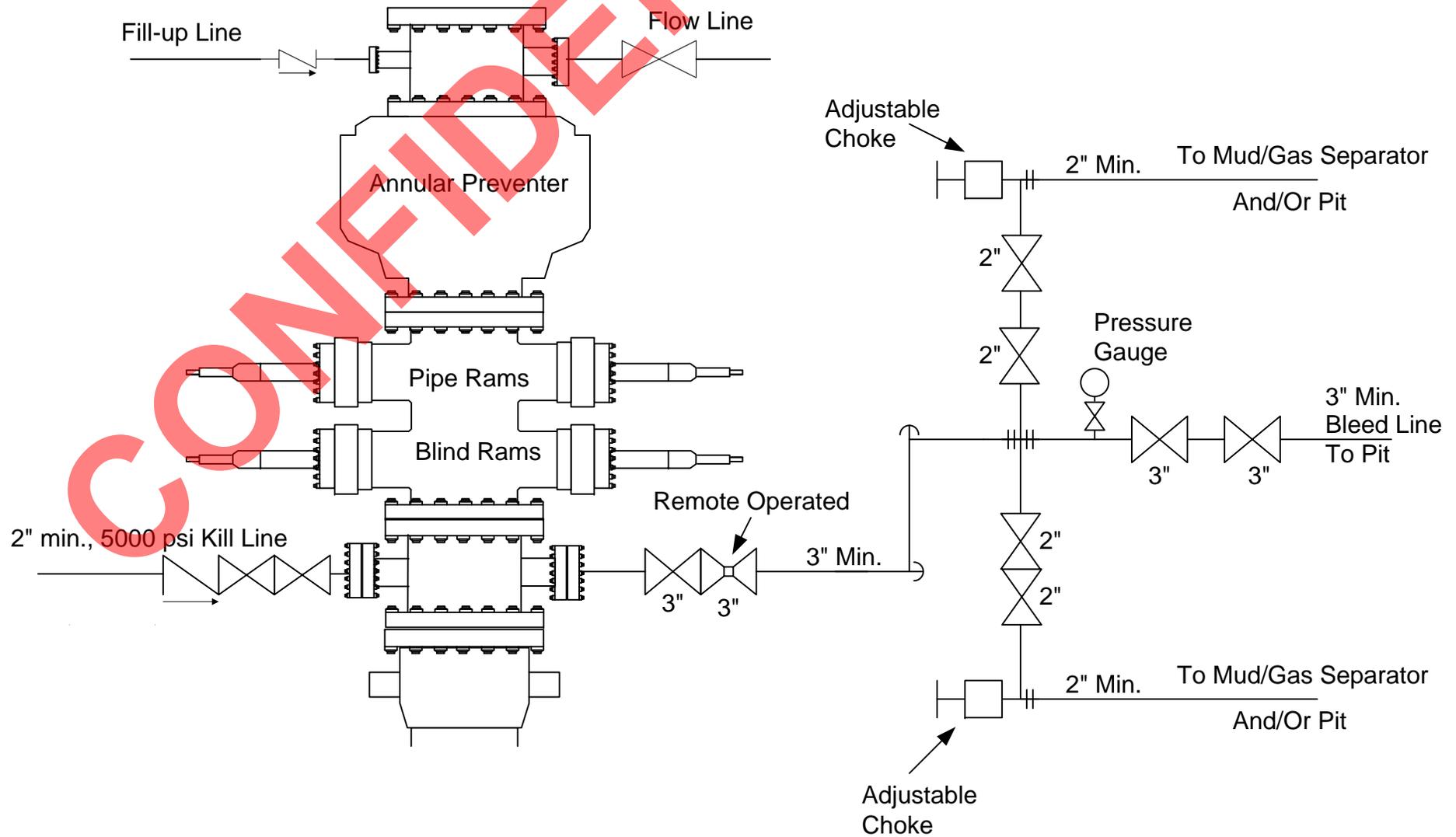
TALON RESOURCES, INC.  
195 North 100 West  
P.O. Box 1230  
Huntington, Utah 84528  
(435) 687-5310

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles  
0 1 2 3 4 5 km  
Map created with TOPOI © 2003 National Geographic (www.nationalgeographic.com/topo)

TN 12"

# 3k BOPE Schematic

(Not to Scale)



## SUMMIT OPERATING, LLC

1245 Brickyard Road, Suite 210 • Salt Lake City, Utah 84106  
Phone: 435.940.9001 • Fax: 435.940.9002

### Exception Location and Directional Drilling

#### State 3H-16-7-21

Plans to drill the subject well as a horizontal producer from the proposed surface location and with the well bore deviation as prescribed were addressed and approved by the Board of Oil, Gas and Mining under Docket No. 2011-003, Cause No. 270-01. The necessary plats were provided and notifications were made for the hearing on this matter that would otherwise be required for administrative approval of the exception location and directional well.

CONFIDENTIAL

**From:** "Ellis Peterson" <ellis@summitcorp.net>  
**To:** <dianawhitney@utah.gov>  
**Date:** 4/5/2011 7:55 AM  
**Subject:** RE: Application For Permit to Drill Sent Back for Revisions  
**Attachments:** State 3H-16-7-21 BHL Drawing.pdf

The attached drawing showing the planned surface and BHL was presented to and accepted by the Board. There was not a drawing showing BHL included with the directional plan or the surveyor plats.

Please let me know if you see anything else of question.

Thanks,

Ellis

Ellis Peterson, PE  
Senior Petroleum Engineer

Summit Operating, LLC  
1245 Brickyard Road, Suite 210  
Salt Lake City, UT 84106

ellis@summitcorp.net  
Office Direct: (801) 869-1711  
Cell Phone: (435) 890-2627

-----Original Message-----

From: dianawhitney@utah.gov [mailto:dianawhitney@utah.gov]  
Sent: Tuesday, April 05, 2011 7:25 AM  
To: ellis@summitcorp.net  
Cc: david@summitcorp.net  
Subject: Application For Permit to Drill Sent Back for Revisions

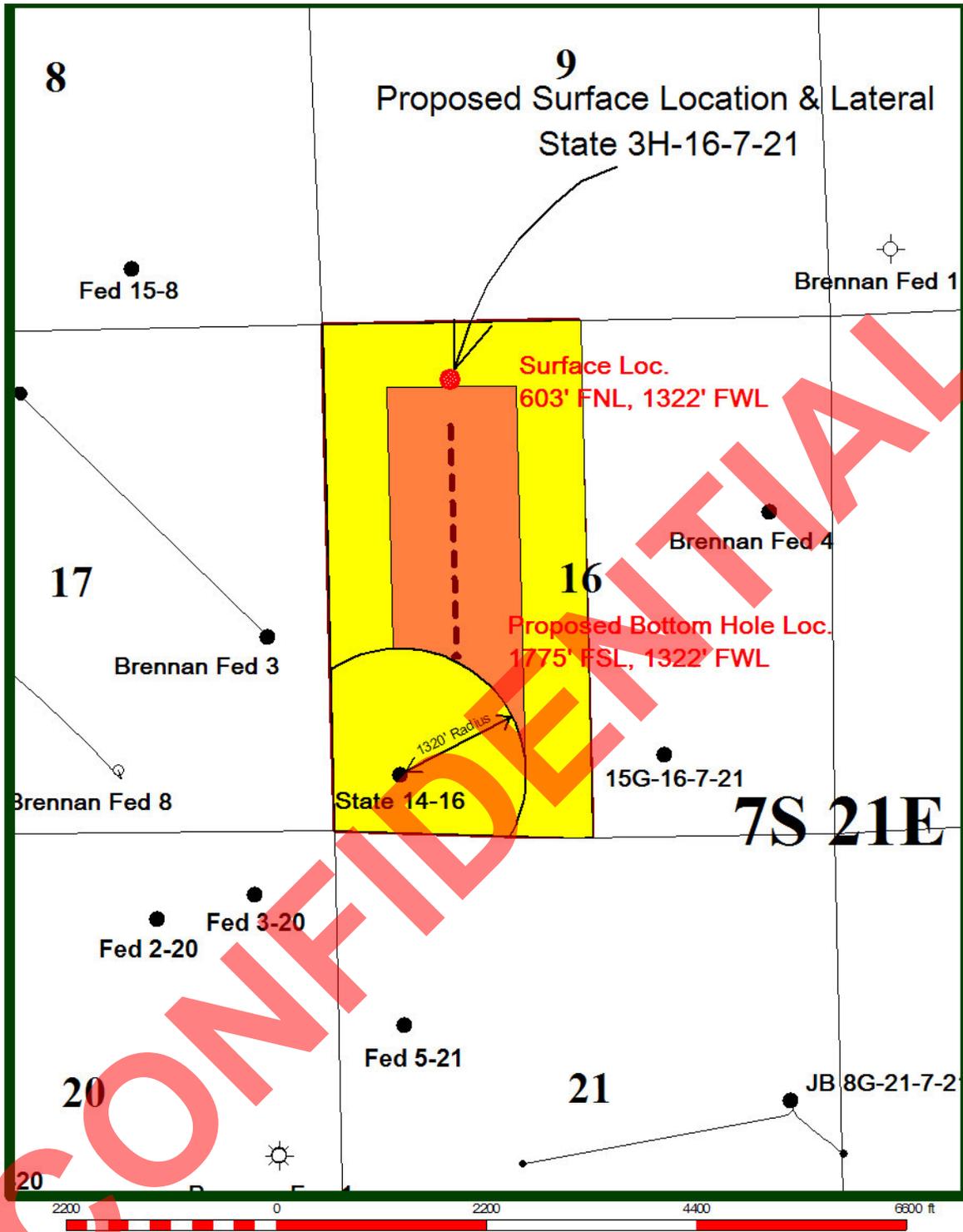
APD Number: 3613

Well Name: State 3H-16-7-21

Operator: SUMMIT OPERATING, LLC

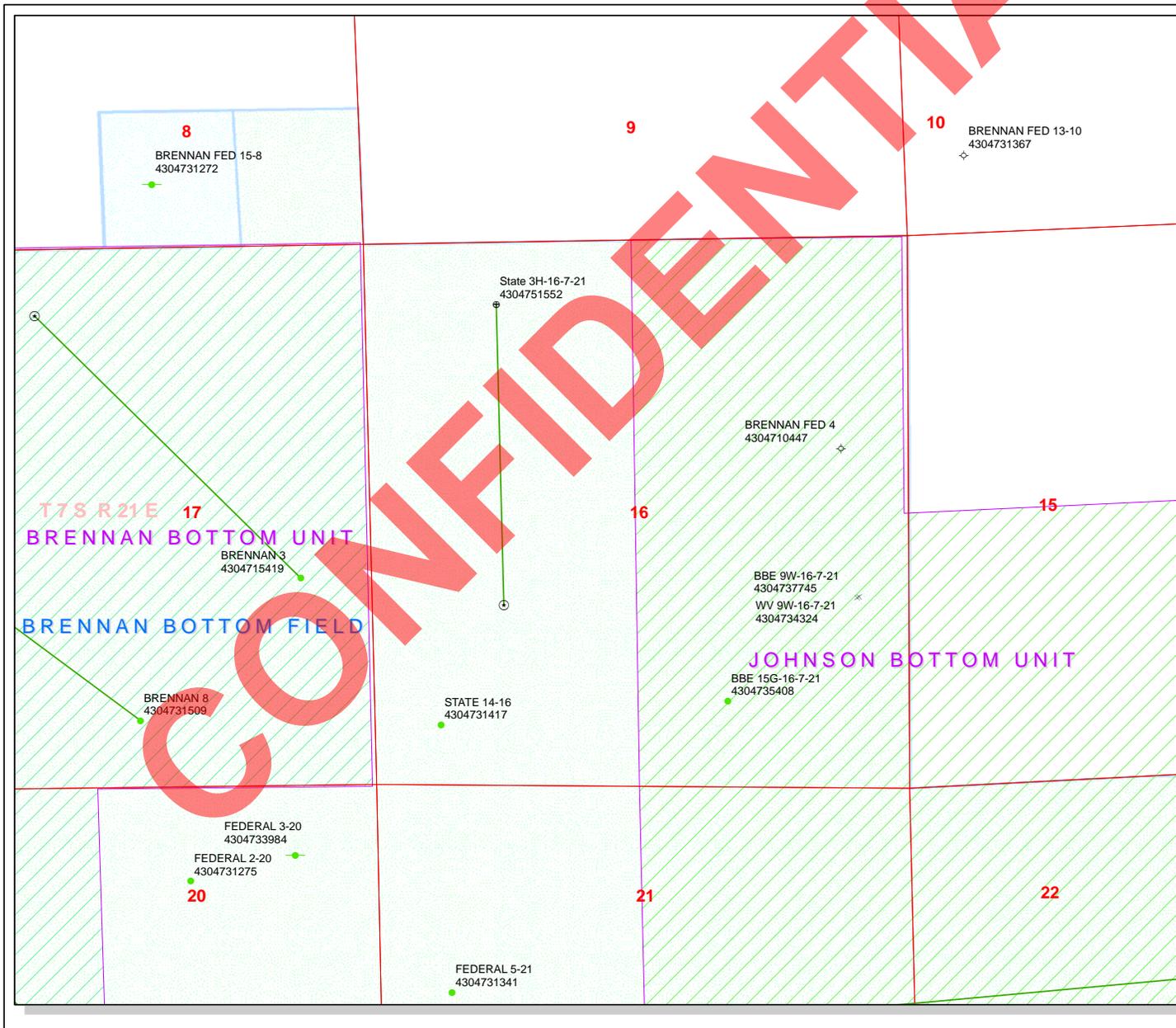
Im looking at the plat map and Im not sure if Im just not seeing where the BHL is at. Could one of you let me know if Im just missing it on there?

Thank you!



<b>Summit Operating LLC</b>		
<b>Brennan Bottom Uintah Co. Utah Projected Horizontal Well Path</b>		
Author: Carl F. Kendell		Date: 20 January, 2011
	Scale: 1" = 1667'	

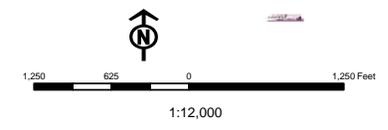
**Docket # 2011-003  
Cause: 270-01**



**API Number: 4304751552**  
**Well Name: State 3H-16-7-21**  
**Township T0.7 . Range R2.1 . Section 16**  
**Meridian: SLBM**  
 Operator: SUMMIT OPERATING, LLC

Map Prepared:  
 Map Produced by Diana Mason

- |               |                                    |
|---------------|------------------------------------|
| <b>Units</b>  | <b>Wells Query</b>                 |
| <b>STATUS</b> | <b>Status</b>                      |
| ACTIVE        | APD - Approved Permit              |
| EXPLORATORY   | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE   | GIW - Gas Injection                |
| NF PP OIL     | GS - Gas Storage                   |
| NF SECONDARY  | LA - Location Abandoned            |
| PI OIL        | LOC - New Location                 |
| PP GAS        | OPS - Operation Suspended          |
| PP GEOTHERML  | PA - Plugged Abandoned             |
| PP OIL        | PGW - Producing Gas Well           |
| SECONDARY     | POW - Producing Oil Well           |
| TERMINATED    | RET - Returned APD                 |
| <b>Fields</b> | SGW - Shut-in Gas Well             |
| Unknown       | SOW - Shut-in Oil Well             |
| ABANDONED     | TA - Temp. Abandoned               |
| ACTIVE        | TW - Test Well                     |
| COMBINED      | WDW - Water Disposal               |
| INACTIVE      | WIW - Water Injection Well         |
| STORAGE       | WSW - Water Supply Well            |
| TERMINATED    |                                    |
| Sections      |                                    |
| Township      |                                    |



**From:** Jim Davis  
**To:** Bonner, Ed; Garrison, LaVonne; Mason, Diana  
**CC:** ellis@summitcorp.net  
**Date:** 5/16/2011 8:59 AM  
**Subject:** Summit APD approval

The following APD has been approved including arch and paleo clearance. Paleo clearance is granted under the condition that the operator and contractors observe the recommendation given in the paleo survey report which states:

"RECOMMENDATIONS: It is unlikely that further paleontological work will be necessary at this site. However, if Tertiary bedrock (red mudstone and red to tan sandstone) is impacted during construction, workers should be aware of the potential to exhume vertebrate fossils. If fossils are discovered, the project paleontologist, land agent, and company representative should be notified immediately to evaluate the discovery."

State 3H-16-7-21 (4304751552)

-Jim Davis

CONFIDENTIAL

Well Name	SUMMIT OPERATING, LLC State 3H-16-7-21 4304751552000			
String	Cond	Surf	Prod	L1
Casing Size(")	14.000	9.625	7.000	4.500
Setting Depth (TVD)	60	500	6822	6784
Previous Shoe Setting Depth (TVD)	0	60	500	6822
Max Mud Weight (ppg)	8.4	9.0	9.2	8.6
BOPE Proposed (psi)	0	0	3000	3000
Casing Internal Yield (psi)	1000	3520	9950	5350
Operators Max Anticipated Pressure (psi)	2642			7.5

Calculations	Cond String	14.000	"
Max BHP (psi)	.052*Setting Depth*MW=	26	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	19	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	13	NO OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	13	NO
Required Casing/BOPE Test Pressure=		0	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	234	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	174	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	124	NO OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	137	NO OK
Required Casing/BOPE Test Pressure=		500	psi
*Max Pressure Allowed @ Previous Casing Shoe=		60	psi *Assumes 1psi/ft frac gradient

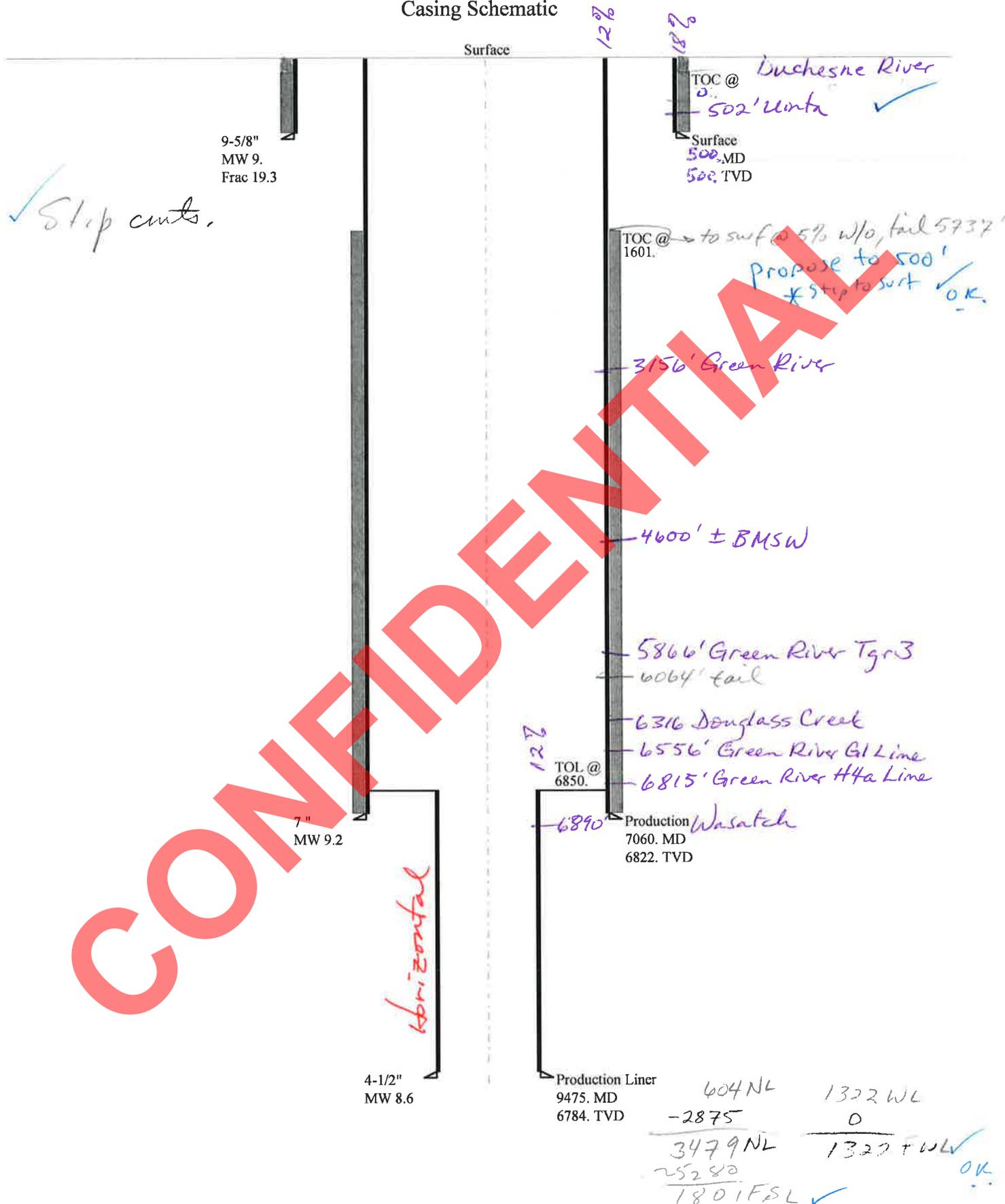
Calculations	Prod String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	3264	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2445	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1763	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1873	NO Reasonable
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		500	psi *Assumes 1psi/ft frac gradient

Calculations	L1 String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	3034	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2220	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1542	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3042	YES OK
Required Casing/BOPE Test Pressure=		3000	psi

**CONFIDENTIAL**

43047515520000 State 3H-16-7-21

Casing Schematic



Well name:	<b>43047515520000 State 3H-16-7-21</b>		
Operator:	<b>SUMMIT OPERATING, LLC</b>		
String type:	Surface	Project ID:	43-047-51552
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 9.000 ppg  
Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 440 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP: 500 psi  
  
No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
Neutral point: 433 ft

**Environment:**

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

Cement top: Surface

**Non-directional string.**

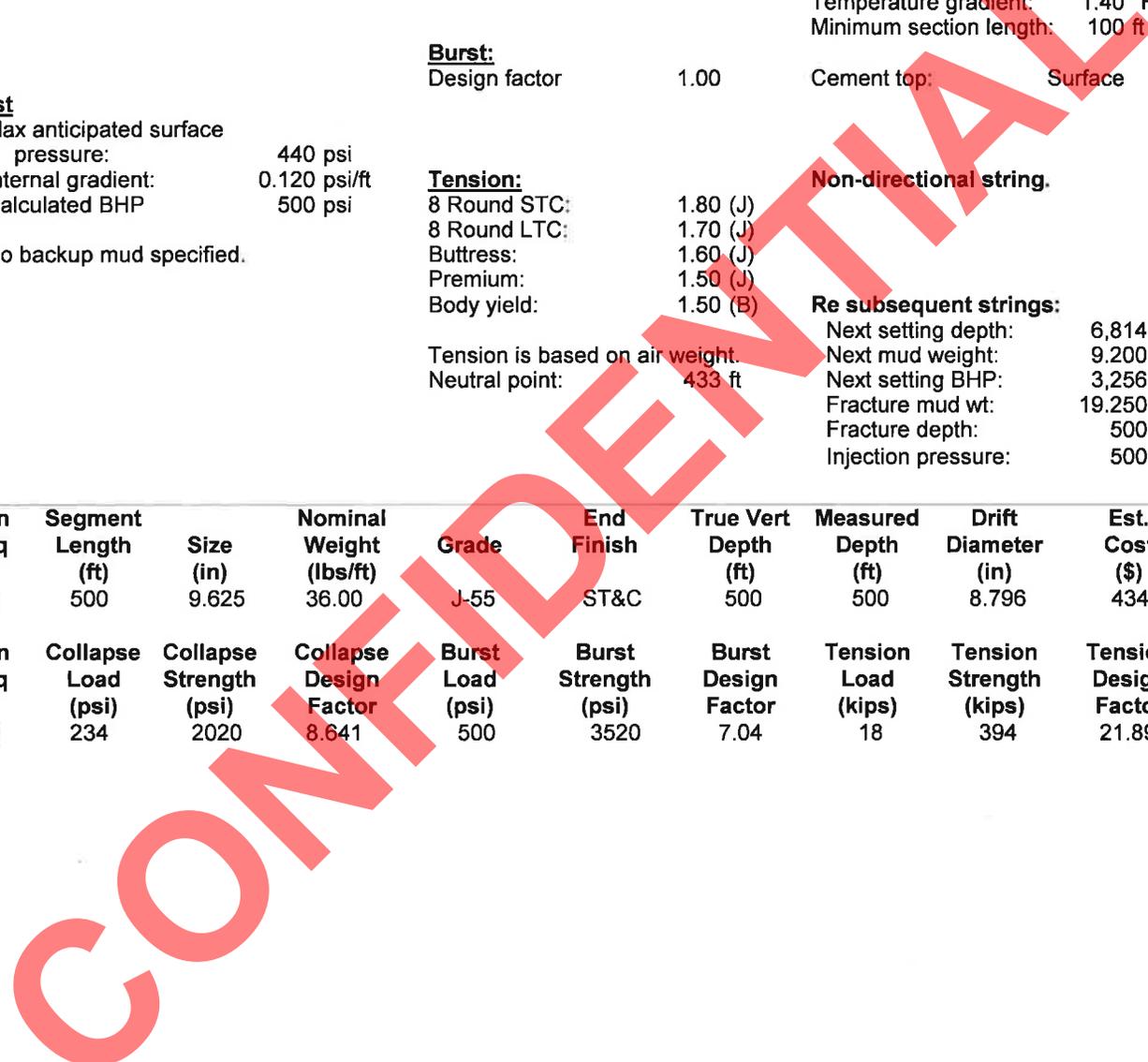
**Re subsequent strings:**

Next setting depth: 6,814 ft  
Next mud weight: 9.200 ppg  
Next setting BHP: 3,256 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 500 ft  
Injection pressure: 500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	500	9.625	36.00	J-55	ST&C	500	500	8.796	4346

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	234	2020	8.641	500	3520	7.04	18	394	21.89 J



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

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

Date: August 1, 2011  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 500 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>43047515520000 State 3H-16-7-21</b>		
Operator:	<b>SUMMIT OPERATING, LLC</b>		
String type:	Production	Project ID:	43-047-51552
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 9.200 ppg  
 Internal fluid density: 1.000 ppg

**Burst**

Max anticipated surface pressure: 1,757 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP: 3,256 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 5,949 ft

Estimated cost: 58,856 (\$)

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 169 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 1,601 ft

**Directional well information:**

Kick-off point: 6321 ft  
 Departure at shoe: 457 ft  
 Maximum dogleg: 11.6 °/100ft  
 Inclination at shoe: 85.56 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	6000	7	23.00	N-80	LT&C	6000	6000	6.25	47837
1	1060	7	26.00	P-110	LT&C	6814	7060	6.151	11019

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2556	3788	1.482	3077	6340	2.06	159.2	442	2.78 J
1	2902	5985	2.062	3256	9950	3.06	21.2	693	32.76 J

COMPLETED

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

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

Date: August 1, 2011  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 6814 ft, a mud weight of 9.2 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>43047515520000 State 3H-16-7-21</b>	
Operator:	<b>SUMMIT OPERATING, LLC</b>	
String type:	Production Liner	Project ID: 43-047-51552
Location:	UINTAH COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 8.600 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 169 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

**Burst**

Max anticipated surface pressure: 1,536 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 3,026 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
Neutral point: 6,880 ft

**Liner top:**

**Directional Info - Build & Hold**

Kick-off point: 6,850 ft  
Departure at shoe: 6321 ft  
Maximum dogleg: 2872 ft  
Inclination at shoe: 11.6 °/100ft  
91.03 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2675	4.5	11.60	J-55	LT&C	6772	9475	3.875	7080
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	3026	4960	1.639	3035	5350	1.76	.5	162	99.99 J

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

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

Date: June 28, 2011  
Salt Lake City, Utah

**Remarks:**

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 6772 ft, a mud weight of 8.6 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** SUMMIT OPERATING, LLC  
**Well Name** State 3H-16-7-21  
**API Number** 43047515520000      **APD No** 3613      **Field/Unit** BRENNAN BOTTOM  
**Location: 1/4,1/4** NWNW      **Sec 16 Tw 7.0S Rng 21.0E 604 FNL 1322 FWL**  
**GPS Coord (UTM)** 622135 4452610      **Surface Owner**

### Participants

Floyd Bartlett (DOGM), Ed Bonner (SITLA), Ben Williams (Utah Division of Wildlife Resources), Red Roush and Steven Fliflet Summit Operating (LLC).

### Regional/Local Setting & Topography

The general area is approximately 17 air miles and 24 road miles south of Vernal, Uintah County, Utah. Access is by State highways and Uintah County roads to within approximately 100 feet of the location where a new road will be constructed. The general area is referred to as Brennan Bottoms. The site is on the slopes which extend west to the actual bottom lands of the Green River which is a distance of 1 mile. The area is characterized by gentle sloping benches or flats occasionally intersected by draws or gullies which run toward the river. All drainages in the immediate area are ephemeral. No seeps, springs or streams exist. An occasional pond has been constructed to catch surface runoff for watering cattle and wildlife.

The pad for the proposed State 3H-16-7-21 oil well, which will be drilled horizontally, is on a flat which extends to the east and north. To the west approximately 1/4 mile the topography breaks off moderately steep into the Green River bottom. Also to the northwest a draw begins which drains to the bottom. The pad is oriented in an east to westerly direction. Maximum cut is 2.9 feet at the southwest reserve pit corner and 4.9 feet of fill on the northwest pad corner. To ease in construction and rehabbing of the location the reserve pit spoils should be placed directly behind or south of the pit. No drainages intersect the site. The selected site appears to be a suitable location for drilling and operating the proposed well.

Both the surface and minerals are owned by SITLA.

### Surface Use Plan

#### **Current Surface Use**

Grazing  
Wildlife Habitat  
Residential

#### **New Road Miles**

0.01

#### **Well Pad**

Width 278      Length 330

#### **Src Const Material**

Onsite

#### **Surface Formation**

UNTA

**Ancillary Facilities** N

### Waste Management Plan Adequate?

### Environmental Parameters

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a desert shrub type. Principal species include curly mesquite grass, prickly pear, horsebrush, Russian thistle, rabbit brush, broom snakeweed, cheat grass and annuals.

Deer, antelope, rabbits, prairie dogs, coyote and other small mammals and birds.

**Soil Type and Characteristics**

Deep sandy loam

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

**Reserve Pit**

**Site-Specific Factors**

**Site Ranking**

<b>Distance to Groundwater (feet)</b>	75 to 100	10
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>	>1320	0
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>		25

1 Sensitivity Level

**Characteristics / Requirements**

The reserve pit is in an area of cut in the southeast corner of the location. Its dimensions are 70' x 150' x 12' deep. It will be lined with a minimum of 12-mil liner. Unless rocks are encountered, a sub-liner may not be needed.

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 12 **Pit Underlayment Required?**

**Other Observations / Comments**

Floyd Bartlett  
**Evaluator**

4/28/2011  
**Date / Time**

# Application for Permit to Drill

## Statement of Basis

8/3/2011

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
3613	43047515520000	LOCKED	OW	S	No
<b>Operator</b>	SUMMIT OPERATING, LLC		<b>Surface Owner-APD</b>		
<b>Well Name</b>	State 3H-16-7-21	<b>Unit</b>			
<b>Field</b>	BRENNAN BOTTOM	<b>Type of Work</b>		DRILL	
<b>Location</b>	NWNW 16 7S 21E S 604 FNL 1322 FWL	GPS Coord (UTM)	622131E	4452610N	

### Geologic Statement of Basis

Summit proposes to set 500 feet of surface casing cemented to the surface. The base of the moderately saline water is estimated at 4,600 feet. A search of Division of Water Rights records shows 2 water wells within a 10,000 foot radius of the center of Section 16. Both wells are located over a mile from the proposed location. Depths are listed as 120 and 27 feet. Water use is listed as oil field use for one well and no use is listed for the other well. The surface formation at this location is the transition between the Duchesne River and the Uintah Formations. These formations are made up of interbedded shales and sandstones which can contain limited water resources. Production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters up hole.

Brad Hill  
APD Evaluator

5/3/2011  
Date / Time

### Surface Statement of Basis

The general area is approximately 17 air miles and 24 road miles south of Vernal, Uintah County, Utah. Access is by State highways and Uintah County roads to within approximately 100 feet of the location where a new road will be constructed. The general area is referred to as Brennan Bottoms. The site is on the slopes which extend west to the actual bottom lands of the Green River which is a distance of 1 mile. The area is characterized by gentle sloping benches or flats occasionally intersected by draws or gullies which run toward the river. All drainages in the immediate area are ephemeral. No seeps, springs or streams exist. An occasional pond has been constructed to catch surface runoff for watering cattle and wildlife.

The pad for the proposed State 3H-16-7-21 oil well, which will be drilled horizontally, is on a flat which extends to the east and north. To the west approximately 1/4 mile the topography breaks off moderately steep into the Green River bottom. Also to the northwest a draw begins which drains to the bottom. The pad is oriented in an east to westerly direction. Maximum cut is 2.9 feet at the southwest reserve pit corner and 4.9 feet of fill on the northwest pad corner. To ease in construction and rehabbing of the location the reserve pit spoils should be placed directly behind or south of the pit. No drainages intersect the site. The selected site appears to be a suitable location for drilling and operating the proposed well.

Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site. He had no concerns regarding the proposal. He instructed Summit to contact SITLA for a seed mix to be used in re-vegetating the site. Ben Williams, representing the UDWR, stated the area is classified as crucial value yearlong habitat for antelope. He however did not recommend any restrictions for antelope. No other wildlife is expected to be significantly affected.

Floyd Bartlett  
Onsite Evaluator

4/28/2011  
Date / Time

### Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
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**Application for Permit to Drill  
Statement of Basis**

8/3/2011

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

Page 2

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Pits	A synthetic liner with a minimum thickness of 12 mils with a felt subliner if needed shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

**CONFIDENTIAL**

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 4/4/2011

**API NO. ASSIGNED:** 43047515520000

**WELL NAME:** State 3H-16-7-21

**OPERATOR:** SUMMIT OPERATING, LLC (N2315)

**PHONE NUMBER:** 435 940-9001

**CONTACT:** Ellis Peterson

**PROPOSED LOCATION:** NWNW 16 070S 210E

**Permit Tech Review:**

**SURFACE:** 0604 FNL 1322 FWL

**Engineering Review:**

**BOTTOM:** 1775 FSL 1322 FWL

**Geology Review:**

**COUNTY:** UINTAH

**LATITUDE:** 40.21691

**LONGITUDE:** -109.56473

**UTM SURF EASTINGS:** 622131.00

**NORTHINGS:** 4452610.00

**FIELD NAME:** BRENNAN BOTTOM

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** ML-40904

**PROPOSED PRODUCING FORMATION(S):** GREEN RIVER

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

**RECEIVED AND/OR REVIEWED:**

- PLAT
- Bond: STATE - NZS633487
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Vernal City
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

**Commingling Approved**

**LOCATION AND SITING:**

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 270-01
- Effective Date: 2/28/2011
- Siting: 660' Fr Outer Bdry U & 1320' Fr Other Wells
- R649-3-11. Directional Drill

**Comments:** Presite Completed

**Stipulations:**  
 1 - Exception Location - dmason  
 5 - Statement of Basis - bhill  
 8 - Cement to Surface -- 2 strings - hmacdonald  
 15 - Directional - bhill



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:** State 3H-16-7-21  
**API Well Number:** 43047515520000  
**Lease Number:** ML-40904  
**Surface Owner:** STATE  
**Approval Date:** 8/3/2011

**Issued to:**

SUMMIT OPERATING, LLC, 1245 Brickyard Road, Suite 210, Salt Lake City, UT 84106

**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 270-01. 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:**

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

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.

Cement volumes for the 9 5/8" and 7" casing strings shall be determined from actual hole diameters in order to place cement from the pipe setting depths back to the surface.

**Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

**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  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

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

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

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: ML-40904
<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.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: STATE 4-16-7-21	
2. NAME OF OPERATOR: SUMMIT OPERATING, LLC	9. API NUMBER: 43047515520000	
3. ADDRESS OF OPERATOR: 1245 Brickyard Road, Suite 210 , Salt Lake City, UT, 84106	PHONE NUMBER: 435 940-9001 Ext	9. FIELD and POOL or WILDCAT: BRENNAN BOTTOM
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0604 FNL 1322 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 16 Township: 07.0S Range: 21.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/9/2011	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input checked="" type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input 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.

Originally this well was approved to be drilled vertically, plugged back, and then sidetracked horizontally but at this time Summit Operating, LLC asks to instead just **drill the vertical portion** of this well **leaving the option to sidetrack horizontally in the future**. Attached is a new casing and cementing program that reflects this change along with an exception letter for the location with an exhibit map. Also, to assure that the target zone is reached with the vertical wellbore, Summit asks to increase the proposed total depth (TD) to 7100'. Originally, the TVD was set at 6774' and MD to 9478' but since this is being drilled vertically for now the TD, or TVD, need to be changed to 7100'. Finally, Summit Operating, LLC requests to change the name of the well from the "State 3H-16-7-21" to the "State 4-16-7-21". Attached is a new survey plat reflecting the name change.

**Approved by the Utah Division of Oil, Gas and Mining**  
 Date: 12/29/2011  
 By:

NAME (PLEASE PRINT) Crystal Hammer	PHONE NUMBER 435 940-9001	TITLE Geo Tech
SIGNATURE N/A	DATE 12/9/2011	

Sundry Number: 21116 API Well Number: 43047515520000

**RECEIVED** Dec. 09, 2011

Well name:	<b>43047515520000 State 4-16-7-21</b>		
Operator:	<b>SUMMIT OPERATING, LLC</b>		
String type:	Production		Project ID:
			43-047-51552
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 9.200 ppg  
 Internal fluid density: 1.000 ppg

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 169 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

**Burst**

Max anticipated surface pressure: 1,758 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 3,257 psi

**Burst:**

Design factor 1.00

Cement top: 235 ft w/38" WD  
 Propose to 450' minimum  
 ✓ B.K.

**Tension:**

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

**Directional well information:**

Kick-off point 6321 ft  
 Departure at shoe: 497 ft  
 Maximum dogleg: 11.6 °/100ft  
 Inclination at shoe: 89.13 °

No backup mud specified.

Tension is based on air weight.  
 Neutral point: 5,870 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	7100	7	26.00	N-80	LT&C	6815	7100	6.151	63120
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2903	5098	1.756 ✓	3257	7240	2.22 ✓	177.2	519	2.93 J ✓

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

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

Date: December 20, 2011  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 6815 ft, a mud weight of 9.2 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

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

**RECEIVED** Dec. 09, 2011

Well name:	<b>43047515520000 State 4-16-7-21</b>		
Operator:	<b>SUMMIT OPERATING, LLC</b>		
String type:	Production	Project ID:	43-047-51552
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 9.200 ppg  
 Internal fluid density: 1.000 ppg

**Burst**

Max anticipated surface pressure: 1,758 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP: 3,257 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.

Neutral point: 5,870 ft

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 169 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 235 ft *w/38' NO propose to 450' minimum*

**Directional well information:**

Kick-off point: 6321 ft  
 Departure at shoe: 497 ft  
 Maximum dogleg: 11.6 °/100ft  
 Inclination at shoe: 89.13 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
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 Div of Oil, Gas & Mining

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Burst strength is not adjusted for tension.

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

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

**RECEIVED** Dec. 09, 2011

## SUMMIT OPERATING, LLC

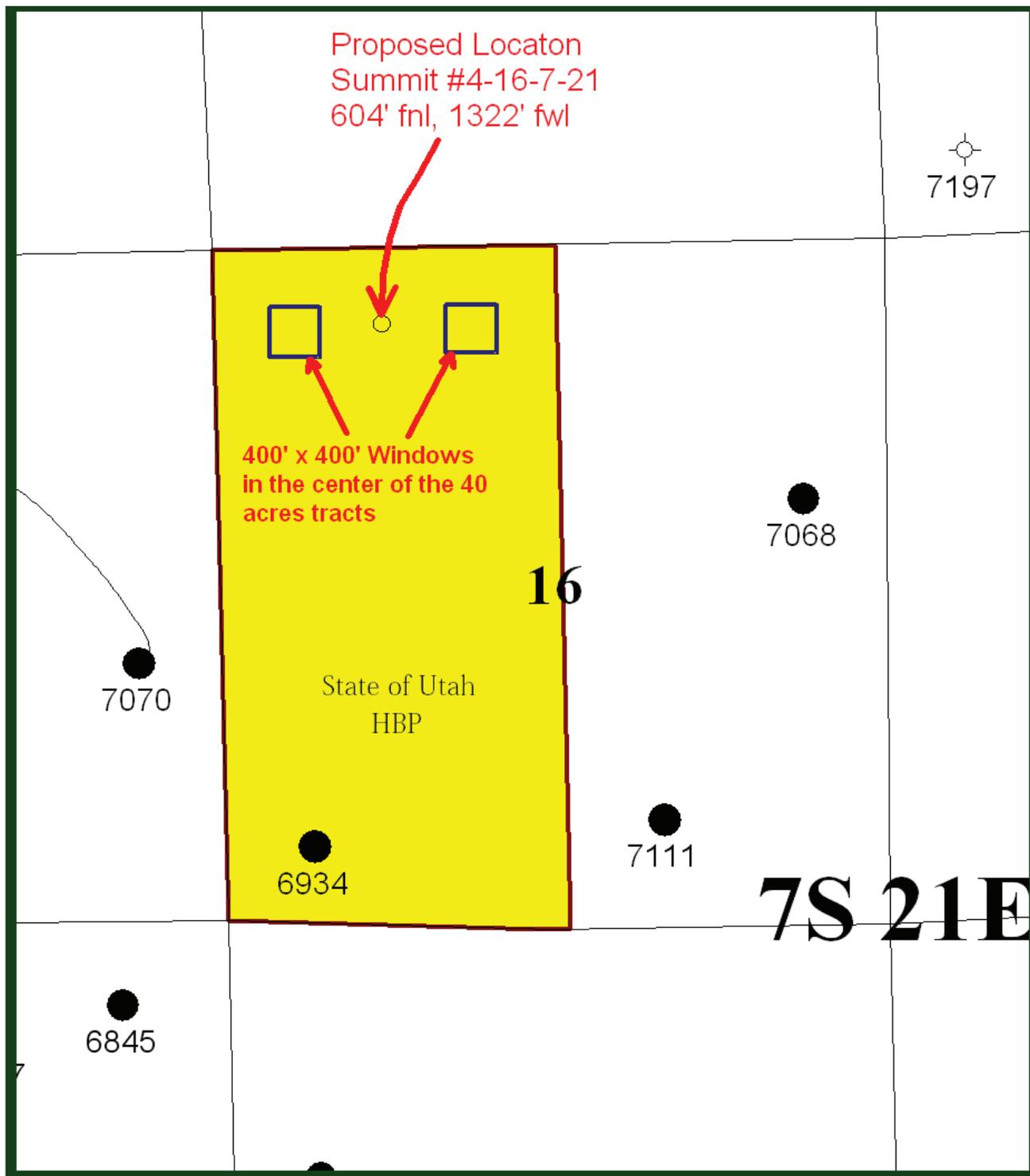
1245 Brickyard Road, Suite 210 • Salt Lake City, Utah 84106  
Phone: 435.940.9001 • Fax: 435.940.9002

### **Exception Location State 4-16-7-21**

Summit Operating, LLC (Summit) requests an exception to the location for the proposed State 4-16-7-21 well. Summit plans to initially drill the well vertically, leaving the option open to sidetrack and drill horizontally in the future.

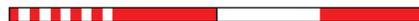
In order to prevent waste and protect correlatives rights, Summit decided to drill and complete the well vertically prior to drilling it horizontally.

Attached is a plat showing the requested location for the subject well, locations of offset wells and potential drilling locations, and Summit acreage. Summit is the only owner within a 460' radius.



4 inch = 1 mile

660 0 660 1300 1950 ft



Summit Leases

**Summit Operating LLC**

**Summit State 4-16-7-21  
Brennan Bottom  
Uintah Co. Utah**

Author:  
Carl F. Kendell

Date:  
8 December, 2011

Scale 1" = 1320'  
Dec. 09, 2011

RECEIVED

# SUMMIT OPERATING, LLC

1245 Brickyard Road, Suite 210 • Salt Lake City, Utah 84106  
Phone: 435.940.9001 • Fax: 435.940.9001

## APD DRILLING PLAN

**State 4-16-7-21  
NWNW, Section 16, T7S, R21E  
Uintah County, Utah**

**Lease: UT ST ML-40904**

### **Plan Summary:**

This horizontal development well will be drilled as a vertical bore hole leaving the option to be redrilled horizontally in either the Green River H4a or G1 Limestone Formation depending on results of the vertical penetration. The planned location is as follows:

Surface Hole Location: 604' FNL, 1322' FWL, Section 16, T7S, R21E, S.L.B.&M.

Bottom Hole Location: 604' FSL, 1322' FWL, Section 16, T7S, R21E, S.L.B.&M

Conductor casing will be set at approximately 60 feet and cemented to surface. A 12-1/4" hole will be drilled to 500' where 9-5/8" surface casing will be set and cemented to surface. After setting surface casing, an 8-3/4" vertical hole will be drilled to 7100' and logs will be run for evaluation of the prospective producing formations. A string of 7" production casing will be run to the new TD and cemented from TD to surface casing.

Drilling activities at this well are expected to commence in December, 2011.

Summit Operating, LLC  
Revised Drilling Program  
State 4-16-7-21

**Well Name:** State 4-16-7-21  
**Surface and BH Location:** 604' FNL, 1322' FWL, NWNW, Section 16, T7S, R21E, S.L.B.&M., Uintah County, Utah  
**Elevations:** 4812' (Est. Graded Elevation) 4829' (Est. KB)

### I. Geology:

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

<b><u>Formation</u></b>	<b><u>TVD Tops (KB)</u></b>	<b><u>Horizontal MD Tops (KB)</u></b>	<b><u>Contents</u></b>	<b><u>Pressure Gradient</u></b>
Duchesne River	17'	17'		
Uinta	502'	502'		
Green River	3156'	3156'		
Green River Tgr3	5866'	5866'		
Douglas Creek	6316'	6316'	O/W/G	0.39 psi/ft
Green River G1 Lime	6552'	6552'	O/W/G	0.39 psi/ft
Green River H4a Lime	6816'	6816'	O/W/G	0.39 psi/ft
Wasatch	6892'	6892'		
Total Depth	7100'	7100'		

### II. Well Control:

A 3M BOP system will be in place and tested prior to drilling out the surface casing shoe. A schematic diagram of the BOPE, including BOP diagram and choke manifold, is attached.

A. The BOPE will as a minimum include the following:

#### Wellhead Equipment (3M minimum):

<b><u>BOPE Item</u></b>	<b><u>Flange Size and Rating</u></b>
Annular Preventer	11" 3M
Double Ram (Pipe - top, Blind - bottom)	11" 3M
Drilling Spool w/ 2 side outlets (one 3" min. and one 2" min.)	11" 3M x 11 3M
Casing Head (9-5/8" SOW w/ two 2" LPO's)	11" 3M

#### Auxiliary Equipment (3M minimum):

<b><u>BOPE Item</u></b>
Choke Line (3" minimum) with 2 valves
Kill Line (2" minimum) with two valves and one check valve
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles available
Safety valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

Note: All BOPE connections subjected to well pressures will be flanged, welded, or clamped.

B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All chokes will be straight lines, or use tee blocks or be targeted with running tees if there are turns, and all choke lines will be anchored. All valves (except chokes) in the kill line choke

manifold and choke line will be full opening and allow straight through flow. Pressure gauges will be designed for drilling fluid service.

- C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.
- D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.
- E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.
- F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.
- G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.
- H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.
- I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.

Ram type preventers and associated equipment will be isolated and tested to 3000 psi. The annular preventer will be tested to 1500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

Summit Operating, LLC  
Revised Drilling Program  
State 4-16-7-21

### III. Casing and Cementing:

#### A. Casing Program (all new casing):

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Connection</u>	<u>Coupling Diameter</u>	<u>Setting Depth</u>
20.00"	14"					0' - 60' GL
12.25"	9.625"	36.0	J-55	STC	10.625"	0' - 500' KB
8.75"	7"	26.0	N-80	LTC	7.656"	0' - 6930' KB

	<u>Surface</u>	<u>Production</u>	<u>Liner</u>
Casing O.D. (in)	9.625	7.000	
Casing Grade	J-55	N-80	
Weight of Pipe (lbs/ft)	36	26.0	
Connection	STC	LTC	
Top Setting Depth - MD (ft)	0	0	
Top Setting Depth - TVD (ft)	0	0	
Bottom Setting Depth - MD (ft)	500	7100	
Bottom Setting Depth - TVD (ft)	500	7100	
Maximum Mud Weight - Inside (ppg)	9.0	9.2	
Maximum Mud Weight - Outside (ppg)	9.0	9.2	
Design Cement Top - TVD (ft)	0	450	
Design Cement Top - MD (ft)	0	450	
Max. Hydrostatic Inside w/ Dry Outside (psi)	234	3397	
Casing Burst Rating (psi)	3520	7240	
<b>Burst Safety Factor (1.10 Minimum)</b>	<b>15.04</b>	<b>2.13</b>	
Max. Hydrostatic Outside w/ Dry Inside (psi)	234	3397	
Collapse Rating	2020	5410	
<b>Collapse Safety Factor (1.125 Minimum)</b>	<b>8.63</b>	<b>1.59</b>	
Casing Weight in Air 1000 lbs	18.0	184.6	
Body Yield 1000 lbs	564.0	604.0	
Joint Strength 1000 lbs	394.0	519.0	
<b>Tension Safety Factor (1.80 Minimum)</b>	<b>21.89</b>	<b>2.81</b>	

Casing having same or greater burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

## B. Cementing Program

<u>Casing Size</u>	<u>Cement Slurry</u>	<u>Quantity (sks)</u>	<u>Density (ppg)</u>	<u>Yield (ft<sup>3</sup>/sk)</u>
16"	Ready-mix	1.5 yds		
9.625"	Lead: Extended cement	102	12.5	2.11
	Tail: Class G w/ 2% CaCl <sub>2</sub>	123	15.8	1.17
7.000"	Stage 1: 50:50 Poz:Prem w/ add.	100	13.5	1.43
	Stage 2 Lead: Extended cement	465	12.3	2.08
	Stage 2 Tail: Premium	80	15.6	1.17

**Surface Casing:** 9-5/8" surface casing will be cemented from setting depth (500') to surface and topped out with premium cement if necessary. Slurry volume for cementing surface casing will be gauge hole volume plus 100%. Surface casing hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

**Production Casing:** 7" production casing will be run and cemented in two stages from total depth (7100) to inside surface casing (450'). The stage tool will be located at approximately 6300'. Slurry volumes will be based on callipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, wiper plug, stage collar, opening and closing plugs, and centralizers as needed across pay zones. Stage 1 cement will be 50:50 poz:premium cement to cover from TD to 6300'. Stage 2 cement will be a lead of extended light cement to cover from 450' to 5800' and tail cement will be premium cement to cover from 6300' to 5800'. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Actual cement slurries for all casing will be based on final service company recommendations.

The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

A pressure integrity test of the casing shoe will be performed before drilling more than 20 feet of new hole below the surface casing string to a minimum of the mud weight equivalent anticipated for controlling the pore pressure to the next casing depth or at total depth of the well.

## IV. Mud Program:

<u>Depth</u>	<u>Mud Weight (ppg)</u>	<u>Mud Type</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0 – 500'	8.4 – 9.0	Water/Spud Mud	26 – 38	N/C
500' – 7100'	8.6 – 9.2	Water/LSND	32 - 45	8 – 15 cc

A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.

B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.

Summit Operating, LLC  
Revised Drilling Program  
State 4-16-7-21

- C. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtrate, and pH.
- D. The need to vent combustible or noncombustible gas is not expected.
- E. Abnormal pressure is not expected so a mud-gas separator (gas buster) will not be installed.

**V. Evaluation:**

- A. Mud Log: A mud logging unit will be in operation from approximately 300 feet above the Tgr3 (5864') to TD. Samples will be caught, cleaned, bagged, and marked as required.
- B. Drill Stem Tests: No DST's are expected.
- C. Coring: Rotary side-wall cores may also be taken at select intervals in conjunction with open-hole logging operations.
- D. Wireline Logs: Wireline logs will be run in the vertical well bore as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

**VI. Expected Bottom-Hole Pressure and Abnormal Conditions:**

- A. Hydrogen Sulfide: Hydrogen Sulfide (H<sub>2</sub>S) gas has not been present in other wells in this area and is therefore not expected to be present in this well.
- B. Pressure: No abnormal pressures are expected to be encountered based on data from offset wells. The pressure gradient for the formations in this well is expected to be approximately 0.39 psi/ft.
- C. Temperature: No abnormally high temperatures are expected. Bottom-hole temperature is expected to be approximately 150 °F.

End

**REPORTING AND NOTIFICATIONS**

UDOGM has regulatory authority for this drilling operation. The phone number for the Salt Lake City office is 801-538-5340. The following are notification and reporting requirements:

Notifications:

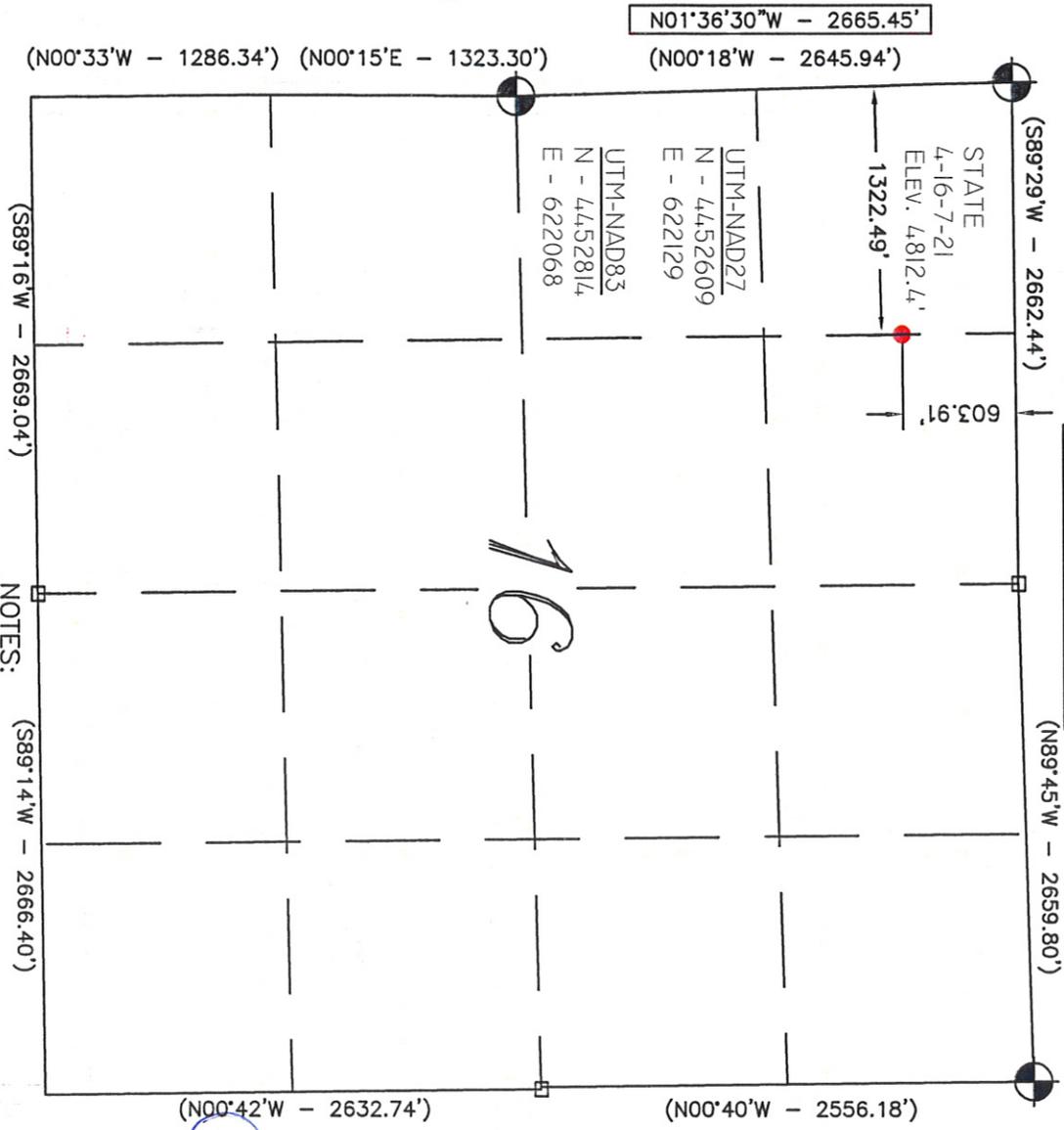
- Within 24 hours of spudding;
- 24 hours prior to cementing or testing casing;
- 24 hours prior to testing BOPE;
- Within 24 hours of any emergency changes to the approved drilling program;
- Prior to commencing operations to P&A the well.

Reporting:

- Entity Action Form (Form 6) within five days of spudding the well;
- Report for any water encountered during drilling (Form 7);
- Monthly status report for the drilling well (Form 9) by fifth day of month;
- Sundry Notices (Form 9) for change of plans or other operational actions.

# Township 7 South

## Range 21 East



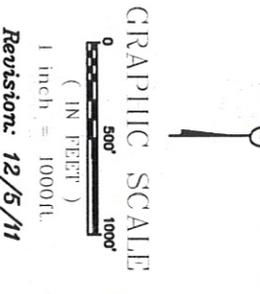
- Legend**
- Drill Hole Location
  - Brass Cap (Found)
  - Bearing Change
  - GPS Measured

**NOTES:**

- Dimensions are GPS measured unless noted otherwise.
- UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 and 83 Datum.

NAD27  
 LAT / LONG  
 40°13'00.8" N  
 109°33'53.1" W

NAD83  
 LAT / LONG  
 40°13'00.7" N  
 109°33'55.6" W



**Location:**  
The well location was determined using a Trimble 5700 GPS survey grade unit.

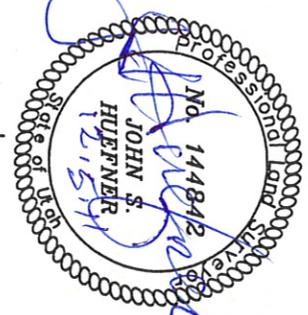
**Basis of Bearing:**  
The Basis of Bearing is GPS Measured between the NW Corner and West Quarter Corner of Section 16, T7S, R21E, S.L.B.&M.

**GLO Bearing:**  
The Bearings indicated are per the recorded plat obtained from the U.S. Land Office.

**Basis of Elevation:**  
Basis of Elevation of 4788.00' being at the Northwest Section corner of Section 16, Township 7 South, Range 21 East, Salt Lake Base and Meridian, as shown on the Brennan Basin Quadrangle 7.5 Minute series map.

**Description of Location:**  
Proposed Drill Hole located in the NW/4, NW/4 of Section 16, T7S, R21E, S.L.B.&M., being South 603.91' from North Line and East 1322.49' from West Line of Section 16, T7S, R21E, Salt Lake Base & Meridian.

**Surveyor's Certificate:**  
I, John S. Huefner, a Professional Land Surveyor, holding Certificate No. 144842 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my personal direction and supervision as shown hereon.



**TALON RESOURCES, INC.**

615 North 400 East P.O. Box 1230  
 Huntington, Utah 84528  
 Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon@trv.net

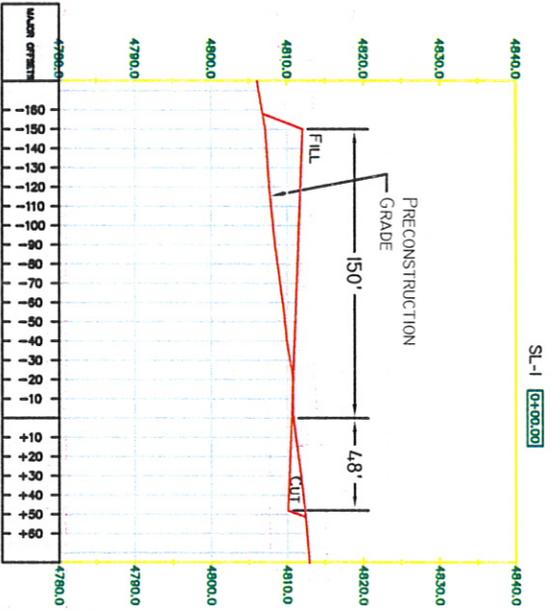
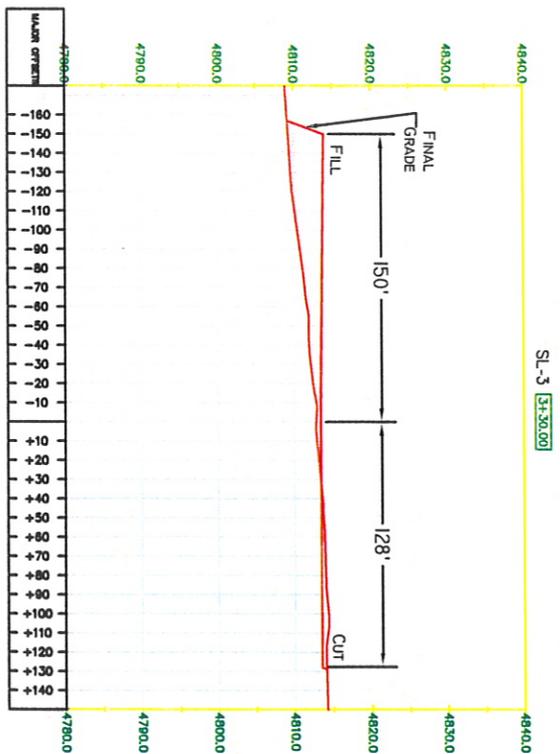
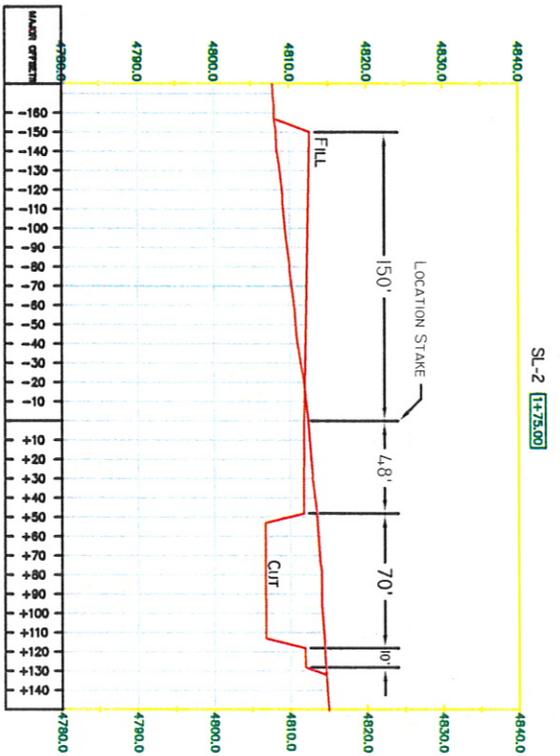
**SUMMIT OPERATING**

**LOCATION LAYOUT**

Section 16, T7S, R21E, S.L.B.&M.  
 STATE 4-16-7-21

Drawn By: N. BUTKOVICH	Checked By: J.S.H.
Drawing No. A-1	Date: 11/22/10
Sheet 1 of 4	Scale: 1" = 1000'
	Job No. 4724/4994





CUT/FILL  
SLOPE = 1 1/2 : 1  
PIT SLOPE = 1 : 1

1" = 10'  
X-Section  
Scale  
1" = 40'

APPROXIMATE YARDAGES

(6") TOPSOIL STRIPPING = 1,555 CU. YDS.  
TOTAL CUT (INCLUDING PIT) = 5,735 CU. YDS.  
TOTAL FILL = 4,295 CU. YDS.

Revision: 12/5/11

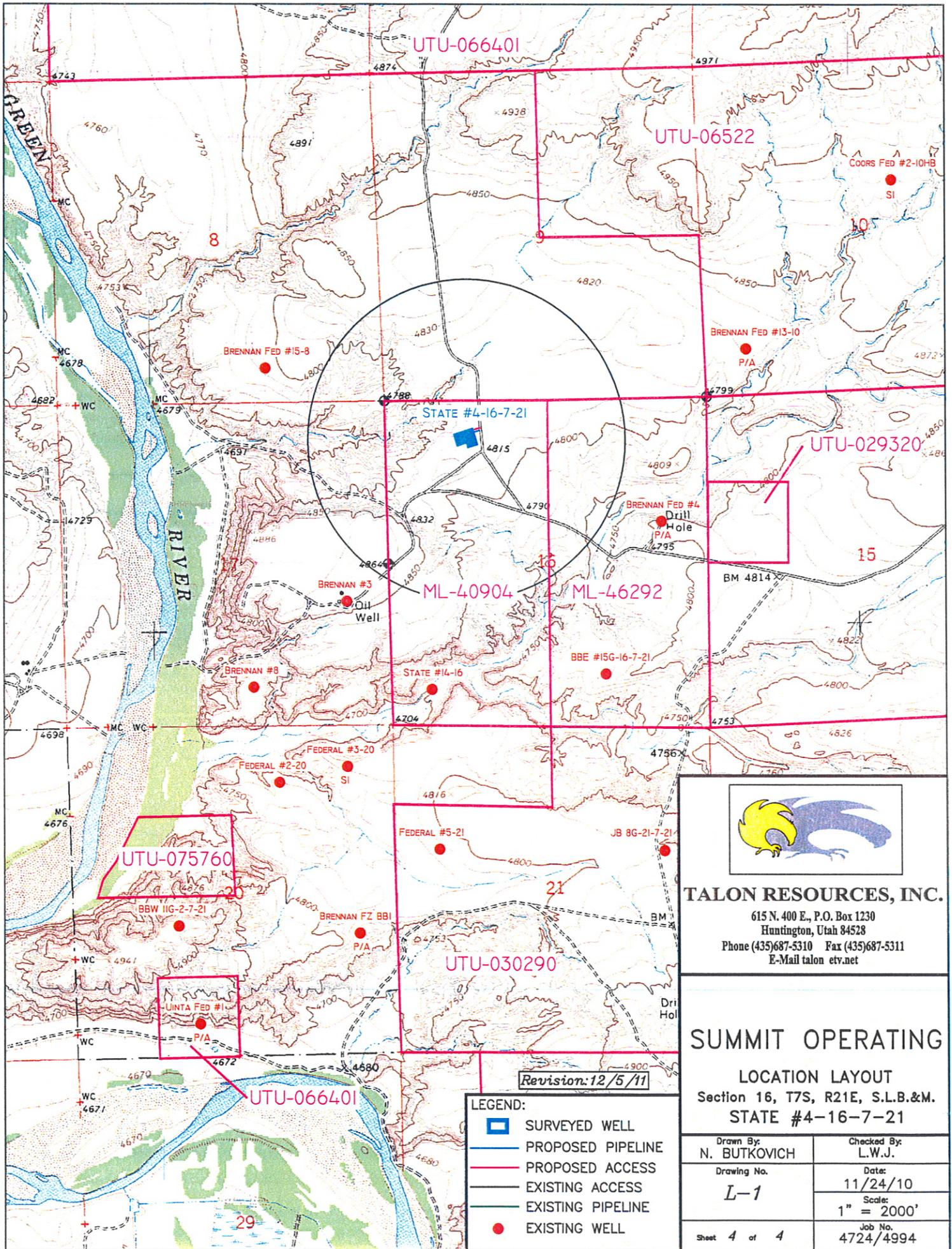


**TALON RESOURCES, INC.**  
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Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talonres@talonres.com

**SUMMIT OPERATING**

**TYPICAL CROSS SECTION**  
Section 16, T7S, R21E, S1.B.&M.  
STATE #4-16-7-21

Drawn By: <b>N. BUTKOVICH</b>	Checked By: <b>L.W.J.</b>
Drawing No. <b>C-1</b>	Date: <b>11/19/10</b>
Sheet <b>3</b> of <b>4</b>	Scale: <b>1" = 100'</b>
	Job No. <b>4724/4994</b>



**TALON RESOURCES, INC.**

615 N. 400 E., P.O. Box 1230  
 Huntington, Utah 84528  
 Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon etv.net

**SUMMIT OPERATING**

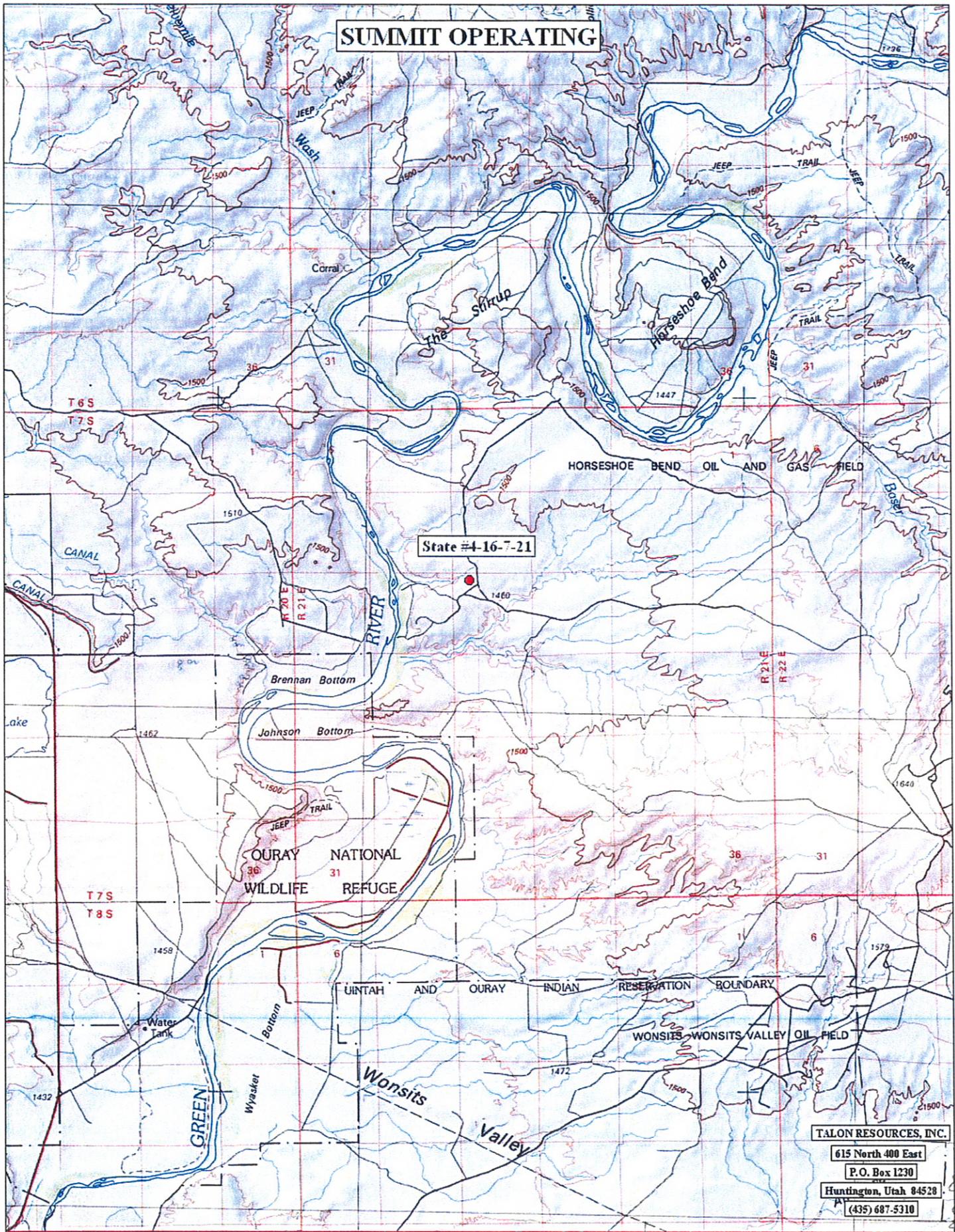
LOCATION LAYOUT  
 Section 16, T7S, R21E, S.L.B.&M.  
 STATE #4-16-7-21

Drawn By: N. BUTKOVICH	Checked By: L.W.J.
Drawing No. L-1	Date: 11/24/10
	Scale: 1" = 2000'
Sheet 4 of 4	Job No. 4724/4994

**LEGEND:**

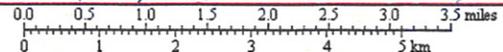
- SURVEYED WELL
- PROPOSED PIPELINE
- PROPOSED ACCESS
- EXISTING ACCESS
- EXISTING PIPELINE
- EXISTING WELL

Revision: 12/5/11



**TALON RESOURCES, INC.**  
 615 North 400 East  
 P.O. Box 1230  
 Huntington, Utah 84520  
 (435) 687-5310

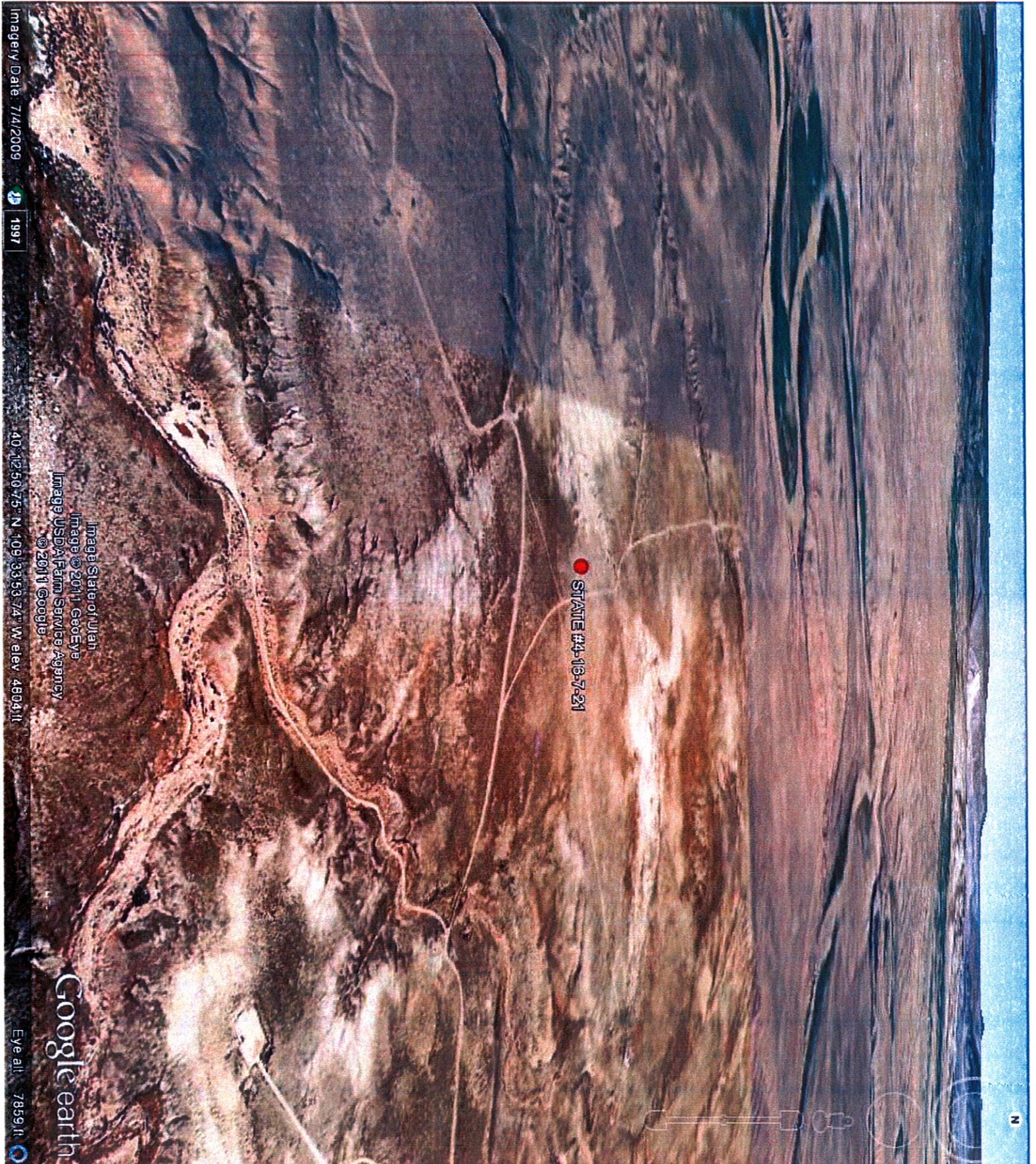
TN MN  
 12°



Map created with TOPO! © 2003 National Geographic (www.nationalgeographic.com/topo)

**RECEIVED** Dec. 09, 2011





Imagery Date: 7/4/2009 1997 40° 12' 50.75" N 109° 33' 53.74" W elev: 4804 ft Eye alt: 7859 ft

Image State of Utah  
Image © 2011 GeoEye  
Image USDA Farm Service Agency  
© 2011 Google

RECEIVED

JAN 04 2012

ENTITY ACTION FORM

DIV OF OIL, GAS & MINING

Operator: Summit Operating, LLC  
Address: 1245 Brickyard Rd., Ste. 210  
city Salt Lake City  
state UT zip 84106

Operator Account Number: N 2315  
Phone Number: (435) 940-9001

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751552	State 4-16-7-21		NWNW	16	7S	21E	Uintah
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	18373	12/21/2011		1/18/2012		
Comments: <u>Spud WSTC</u>							<b>CONFIDENTIAL</b>

Well 2

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

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)

Crystal Hammer

Name (Please Print)



Signature

Geo Tech

Title

12/29/2011

Date

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<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> ML-40904	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b>	
<b>2. NAME OF OPERATOR:</b> SUMMIT OPERATING, LLC		<b>8. WELL NAME and NUMBER:</b> STATE 4-16-7-21	
<b>3. ADDRESS OF OPERATOR:</b> 1245 Brickyard Road, Suite 210 , Salt Lake City, UT, 84106		<b>9. API NUMBER:</b> 43047515520000	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0604 FNL 1322 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 07.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> BRENNAN BOTTOM	
		<b>COUNTY:</b> UINTAH	
		<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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 2/1/2012  <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 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 checked="" 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 type="text" value="reporting"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
Summit Operating, LLC hereby reports on the daily status of this well.			
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY February 01, 2012</b>			
<b>NAME (PLEASE PRINT)</b> Crystal Hammer	<b>PHONE NUMBER</b> 435 940-9001	<b>TITLE</b> Geo Tech	
<b>SIGNATURE</b> N/A		<b>DATE</b> 2/1/2012	

**Well Activity Summary Report**

Well: State 4-16-7-21  
 Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
 Field: Brennan Bottom  
 Purpose: Drill and Complete.

---

<u>Date</u>	<u>Activity</u>
12/14-17/2011	Stubbs & Stubbs constructed drilling pad and dug reserve pit.
12/19/2011	Installed liner in reserve pit.
12/20/2011	Fenced three sides of reserve pit.
12/21/2011	Pete Martin Drilling started drilling 20" hole to set conductor pipe. Shallow unconsolidated soil was sloughing off in hole. Ran 20' of 24" culvert pipe and continued drilling 20" hole to 60' with water. SDFN.
12/22/2011	Continued drilling 20" hole for conductor pipe after mudding up to maintain hole stability below culvert pipe. Drilled harder clay and rock starting at about 60' with hardness of rock increasing with depth and being very hard at 80'. Set 14" conductor pipe at 80' GL and pressure cemented conductor from 80' to 4' GL. Drilled mouse hole and rat hole on Frontier Drilling Rig #2 template. Pete Martin Drilling RDMO location.
12/30/2011	ProPetro mobilized rig to location to drill 12-1/4" hole and set 9-5/8" surface casing to 500'. Cleared conductor hole cuttings and leveled location around well. RU rig with air package and started drilling with an air hammer BHA. Drilled 12-1/4" hole from 80' to approximately 113' before packing off hole with sand material and losing circulation. Laid down drilling tools, RD and released ProPetro. Surface hole will be drilled using drilling rig with mud circulation equipment.
1/2/2012	Set 4' x 6' cellar ring and graded location in preparation for rig.
1/3/2012	Started moving man camp and drilling rig equipment to location.
1/4/2012	Continued moving drilling rig equipment to location. Waiting for crane to finish rigging down rig components.
1/5/2012	Rigging up Frontier Drilling Rig #2.
1/6/2012	Continued rigging up drilling rig. Welded extension to conductor in preparation for drilling 12-1/4" surface hole.
1/7/2012	Finished rigging up and mixing 140 Bbls of mud. Picked up BHA and drilled 12-1/4" hole from 130' to 566' KB. Circulated bottoms up and pumped a LCM sweep. Started tripping out to run surface casing.
1/8/2012	Finished TOOH and laid down 8" DC, subs, and 12-1/4" bit. RU and ran 9-5/8", 36#, J-55, ST&C surface casing with shoe at 550' and float collar at 506' KB. Every joint of casing past 110' had to be washed and worked down. RD casing crew and RU cementers. Cemented surface casing with 300 sacks of premium cement containing 2% CaCl and 1/4# per sack flocele. Approximately 4 Bbls of cement were returned to surface. Waited on cement. Cut off casing and welded on casing head. NU BOP.
1/9/2012	Finished NU BOP and tested ram BOPE, choke, and valves to 3000 psi. Tested annular BOP to 1500 psi. Installed wear bushing. PU bit and motor. RIH and tagged top of cement at 466'. Drilled cement, float collar, casing shoe, and 15' of new hole. Tested formation integrity to 9.0 ppg MW equivalent. Drilled 8-3/4" hole from 566' to 2128'. Deviation surveys were 0.58 degrees at 705', 0.65 degrees at 1345', and 0.56 degrees at 2128'. Drilling fluid is 8.4 ppg with 26 viscosity and no fluid loss control.
1/10/2012	Drilled 8-3/4" hole from 2128' to 4480'. Deviation surveys were 1.69 degrees at 2235', 1.70 degrees at 2818', 1.84 degrees at 3239', 0.62 (?) degrees at 3774', and 2.61 degrees at 4275'. Drilling fluid is 8.4 ppg with 26 viscosity and no fluid loss control. Gas show of over 1000 units

**Well Activity Summary Report**

Well: State 4-16-7-21  
 Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
 Field: Brennan Bottom  
 Purpose: Drill and Complete.

---

at approximately 3322' KB and fluid was diverted briefly through gas buster with a 15' flare.

- 1/11/2012 Drilled 8-3/4" hole from 4480' to 5250'. Deviation survey was 1.86 degrees at 4713'. Tripped for bit because penetration rate slowed. Drilling fluid is 8.4 ppg with 26 viscosity and no fluid loss control.
- 1/12/2012 Drilled 8-3/4" hole from 5250' to 6440'. Deviation surveys were 1.86 degrees at 4794', 1.52 degrees at 5170', 1.58 degrees at 5749', and 1.70 degrees at 6250'. Drilling fluid is 8.4 ppg with 26 viscosity and no fluid loss control.
- 1/13/2012 Drilled 8-3/4" hole from 6440' to 6889'. Started trip for bit. Drilling fluid is 8.8 ppg with 38 viscosity. Started to mud up at 6600'.
- 1/14/2012 Finished RIH with new bit and mud motor. Drilled 8-3/4" hole from 6889' to 7140'. Tripped out for logs. New SLM depth was 7137'. RU Weatherford Wireline and started in hole with logging tools. Logging tools stopped at 1669'. Pulled and laid down logging tools. Deviation survey was 1.64 degrees at 6888'. Drilling fluid is 8.9 ppg with 38 viscosity and 15 fluid loss.
- 1/15/2012 Round tripped bit to 2400' without hitting any obstruction. Attempted to log but logging tools would not go past 1630'. RIH with open-ended drill pipe to 3200'. Attempted to run logging tools through drill pipe but hit obstruction inside drill pipe at 2800'. Pulled and laid down bottom 5 stands of drill pipe. RIH with open-ended drill pipe to 3196' after running rabbit through bottom 5 stands of drill pipe. Ran logging tools without bow spring through drill pipe and to 7092' KB. Ran open-hole logs from 7092' to 3196'. RD wireline service. TOOH with drill pipe. TIH to TD with bit and drill collars. Circulated and conditioned mud while waiting for last load of casing. Drilling fluid is 9.0 ppg with 38 viscosity and 10 fluid loss.
- 1/16/2012 Circulated and RU casing crew. TOOH laying down drill string. Pulled wear bushing. RU and ran 7", 26#, N-80, LT&C, 8rd, SLMS production casing. Tagged at 6125'. Circulated and drove casing for about six joints. Lost 175 Bbls mud while circulating. Tagged again at 7090'. Circulated and drove last 45' to casing setting depth of 7133' KB. Circulated and RD casing crew. RU cementers. Drilling fluid is 9.0 ppg with 38 viscosity and 10 fluid loss.
- 1/17/2012 Pumped Stage 1 cement consisting of 150 sacks of 50:50:2 Poz mix (14.2 ppg, 1.26 yld) and displaced with 269 Bbls water. Plug landed and held. Circulated hole through mechanical stage tool at 6270' KB for 4 hours while waiting on Stage 1 cement to set. Pumped Stage 2 lead cement consisting of 865 sack of 65:35:6 Poz mix (13.1 ppg, 1.69 yld) followed by tail cement consisting of 105 sacks of Class G (15.8 ppg, 1.15 yld). Displaced Stage 2 with 150 Bbls of water. Plug landed and held. No cement came to surface with either stage. RD cementers. ND BOP. Set casing slips with 150 kip weight. Cleaned mud pits and released Frontier Drilling Rig 2 at 22:00 hour on 1/16/2012. Continued rigging down. Rig will be moved off location when next customer is ready.
- 1/18/2012 Released and removed all rental equipment and housing skids off location. Drilling rig will be removed when the next customer mobilizes the rig as specified in drilling contract.
- This is the last report until well activities resume.

<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> ML-40904			
<b>1. TYPE OF WELL</b> Oil Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>			
<b>2. NAME OF OPERATOR:</b> SUMMIT OPERATING, LLC		<b>8. WELL NAME and NUMBER:</b> STATE 4-16-7-21			
<b>3. ADDRESS OF OPERATOR:</b> 1245 Brickyard Road, Suite 210 , Salt Lake City, UT, 84106		<b>9. API NUMBER:</b> 43047515520000			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0604 FNL 1322 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 07.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> BRENNAN BOTTOM  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
<b>TYPE OF SUBMISSION</b>  <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <b>3/7/2012</b>  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<b>TYPE OF ACTION</b>				
	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <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           </td> <td style="width: 33%; vertical-align: top;"> <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 checked="" type="checkbox"/> OTHER           </td> <td style="width: 33%; vertical-align: top;"> <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" value="Monthly Status Report"/> </td> </tr> </table>		<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 checked="" 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" value="Monthly Status Report"/>
<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 checked="" 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" value="Monthly Status Report"/>			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  The State 4-6-7-21 well is awaiting for drilling rig to be moved off location before completion activities can commence. The rig is expected to be moved by mid-March.					
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          March 08, 2012</b>					
<b>NAME (PLEASE PRINT)</b> Crystal Hammer	<b>PHONE NUMBER</b> 435 940-9001	<b>TITLE</b> Geo Tech			
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/8/2012				

<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>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-40904
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> STATE 4-16-7-21	
<b>2. NAME OF OPERATOR:</b> SUMMIT OPERATING, LLC	<b>9. API NUMBER:</b> 43047515520000	
<b>3. ADDRESS OF OPERATOR:</b> 1245 Brickyard Road, Suite 210 , Salt Lake City, UT, 84106	<b>PHONE NUMBER:</b> 435 940-9001 Ext	<b>9. FIELD and POOL or WILDCAT:</b> BRENNAN BOTTOM
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0604 FNL 1322 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNW Section: 16 Township: 07.0S Range: 21.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<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: 4/3/2012	<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 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 checked="" type="checkbox"/> OTHER	
	OTHER: <input type="text" value="Monthly Status Report"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
The State 4-6-7-21 well is awaiting for drilling rig to be moved off location before completion activities can commence. The rig, delayed from its original March move date, is expected to be moved early April.		
		<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          April 12, 2012</b>
<b>NAME (PLEASE PRINT)</b> Crystal Hammer	<b>PHONE NUMBER</b> 435 940-9001	<b>TITLE</b> Geo Tech
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/3/2012	

<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> ML-40904
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<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>2. NAME OF OPERATOR:</b> SUMMIT OPERATING, LLC		<b>8. WELL NAME and NUMBER:</b> STATE 4-16-7-21
<b>3. ADDRESS OF OPERATOR:</b> 1245 Brickyard Road, Suite 210 , Salt Lake City, UT, 84106		<b>9. API NUMBER:</b> 43047515520000
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		<b>COUNTY:</b> UINTAH
		<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 checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/4/2012  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<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 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"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER	
OTHER: <input type="text" value="Monthly Status Report"/>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Completion activity for April 2012 is summarized in the attached file.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 15, 2012</b>		
<b>NAME (PLEASE PRINT)</b> Crystal Hammer	<b>PHONE NUMBER</b> 435 940-9001	<b>TITLE</b> Geo Tech
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/4/2012	

**Well Activity Summary Report**

Well: State 4-16-7-21  
 Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
 Field: Brennan Bottom  
 Purpose: Drill and Complete.

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- 4/16-20/2012 Prepared location for completion. Installed 11' 5k x 7-1/16" 5k tubing head and set rig anchors. Three 400-Bbl production tanks were delivered and crews started installing surface production equipment. Spotted two 500 Bbl frac tanks and filled one with KCl substitute to 2% equivalent containing biocide, O2 scavenger and 0.2% micro-emulsion surfactant. Second tank was filled with fresh water containing biocide and O2 scavenger.
- 4/24/2012 MIRU Basic Energy Services completion rig. Spot pump and tank and run hard line to wellhead. NU 5K double ram BOP with accumulator. RIH with a 6-1/4" mill tooth bit, bit sub, and 72 joints of 2-7/8" N-80 tubing. SDFN. DCC = \$12000, CCC = \$24500
- 4/25/2012 Continued RIH with 6-1/4" bit. Tagged cement at 6238' KB. RU power swivel. Drilled out cement and stage tool at 6270' KB. Circulated clean and continued RIH. Tagged PBTD at 7080' KB. POOH with bit. RIH with 6-1/4" bit and 7" casing scraper on 2-7/8" tubing to PBTD. Circulated hole full of KCl/Chemical water. POOH with bit, casing scraper and tubing. SDFN. DCC = \$10000, CCC = \$34500
- 4/26/2012 No rig activity. Crew took day off in anticipation of possibly working weekend.
- 4/27/2012 Rigged up J-W Energy wireline and ran a cement bond log. Wireline PBTD was 7064' KB and the CBL repeat was run from PBTD to above 6250' KB without pressure and then main log pass was run from PBTD to 2000' with 2000 psi pressure applied using the rig pump. Cement top was 2370' KB and there is a cement gap below DV collar from 6300' to 6440' KB. Overall cement isolation of planned perforation intervals is good. Pressure tested production casing, tubing head, and BOP to 5200 psi. RIH with a 2.75" hollow carrier and perforated 7009' - 7014'(5') and 6972' - 6976' (4') with 6 SPF on 60° phasing using 11.5 gm Owen GH charges. Logged CCL from PBTD to above 2000' to replace questionable CCL strip on CBL. Used rig pump for injection test into perforations with breakdown pressure of 3000 psi, rate of 3.5 BPM at 2700 psi, ISIP of 2550 psi, and 5-minute shut-in pressure of 2250 psi. Changed out BOP rams to accommodate 3-1/2" tubing. SDFN. DCC = \$66,100, CCC = \$100,600 (costs include \$46,000 for production tubing).
- 4/28/2012 Set tubing racks and catwalk. Unloaded 234 joints of 3-1/2", 9.3#, P-110, EUE tubing (rental string with special clearance couplings) on racks. RU to handle 3-1/2" tubing. PU 3-1/2" tubing while RIH with a notched collar on bottom. Tagged PBTD with 227 joints in. POOH with 25 joints standing back. Pick up a 4' tubing sub and x-over. RU Oil States 10k frac tree and land tree on BOP. EOT at 6326' KB with 201 full joints of tubing in well. SDFWE. DCC = \$9400, CCC = \$110,000
- 4/29/2012 No activity.
- 4/30/2012 Hot oil service rolled water tanks and heated water to 90°F. Halliburton mobilized frac equipment to location. DCC = \$2900, CCC = \$112,900
- 5/1/2012 Rigged up and J-W wireline service and Halliburton prepared to fracture stimulate. Fracture stimulated perforations at 6972'- 6976 and 7009'- 7014' (Stage 1) using 44,500 lbs 20/40 mesh white sand proppant and 24,117 gal total fluid. Treating rate was 30 BPM and average treating pressure was 4079 psi. Pumped a sand plug and 54 diverter balls at end of Stage 1. Picked up and RIH with 2.50" hollow carrier and perforated 6850' - 6854' (4') and 6800' - 6804' (4') with 6 SPF on 60° phasing using 11.5 gm Owen GH charges. Fracture stimulated perforations at 6800' - 6804' and 6850' - 6854' (Stage 2) using 77,300 lbs 20/40 mesh white sand proppant and 31,395 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3892 psi. Pumped a sand plug and 68 diverter balls at end of Stage 2. Picked up and RIH with 2.50" hollow carrier and perforated 6698' - 6708' (10') with 6 SPF on 60° phasing using 11.5 gm Owen GH charges. Fracture stimulated perforations at 6698' - 6708' (Stage 3) using 52,400 lbs 20/40 mesh white sand proppant and 22,390 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3416 psi. Pumped a sand plug and 90 diverter balls at end of Stage

**Well Activity Summary Report**

Well: State 4-16-7-21  
 Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
 Field: Brennan Bottom  
 Purpose: Drill and Complete.

---

3. Picked up and RIH with 2.50" hollow carrier and perforated 6614' – 6617' (3') and 6568' – 6573' (5') with 6 SPF on 60° phasing using 11.5 gm Owen GH charges. Fracture stimulated perforations at 6568' – 6573' and 6614' – 6617' (Stage 4) using 46,900 lbs 20/40 mesh white sand proppant and 22,010 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3723 psi. Final ISDP was 2500 psi at 2:32 PM. RDMO wireline and frac crew. Connected hard line from casing to a frac tank. SI pressure was 1500 psi at 5:00 PM. Opened casing to flow through a partially open valve. Flowed back 180 Bbls of frac fluid by 9:30 PM when flowing pressure was 900 psi and rate was 0.4 BPM. DCC = \$172,500, CCC = \$285,400
- 5/2/2012 Well continued to flow out casing at controlled rate overnight. 7:00 AM FCP was 380 psi. Overnight recovery was 280 BW. Cancelled rig crew and continued flowing well to frac tank. By 5:00 PM, FCP was less than 20 psi and total Fluid recovery was 648 BF. Trace of oil in recovered fluid starting about 10:00 AM (after total 560 BF recovered). Left well flowing overnight. DCC = \$11,700, CCC = \$297,100 (Costs include frac water delivery and frac stack rental)
- 5/3/2012 Well continued to flow out casing at controlled rate overnight. At 7:00 AM the FCP was 0 psi. Overnight recovery was 85 BW. Skim of oil on flowback tank. Fracturing fluid load recovery to date is 733 Bbls of 2500 Bbls. ND frac stack. NU Washington head and RIH with 3-1/2" tubing and tagged sand at 6490'. Circulated sand out to PBTD (7064' KB). Circulated clean and POOH laying down 91 joints of the rented 3-1/2" tubing. SDFN. DCC = \$9600, CCC = \$306,700
- 5/4/2012 Finished POOH and laying down 3-1/2" tubing. RIH with a tubing collar, 1 joint of 2-7/8" tubing, 2-7/8" seating nipple, and 226 joints of 2-7/8" tubing. Tag PBTD at 7083' (rig tubing tally depth) and pulled back up 18 joints so seating nipple is at 6529'. Rigged up and swabbed for 2.5 hours with initial fluid level at surface, final fluid level at 1200', and 105 Bbls of recovery in 15 runs. Final swab rate was 18 BPH pulling from 3900' with trace of oil. SDFN. DCC = \$8600, CCC = \$315,300

CONFIDENTIAL

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

RECEIVED
JUN 05 2012
DIV. OF OIL, GAS & MINING

AMENDED REPORT [ ] FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
ML-40904

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NA

7. UNIT or CA AGREEMENT NAME
NA

8. WELL NAME and NUMBER:
State 4-16-7-21

9. API NUMBER:
4304751552

10. FIELD AND POOL, OR WILDCAT
Brennan Bottom

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NWNW 16 7S 21E S

12. COUNTY
Uintah
13. STATE
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

2. NAME OF OPERATOR:
Summit Operating, LLC

3. ADDRESS OF OPERATOR:
1245 Brickyard Rd, Ste 2 CITY Salt Lake City STATE UT ZIP 84106
PHONE NUMBER: (435) 940-9001

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 304 FNL, 1322 FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: same
AT TOTAL DEPTH: same

14. DATE SPURRED: 12/30/2011
15. DATE T.D. REACHED: 1/14/2012
16. DATE COMPLETED: 5/12/2012
ABANDONED [ ] READY TO PRODUCE [x]

17. ELEVATIONS (DF, RKB, RT, GL):
4812' GL

18. TOTAL DEPTH: MD 7.140 TVD 7.140
19. PLUG BACK T.D.: MD 7.080 TVD 7.080
20. IF MULTIPLE COMPLETIONS, HOW MANY? \*
NA

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
Induction, Neutron/Density, Bond Log

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

24. CASING AND LINER RECORD (Report all strings set in well)

Table with 10 columns: 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. Contains 4 rows of casing data.

25. TUBING RECORD
Table with 10 columns: SIZE, DEPTH SET (MD), PACKER SET (MD), SIZE, DEPTH SET (MD), PACKER SET (MD), SIZE, DEPTH SET (MD), PACKER SET (MD). Contains 1 row of tubing data.

26. PRODUCING INTERVALS
Table with 5 columns: FORMATION NAME, TOP (MD), BOTTOM (MD), TOP (TVD), BOTTOM (TVD). Contains 4 rows of producing interval data.

27. PERFORATION RECORD
Table with 9 columns: INTERVAL (Top/Bot - MD), SIZE, NO. HOLES, PERFORATION STATUS. Contains 4 rows of perforation data.

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.
Table with 2 columns: DEPTH INTERVAL, AMOUNT AND TYPE OF MATERIAL. Contains 1 row of treatment data.

29. ENCLOSED ATTACHMENTS:
[ ] ELECTRICAL/MECHANICAL LOGS
[ ] GEOLOGIC REPORT
[ ] DST REPORT
[ ] DIRECTIONAL SURVEY
[ ] SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION
[ ] CORE ANALYSIS
[x] OTHER: Perf/Frac Data

30. WELL STATUS:
Producing

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 5/12/2012		TEST DATE: 5/24/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 65	GAS - MCF: 10	WATER - BBL: 41	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY 28.40	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 65	GAS - MCF: 10	WATER - BBL: 41	INTERVAL STATUS:

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.)

Sold

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)
Douglas Creek	6,320	6,890		Duchesne River	0
Wasatch	6,890			Green River	3,170
				Green River Tgr3	5,887
				Douglas Creek Mbr	6,320
				Wasatch	6,890

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) Crystal Hammer

TITLE Geology Technician

SIGNATURE 

DATE 6/1/2012

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

## Perforation and Fracture Record

Well: State 4-16-7-21

API: 43-047-51552

Location: NWNW, Sec 16, T 7S, R 21E, SLM, Uintah County, Utah

Field: Brennan Bottom

### Perforation Record

Interval (Top/Bot - MD)		Size	No. Holes	Perforation Status
7009	7014	5'	6 SPF	Open
6972	6976	4'	6 SPF	Open
6850	6854	6'	6 SPF	Open
6800	6804	4'	6 SPF	Open
6698	6708	10'	6 SPF	Open
6614	6617	3'	6 SPF	Open
6568	6573	5'	6 SPF	Open

### Fracture Record

Depth Interval		Amount and Type of Material
7009	7014	Stage 1, using 44,500 lbs 20/40 mesh white sand proppant and 24,117 gal total fluid. Treating rate was 30 BPM and average treating pressure was 4079 psi.
6972	6976	
6850	6854	Stage 2, using 77,300 lbs 20/40 mesh white sand proppant and 31,395 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3892 psi.
6800	6804	
6698	6708	Stage 3, using 52,400 lbs 20/40 mesh white sand proppant and 22,390 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3416 psi.
6614	6617	
6568	6573	Stage 4, using 46,9000 lbs 20/40 mesh white sand proppant and 22,010 gal total fluid. Treating rate was 30 BPM and average treating pressure was 3723 psi.

## Well Activity Summary Report

Well: State 4-16-7-21  
Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
Field: Brennan Bottom  
Purpose: Drill and Complete.

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5/5/2012 Opened well. FL at surface. Continued swabbing and made 12 swab runs in 2.5 hours with recovery of 97 BF that included approximately 5 BO. Final fluid level was 1700' and final pull depth was 3600'. Reverse circulated with 10 Bbls of 10 ppg brine containing biocide and Oxygen scavenger chemical and 205 Bbls 2% KCl substitute water. LD 4 joints of tubing and reverse circulated 45 more Bbls of 2% KCl substitute water. POOH standing back remaining 2-7/8" tubing. RIH with a 2-7/8" bull plug, 2-7/8" tubing collar, two joints of 2-7/8" tubing, 4' 2-7/8" perforated tubing sub, 2-7/8" seating nipple, 4 joints of 2-7/8" tubing, 7" x 2-7/8" Weatherford tubing anchor-catcher, and 204 joints of 2-7/8", 6.5#, N-80, EUE, 8rd tubing. Set TAC at 6324' KB and EOT at 6522' KB. Landed tubing in 13k tension. ND BOP and NU wellhead. SDFWE. DCC = \$44,100, CCC = \$359,400 (Daily cost includes downhole rod pumping equipment.)

5/8/2012 Opened well. FL at surface and no pressure on tubing or casing. PU and RIH with a 22' x 1.5" dip tube on a 2.5" x 1.5" x 22' RHTC pump, four 1.5" weight bars, one 2' Grade D 7/8" pony rod, 170 Grade D 3/4" guided Grade D rods (4 guides/rod), 82 Grade D 7/8" rods, one 8' Grade D 7/8" pony rod, and a 22' x 1.5" polished rod. Seated pump and stroked up to 1000 psi for test. Clamped off to hang rods. Cleaned out mud tank. RDMO Basic Energy Services rig. DCC = \$7700, CCC = \$367,100

5/10/2012 Leveled pad for pumping unit base. Installed base and a new Weatherford Maximizer 320-305-100 pumping unit with a remanufactured Ajax E-42 driver.

5/11/2012 Finished connecting all flow lines and installing controls on production unit.

5/12/2012 Connected gas fuel line and installed gas meters. Started pumping to production at approximately 3:00 PM on 5/11/2012. Well is pumping at 5 SPM on a 100" stroke.

5/14/2012 Well produced 297 Bbls of water to tanks in 65 hours as of 8:00 AM on 5/14/2012. There is no significant oil in tanks. Load recovery to date is 1232 BW of total 2600 BW.

5/15/2012 Produced 100 Bbls of water in 24 hours pumping 5 SPM. Still no significant oil in tanks. Load recovery to date is 1332 BW of 2600 BW total.

5/16/2012 Produced 95 Bbls of water in 21 hours pumping 5 SPM. Well was shut down by a vibration sensor on the motor that had to be reset. Load recovery is 1427 BW of 2600 BW total.

5/17/2012 Produced 40 BO and 60 BW in 26 hours pumping 5 SPM. Load recovery is 1487 BW of 2600 BW total.

5/18/2012 Produced 47 BO and 58 BW in 22 hours pumping 5 SPM. Load recovery is 1545 BW of 2600 BW total.

5/19/2012 Produced 55 BO and 40 BW in 25.5 hours pumping 5.5 SPM. Load recovery is 1585 BW of 2600 BW total.

5/20/2012 Produced 43 BO and 30 BW in 20.5 hours pumping 5.5 SPM. Load recovery is 1615 BW of 2600 BW total.

5/21/2012 Produced 53 BO and 45 BW in 24 hours pumping 5.5 SPM. Load recovery is 1650 BW of 2600 BW total. Well is running on its own gas now and smaller orifice plate will be installed today to allow accurate measurement of sales volume.

5/22/2012 Produced 68 BO, 48 BW, and 7.3 MCF in 29 hours pumping 5.5 SPM. Load recovery is 1698 BW of 2600 BW total.

5/23/2012 Produced 38 BO, 37 BW, and 8.5 MCF in 19.75 hours pumping 5.5 SPM. Load recovery is 1735 BW of 2600 BW total.

5/24/2012 Produced 65 BO, 41 BW, and 10.4 MCF in 28.25 hours pumping 5.5 SPM. Load recovery is 1776 BW of 2600 BW total.

## Well Activity Summary Report

Well: State 4-16-7-21  
 Location: NW-NW, Section 16, Township 7 South, Range 21 East, Uintah County, Utah  
 Field: Brennan Bottom  
 Purpose: Drill and Complete.

---

5/25/2012 Produced 53 BO, 48 BW, and 2.5 MCF in 21.5 hours pumping 5.5 SPM. Load recovery is 1824 BW of 2600 BW total.

5/26/2012 Produced 44 BO and 33 BW in 22.25 hours pumping 5.5 SPM. Load recovery is 1857 BW of 2600 BW total.

5/27/2012 Engine on pumping unit quit running sometime during last 24 hours. Engine was restarted at 9:00 AM. Tanks were gauged at 5:00 PM and well had produced 50 BO and 35 BW in 31.25 hours (less unknown down time) pumping 5.5 SPM. Load recovery is 1892 BW of 2600 BW total.

5/28/2012 Produced 22 BO and 26 BW in 19 hours pumping 5.5 SPM. Load recovery is 1918 BW of 2600 BW total.

5/29/2012 Produced 20 BO and 25 BW in 24 hours pumping 5.5 SPM. Load recovery is 1943 BW of 2600 BW total.

5/30/2012 Produced 23 BO and 12 BW in 21 hours pumping 5.5 SPM. Load recovery is 1955 BW of 2600 BW total.

### Tubing Detail (5/5/2012)

17.00 KB  
 -2.00 Landed above GL  
 1.50 Tubing stretch

204	6323.46 Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd	
1	2.33 Tubing Anchor, 7.0" X 2-7/8"	(6324' WL)
4	126.81 Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd	
1	1.08 Seating Nipple - 2-7/8" EUE with 2.25" ID	(6453' WL)
1	4.08 Perforated Sub - 2-7/8", 6.5#, J-55, EUE, 8rd	
2	62.97 Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd	
1	0.83 Bull-plugged tubing collar - 2-7/8", EUE, 8rd	

6538.06' EOT (6522' Wireline)

### Rod Detail (5/8/2012)

1	22.00 Polished Rod, 22' x 1.50"
1	8.00 Pony Rod, 7/8", Grade D
82	2050.00 Rods, 7/8", Grade D
170	4250.00 Rods, 3/4", Grade D, w/ 4 Molded 2.5" AF guide per rod
1	2.00 Pony Rod, 7/8", Grade D
4	100.00 Weight (K) Bars, 25' x 1.50"
1	17.00 Pump, RHTC, 2.5" x 1.5" x 22'

JUN 22 2012

ENTITY ACTION FORM

DIV. OF OIL, GAS & MINING

Operator: Summit Operating, LLC  
Address: 1245 Brickyard Rd, Ste 210  
city Salt Lake City  
state UT zip 84106

Operator Account Number: N 2315

Phone Number: (435) 940-9001

Well 1

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304751552	State 4-16-7-21	NWNW	16	7S	21E	Uintah
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
A	18373	18373	12/21/2011		5/12/12	
Comments: Well completed into Douglas Creek and Wasatch formations. CR-WS <span style="float: right;">6/29/2012</span>						

**CONFIDENTIAL**

Well 2

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

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)

Crystal Hammer

Name (Please Print)



Signature

Geology Technician

6/20/2012

Title

Date