

November 23, 2005

Mrs. Diana Whitney  
State of Utah  
Division of Oil Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Application for Permit to Drill—Dominion Exploration & Production, Inc.  
**HCU 15-32F**

*Surface Location:* 760' FSL, 2,246' FWL, SE/4 SW/4,  
*Target Location:* 500' FSL & 1600' FEL, SW/4 SE/4,  
Section 32, T10S, R20E, SLB&M, Uintah County, Utah

Dear Mrs. Whitney:

On behalf of Dominion Exploration & Production, Inc. (Dominion), Buys & Associates, Inc. respectfully submits the enclosed original and two copies of the Application for Permit to Drill (APD) for the above referenced tribal directional well. A request for exception to spacing (Cause No. 197-11 ) is hereby requested based on topography since the well is located within 460' of the drilling unit boundary. Dominion Exploration & Production, Inc. is the only owner and operator within 460' of the proposed well and all points along the intended well bore path. Included with the APD is the following supplemental information:

- Exhibit "A" - Survey plats, layouts and photos of the proposed well site;
- Exhibit "B" - Proposed location maps with access and utility corridors;
- Exhibit "C" - Production site layout;
- Exhibit "D" - Drilling Plan;
- Exhibit "E" - Surface Use Plan;
- Exhibit "F" - Typical BOP and Choke Manifold diagram.

Please accept this letter as Dominion's, written request for confidential treatment of all information contained in and pertaining to this application.

Thank you very much for your timely consideration of this application. Please feel free to contact myself or Carla Christian of Dominion at 405-749-5263 if you have any questions or need additional information.

Sincerely,

*Don Hamilton*  
Don Hamilton  
Agent for Dominion

cc: Fluid Mineral Group, BLM—Vernal Field Office  
Bucky Secakuku, BIA—Uintah & Ouray Agency  
Carla Christian, Dominion

RECEIVED  
NOV 28 2005

DIV. OF OIL, GAS & MINING

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

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: <b>ML-22313-2</b>	6. SURFACE: <b>Indian</b>
1A. TYPE OF WORK: <b>DRILL</b> <input checked="" type="checkbox"/> <b>REENTER</b> <input type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Ute Indian Tribe</b>	
B. TYPE OF WELL: <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input checked="" type="checkbox"/> OTHER _____ <b>SINGLE ZONE</b> <input checked="" type="checkbox"/> <b>MULTIPLE ZONE</b> <input type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: <b>Hill Creek Unit</b>	
2. NAME OF OPERATOR: <b>Dominion Exploration &amp; Production, Inc.</b>			9. WELL NAME and NUMBER: <b>HCU 15-32F</b>	
3. ADDRESS OF OPERATOR: <b>14000 Quail Sp Pkwy</b> CITY <b>Oklahoma City</b> STATE <b>OK</b> ZIP <b>73134</b>			PHONE NUMBER: <b>(405) 749-5263</b>	10. FIELD AND POOL, OR WILDCAT: <b>Natural Buttes</b>
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: <b>760' FSL, 2,246' FWL, SE/4 SW/4</b>  AT PROPOSED PRODUCING ZONE: <b>500' FSL &amp; 1600' FEL, SW/4 SE/4,</b>			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  <b>32   10   20   S</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>13.12 miles south of Ouray, Utah</b>			12. COUNTY: <b>Uintah</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>760'</b>	16. NUMBER OF ACRES IN LEASE: <b>640</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>25'</b>	19. PROPOSED DEPTH: <b>7,750</b>	20. BOND DESCRIPTION: <b>SITLA Blanket 76S 63050 361</b>		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>5,007'</b>	22. APPROXIMATE DATE WORK WILL START: <b>3/15/2006</b>	23. ESTIMATED DURATION: <b>14 days</b>		

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
17-1/2"	13-3/8"    H-40 ST    48#	500	see Drilling Plan    450
12-1/4"	9-5/8"    J-55 LT    36#	2,800	see Drilling Plan    300/390
7-7/8"	5-1/2"    Mav 80 L    17#	7,750	see Drilling Plan    90/600
			(7,996' MD)

25. **ATTACHMENTS**

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Don Hamilton    TITLE Agent for Dominion Exploration & Production, Inc.  
SIGNATURE Don Hamilton    DATE 11/23/2005

(This space for State use only)

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

API NUMBER ASSIGNED: 43-047-37A22    Date: 12-05-05    RECEIVED  
By: [Signature]    NOV 28 2005  
(See Instructions on Reverse Side)

(11/2001) Surf  
612043X  
4417096Y  
39.89843  
- 109.68940

BHL 612399 X  
4417036Y  
39.89784  
- 109.68524

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# T10S, R20E, S.L.B.&M.

1928 Brass Cap,  
0.5' High, Pile  
of Stones

1928 Brass Cap,  
Pile of Stones

1928 Brass Cap  
0.4' High, Pile  
of Stones

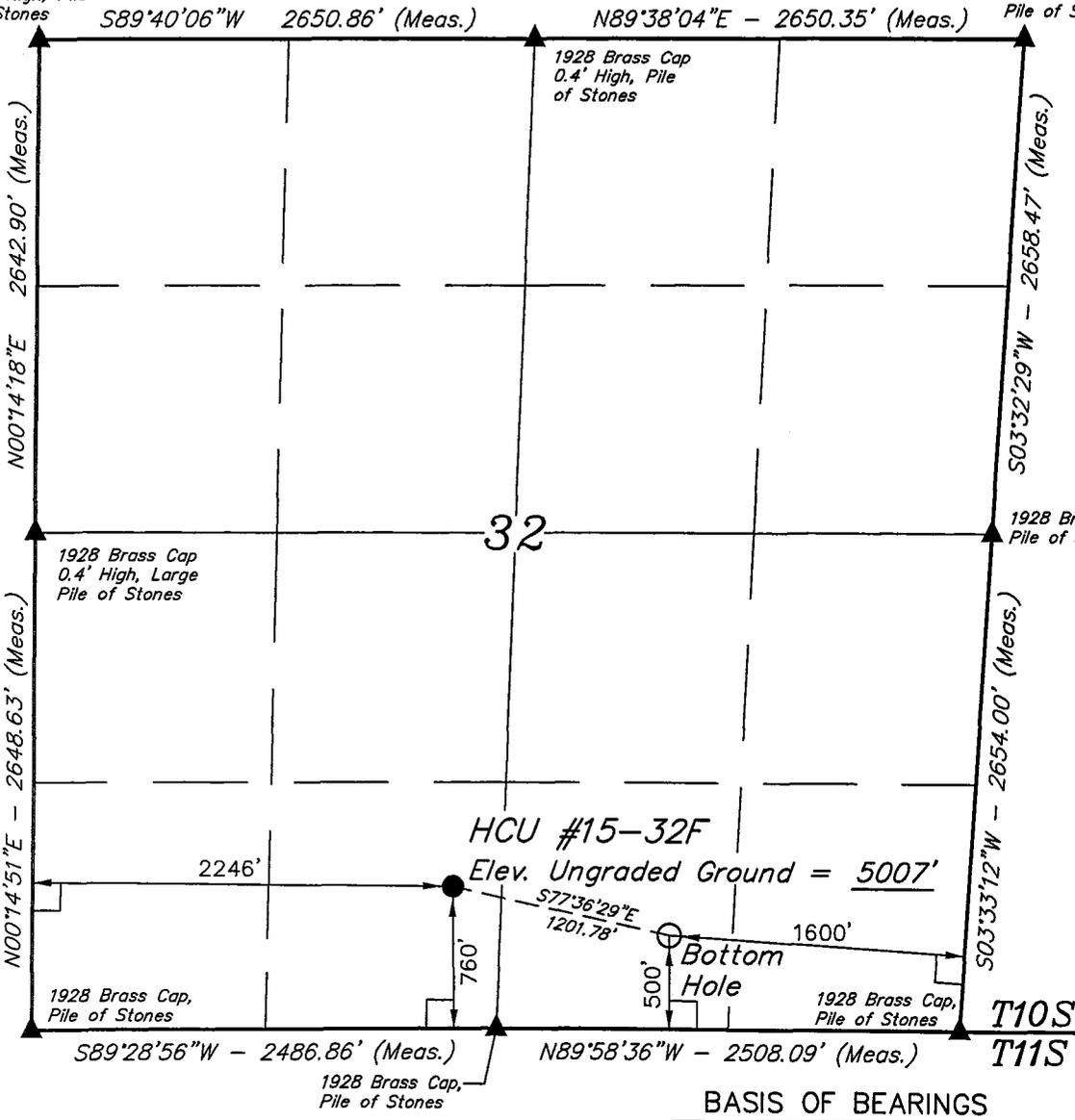
1928 Brass Cap,  
Pile of Stones

1928 Brass Cap  
0.4' High, Large  
Pile of Stones

1928 Brass Cap,  
Pile of Stones

1928 Brass Cap,  
Pile of Stones

1928 Brass Cap,  
Pile of Stones



## BASIS OF BEARINGS

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

(NAD 83)

LATITUDE = 39°53'54.52" (39.898478)

LONGITUDE = 109°41'23.98" (109.689994)

(NAD 27)

LATITUDE = 39°53'54.65" (39.898514)

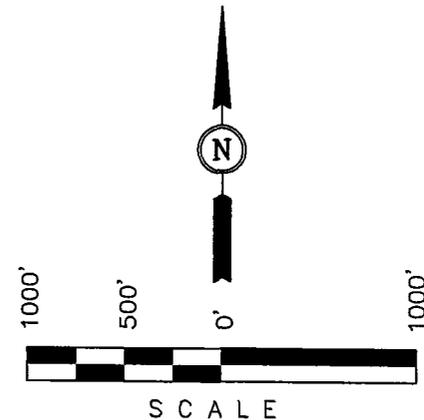
LONGITUDE = 109°41'21.49" (109.689303)

## DOMINION EXPLR. & PROD., INC.

Well location, HCU #15-32F, located as shown in the SE 1/4 SW 1/4 of Section 32, T10S, R20E, S.L.B.&M. Uintah County Utah.

## BASIS OF ELEVATION

SPOT ELEVATION AT THE SOUTHWEST CORNER OF SECTION 20, T10S, R20E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN. NW QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5251 FEET.



## CERTIFICATE

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

*Robert Hay*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

Revised: 9-23-05

## UINTAH ENGINEERING & LAND SURVEYING

85 SOUTH 200 EAST - VERNAL, UTAH 84078

(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 2-11-05	DATE DRAWN: 2-28-05
PARTY B.B. J.M. K.G.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE DOMINION EXPLR. & PROD., INC.	

## LEGEND:

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

# DRILLING PLAN

## APPROVAL OF OPERATIONS

### Attachment for Permit to Drill

**Name of Operator:** Dominion Exploration & Production  
**Address:** 14000 Quail Springs Parkway, Suite 600  
Oklahoma City, OK 73134  
**Well Location:** HCU 15-32F  
SHL: 760' FSL & 2246' FWL Section 32-10S-20E  
BHL: 500' FSL & 1600' FEL Section 32-10S-20E  
Uintah County, UT

1. GEOLOGIC SURFACE FORMATION Uintah

2. ESTIMATED DEPTHS OF IMPORTANT GEOLOGIC MARKERS

<u>Formation</u>	<u>Depth</u>
Wasatch Tongue	3,435'
Uteland Limestone	3,780'
Wasatch	3,925'
Chapita Wells	4,800'
Uteland Buttes	6,000'
Mesaverde	6,795'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS

<u>Formation</u>	<u>Depth</u>	<u>Type</u>
Wasatch Tongue	3,435'	Oil
Uteland Limestone	3,780'	Oil
Wasatch	3,925'	Gas
Chapita Wells	4,800'	Gas
Uteland Buttes	6,000'	Gas
Mesaverde	6,795'	Gas

4. PROPOSED CASING PROGRAM

All casing used to drill this well will be new casing.

<u>Type</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Conn.</u>	<u>Top</u>	<u>Bottom</u>	<u>Hole</u>
Surface	13-3/8"	48.0 ppf	H-40	STC	0'	500'	17-1/2"
Intermediate	9-5/8"	36.0 ppf	J-55	LTC	0'	2,800'	12-1/4"
Production	5-1/2"	17.0 ppf	MAV-80	LTC	0'	7,750'	7-7/8"

5. OPERATOR'S MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

Surface hole: No BOPE will be utilized.

Intermediate hole: To be drilled using a diverter stack with rotating head to divert flow from rig floor.

Production hole: Prior to drilling out the intermediate casing shoe, 3,000 psi or greater BOP equipment will be installed. The pipe rams will be operated at least once per day from intermediate casing to total depth. The blind rams will be tested once per day from intermediate casing to total depth if operations permit.

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## DRILLING PLAN

### APPROVAL OF OPERATIONS

A diagram of the planned BOP equipment for normal drilling operations in this area is attached. As denoted there will be two valves and one check valve on the kill line, two valves on the choke line, and two adjustable chokes on the manifold system. The BOP "stack" will consist of two BOP rams (1 pipe, 1 blind) and one annular type preventer, all rated to a minimum of 3,000 psi working pressure.

The BOP equipment will be pressure tested prior to drilling below the intermediate casing shoe. All test pressures will be maintained for fifteen (15) minutes without any significant pressure decrease. Clear water will be circulated into the BOP stack and lines prior to pressure testing. The following test pressures will be used as a minimum for various equipment items.

1.	Annular BOP	1,500 psi
2.	Ram type BOP	3,000 psi
3.	Kill line valves	3,000 psi
4.	Choke line valves and choke manifold valves	3,000 psi
5.	Chokes	3,000 psi
6.	Casing, casinghead & weld	1,500 psi
7.	Upper kelly cock and safety valve	3,000 psi
8.	Dart valve	3,000 psi

#### 6. MUD SYSTEMS

- An air or an air/mist system may be used to drill to drill the surface hole until water influx becomes too great.
- KCL mud system will be used to drill well.

<u>Depths</u>	<u>Mud Weight (ppg)</u>	<u>Mud System</u>
0' – 500'	8.4	Air foam mist, no pressure control
500' – 2,800'	8.6	Fresh water, rotating head and diverter
2,800' – 7,750'	8.6	Fresh water/2% KCL/KCL mud system

#### 7. BLOOIE LINE

- An automatic igniter will not be installed on blooie line. The blooie will have a contact ignition source.
- A "target tee" connection will be installed on blooie line for 90° change of directions for abrasion resistance.
- "Target tee" connections will be a minimum of 50' from wellhead.
- The blooie line discharge will be a minimum of 100' from the wellhead.

#### 8. AUXILIARY EQUIPMENT TO BE USED

- a. Kelly cock.
- b. Full opening valve with drill pipe connection will be kept on floor. Valve will be used when the kelly is not in string.

#### 9. TESTING, LOGGING, AND CORING PROGRAMS TO BE FOLLOWED

- A drillstem test in the Wasatch Tongue is possible.
- One electric line wire-log will be run from total depth to intermediate casing.
- The gamma ray will be left on to record from total depth to intermediate casing.
- Other log curves (resistivities, porosity, and caliper) will record from total depth to intermediate casing.
- A dipmeter, percussion cores, or rotary cores may be run over selected intervals.

#### 10. ANTICIPATED ABNORMAL PRESSURES OR TEMPERATURES EXPECTED

- Expected BHP 1,500–2,000 psi (lower than normal pressure gradient).
- No abnormal temperature or pressures are anticipated.
- The formations to be penetrated do not contain known H<sub>2</sub>S gas.

#### 11. WATER SUPPLY

- No water pipelines will be laid for this well.
- No water well will be drilled for this well.
- Drilling water for this will be hauled on the road(s) shown in Attachment No. 3.
- Water will be hauled from: Water Permit # 43-10447 Section 9, Township 8 South, Range 20 East

## DRILLING PLAN

### APPROVAL OF OPERATIONS

#### 12. CEMENT SYSTEMS

##### a. Surface Cement:

Drill 17-1/2" hole to 500' and cement 13-3/8" to surface with 450 sks class "C" cement with 2% CaCl<sub>2</sub> and 1/4 #/sk. Poly-E-Flakes (volume includes 40% excess). Top out if necessary with Top Out cement listed below.

##### b. Intermediate Casing Cement:

- Drill 12-1/4" hole to 2,800'±, run and cement 9-5/8" to surface.
- Pump 20 bbls lightly weighted water spacer followed by 5 bbls fresh water. Displace with any available water.
- Casing to be run with: a) guide shoe b) insert float c) three (3) centralizers, one on each of first 3 joints d) stop ring for plug two joints off bottom e) bottom three joints thread locked f) pump job with bottom plug only.
- Cement to surface not required due to surface casing set deeper than normal.

<u>Type</u>	<u>Sacks</u>	<u>Interval</u>	<u>Density</u>	<u>Yield</u>	<u>Hole</u> <u>Volume</u>	<u>Cement</u> <u>Volume</u>	<u>Excess</u>
Lead	300	0'-2,000'	11.0 ppg	3.82 CFS	658 CF	1,152 CF	75%
Tail	390	2,000'-2,800'	15.6 ppg	1.20 CFS	268 CF	469 CF	75%

Lead Mix: Halliburton Prem Plus V blend. Blend includes Class "C" cement, gel, salt, gilsonite, EX-1 and HR-7.  
Slurry yield: 3.82 cf/sack                      Slurry weight: 11.00 #/gal.  
Water requirement: 22.95 gal/sack  
Compressives @ 130°F: 157 psi after 24 hours

Tail Mix: Class "G" Cement, 1/4 lb/sk Cellophane Flakes + 2% bwoc Calcium Chloride + 44.3% fresh water.  
Pump Time: 1 hr. 5 min. @ 90 °F.  
Compressives @ 95 °F: 24 Hour is 4,700 psi

##### c. Production Casing Cement:

- Drill 7-7/8" hole to 7,750'±, run and cement 5 1/2".
- Cement interface is at 3,700', which is typically 500'-1,000' above shallowest pay.
- Pump 20 bbl Mud Clean II unweighted spacer, followed by 20 Bbls fresh H2O spacer.
- Displace with 3% KCL.

<u>Type</u>	<u>Sacks</u>	<u>Interval</u>	<u>Density</u>	<u>Yield</u>	<u>Hole</u> <u>Volume</u>	<u>Cement</u> <u>Volume</u>	<u>Excess</u>
Lead	90	3,700'-4,500'	11.5 ppg	3.12 CFS	139 CF	277 CF	100%
Tail	600	4,500'-7,750'	13.0 ppg	1.75 CFS	525 CF	1050 CF	100%

Note: Caliper will be run to determine exact cement volume.

Lead Mix: Halliburton Prem Plus V blend. Blend includes Class "C" cement, gel, salt, gilsonite, EX-1 and HR-7.  
Slurry yield: 3.12 cf/sack                      Slurry weight: 11.60 #/gal.  
Water requirement: 17.71 gal/sack  
Compressives @ 130°F: 157 psi after 24 hours

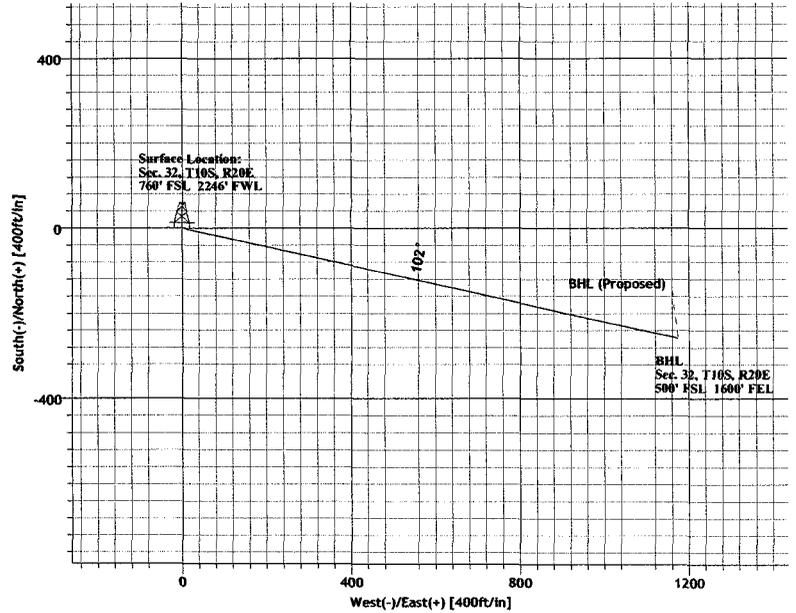
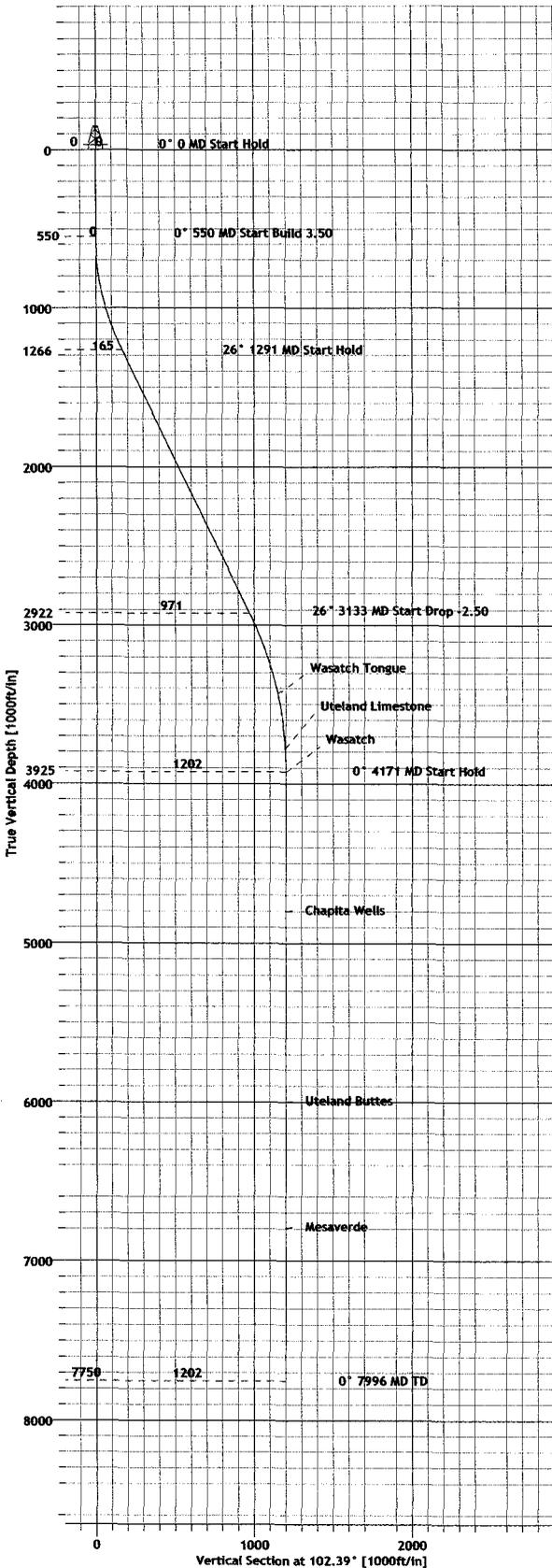
Tail Mix: Halliburton HLC blend (Prem Plus V/JB flyash). Blend includes Class "G" cement, KCl, EX-1, Halad 322, & HR-5.  
Slurry yield: 1.75 cf/sack                      Slurry weight: 13.00 #/gal.  
Water requirement: 9.09 gal/sack  
Compressives @ 165°F: 905 psi after 24 hours

#### 13. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS

Starting Date: March 15, 2006  
Duration: 14 Days



Well: HCU 15-32F  
 Field: Hill Creek Unit  
 Utah Co. Utah  
 Sec. 32, T10S, R20E



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	102.39	0.00	0.00	0.00	0.00	0.00	0.00	
2	550.00	0.00	102.39	550.00	0.00	0.00	0.00	102.39	0.00	
3	1291.32	25.95	102.39	1266.24	-35.41	161.16	3.50	102.39	165.00	
4	3132.97	25.95	102.39	2922.26	-208.33	948.16	0.00	0.00	970.77	
5	4170.82	0.00	102.39	3925.00	-257.90	1173.78	2.50	180.00	1201.78	
6	7995.82	0.00	102.39	7750.00	-257.90	1173.78	0.00	102.39	1201.78	

WELL DETAILS

Name	(N/-S)	(E/-W)	Northing	Easting	Latitude	Longitude	Slot
HCU 15-32F	0.00	0.00	7136896.55	2148182.02	39°53'54.520N	109°41'23.980W	N/A

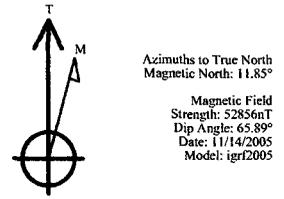
FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	3435.00	3677.00	Wasatch Tongue
2	3780.00	4025.72	Uteland Limestone
3	3925.00	4170.82	Wasatch
4	4800.00	5045.82	Chapite Wells
5	6000.00	6245.82	Uteland Buttes
6	6795.00	7040.82	Mesaverde

WELLPATH DETAILS

Ref. Datum:	Origin (N/-S)	Origin (E/-W)	Starting From TVD
est.KB @ 5025'	0.00	0.00	0.00

REFERENCE INFORMATION  
 Co-ordinate (N/E) Reference: Site Centre HCU 15-32F, True North  
 Vertical (TVD) Reference: est.KB @ 5025' 0.00  
 Section (VS) Reference: Site Centre (0.00N,0.00E)  
 Measured Depth Reference: est.KB @ 5025' 0.00  
 Calculation Method: Minimum Curvature



FIELD DETAILS  
 Natural Buttes Field  
 Uintah County, Utah  
 USA  
 Geodetic System: US State Plane Coordinate System 1983  
 Ellipsoid: GRS 1980  
 Zone: Utah, Central Zone  
 Magnetic Model: igr2005  
 System Datum: Mean Sea Level  
 Local North: True North

SITE DETAILS  
 HCU 15-32F  
 Hill Creek Unit  
 Sec. 32, T10S, R20E  
 Site Centre Latitude: 39°53'54.520N  
 Longitude: 109°41'23.980W  
 Ground Level: 5007.00  
 Positional Uncertainty: 0.00  
 Convergence: 1.16



# Ryan Energy Technologies Planning Report



<b>Company:</b> Dominion E & P		<b>Date:</b> 11/14/2005		<b>Time:</b> 07:47:03		<b>Page:</b> 1				
<b>Field:</b> Natural Buttes Field		<b>Co-ordinate(NE) Reference:</b> HCU 15-32F, True North		<b>Site:</b> HCU 15-32F, True North						
<b>Site:</b> HCU 15-32F		<b>Vertical (TVD) Reference:</b> est.KB @ 5025' 0.0		<b>East:</b> 5025' 0.0						
<b>Well:</b> HCU 15-32F		<b>Section (VS) Reference:</b> Site (0.00N,0.00E,102.39Azi)		<b>Plan:</b> Plan #1						
<b>Wellpath:</b> 1										
<b>Field:</b> Natural Buttes Field Uintah County, Utah USA				<b>Map Zone:</b> Utah, Central Zone						
<b>Map System:</b> US State Plane Coordinate System 1983				<b>Coordinate System:</b> Site Centre						
<b>Geo Datum:</b> GRS 1980				<b>Geomagnetic Model:</b> igrf2005						
<b>Sys Datum:</b> Mean Sea Level										
<b>Site:</b> HCU 15-32F Hill Creek Unit Sec. 32, T10S, R20E										
<b>Site Position:</b>		<b>Northing:</b> 7136896.55 ft		<b>Latitude:</b> 39 53 54.520 N						
<b>From:</b> Geographic		<b>Easting:</b> 2148182.02 ft		<b>Longitude:</b> 109 41 23.980 W						
<b>Position Uncertainty:</b> 0.00 ft				<b>North Reference:</b> True						
<b>Ground Level:</b> 5007.00 ft				<b>Grid Convergence:</b> 1.16 deg						
<b>Well:</b> HCU 15-32F										
<b>Slot Name:</b>										
<b>Surface Position:</b> +N/-S 0.00 ft		<b>Northing:</b> 7136896.55 ft		<b>Latitude:</b> 39 53 54.520 N						
+E/-W 0.00 ft		<b>Easting:</b> 2148182.02 ft		<b>Longitude:</b> 109 41 23.980 W						
<b>Position Uncertainty:</b> 0.00 ft										
<b>Reference Point:</b> +N/-S 0.00 ft		<b>Northing:</b> 7136896.55 ft		<b>Latitude:</b> 39 53 54.520 N						
+E/-W 0.00 ft		<b>Easting:</b> 2148182.02 ft		<b>Longitude:</b> 109 41 23.980 W						
		<b>Measured Depth:</b> 0.00 ft		<b>Inclination:</b> 0.00 deg						
		<b>Vertical Depth:</b> 0.00 ft		<b>Azimuth:</b> 0.00 deg						
<b>Wellpath: 1</b>										
<b>Current Datum:</b> est.KB @ 5025'		<b>Height:</b> 0.00 ft		<b>Drilled From:</b> Well Ref. Point						
<b>Magnetic Data:</b> 11/14/2005				<b>Tie-on Depth:</b> 0.00 ft						
<b>Field Strength:</b> 52856 nT				<b>Above System Datum:</b> Mean Sea Level						
<b>Vertical Section: Depth From (TVD)</b>				<b>Declination:</b> 11.85 deg						
ft		ft		<b>Mag Dip Angle:</b> 65.89 deg						
				<b>+E/-W</b>		<b>Direction</b>				
				ft		deg				
0.00		0.00		0.00		102.39				
<b>Plan: Plan #1</b>										
<b>Principal:</b> Yes				<b>Date Composed:</b> 11/14/2005						
				<b>Version:</b> 1						
				<b>Tied-to:</b> From Well Ref. Point						
<b>Plan Section Information</b>										
MD	Incl	Azim	TVD	+N/-S	+E/-W	DLS	Build	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	deg
0.00	0.00	102.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
550.00	0.00	102.39	550.00	0.00	0.00	0.00	0.00	0.00	102.39	
1291.32	25.95	102.39	1266.24	-35.41	161.16	3.50	3.50	0.00	102.39	
3132.97	25.95	102.39	2922.26	-208.33	948.16	0.00	0.00	0.00	0.00	
4170.82	0.00	102.39	3925.00	-257.90	1173.78	2.50	-2.50	0.00	180.00	
7995.82	0.00	102.39	7750.00	-257.90	1173.78	0.00	0.00	0.00	102.39	
<b>Section 1 : Start Hold</b>										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
0.00	0.00	102.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	102.39	100.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
200.00	0.00	102.39	200.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
300.00	0.00	102.39	300.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
400.00	0.00	102.39	400.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
500.00	0.00	102.39	500.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
550.00	0.00	102.39	550.00	0.00	0.00	0.00	0.00	0.00	0.00	102.39
<b>Section 2 : Start Build 3.50</b>										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg
600.00	1.75	102.39	599.99	-0.16	0.75	0.76	3.50	3.50	0.00	0.00
700.00	5.25	102.39	699.79	-1.47	6.71	6.87	3.50	3.50	0.00	0.00



# Ryan Energy Technologies Planning Report



<b>Company:</b> Dominion E & P <b>Field:</b> Natural Buttes Field <b>Site:</b> HCU 15-32F <b>Well:</b> HCU 15-32F <b>Wellpath:</b> 1	<b>Date:</b> 11/14/2005 <b>Time:</b> 07:47:03 <b>Page:</b> 2 <b>Co-ordinate(NE) Reference:</b> HCU 15-32F, True North <b>Vertical (TVD) Reference:</b> east KB @ 5025' 0.0 <b>Section (VS) Reference:</b> Site (0.00N,0.00E,102.39Azi) <b>Plan:</b> Plan #1
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**Section 2 : Start Build 3.50**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
800.00	8.75	102.39	799.03	-4.09	18.61	19.05	3.50	3.50	0.00	0.00
900.00	12.25	102.39	897.34	-8.00	36.40	37.27	3.50	3.50	0.00	0.00
1000.00	15.75	102.39	994.35	-13.19	60.03	61.46	3.50	3.50	0.00	0.00
1100.00	19.25	102.39	1089.71	-19.64	89.40	91.53	3.50	3.50	0.00	0.00
1200.00	22.75	102.39	1183.05	-27.33	124.39	127.36	3.50	3.50	0.00	0.00
1291.32	25.95	102.39	1266.24	-35.41	161.16	165.00	3.50	3.50	0.00	0.00

**Section 3 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1300.00	25.95	102.39	1274.05	-36.22	164.87	168.80	0.00	0.00	0.00	180.00
1400.00	25.95	102.39	1363.97	-45.61	207.60	212.55	0.00	0.00	0.00	180.00
1500.00	25.95	102.39	1453.89	-55.00	250.33	256.31	0.00	0.00	0.00	180.00
1600.00	25.95	102.39	1543.81	-64.39	293.07	300.06	0.00	0.00	0.00	180.00
1700.00	25.95	102.39	1633.73	-73.78	335.80	343.81	0.00	0.00	0.00	180.00
1800.00	25.95	102.39	1723.65	-83.17	378.53	387.56	0.00	0.00	0.00	180.00
1900.00	25.95	102.39	1813.57	-92.56	421.27	431.32	0.00	0.00	0.00	180.00
2000.00	25.95	102.39	1903.49	-101.95	464.00	475.07	0.00	0.00	0.00	180.00
2100.00	25.95	102.39	1993.41	-111.34	506.74	518.82	0.00	0.00	0.00	180.00
2200.00	25.95	102.39	2083.33	-120.73	549.47	562.58	0.00	0.00	0.00	180.00
2300.00	25.95	102.39	2173.25	-130.12	592.20	606.33	0.00	0.00	0.00	180.00
2400.00	25.95	102.39	2263.17	-139.51	634.94	650.08	0.00	0.00	0.00	180.00
2500.00	25.95	102.39	2353.09	-148.90	677.67	693.83	0.00	0.00	0.00	180.00
2600.00	25.95	102.39	2443.01	-158.28	720.40	737.59	0.00	0.00	0.00	180.00
2700.00	25.95	102.39	2532.93	-167.67	763.14	781.34	0.00	0.00	0.00	180.00
2800.00	25.95	102.39	2622.85	-177.06	805.87	825.09	0.00	0.00	0.00	180.00
2900.00	25.95	102.39	2712.78	-186.45	848.60	868.84	0.00	0.00	0.00	180.00
3000.00	25.95	102.39	2802.70	-195.84	891.34	912.60	0.00	0.00	0.00	180.00
3100.00	25.95	102.39	2892.62	-205.23	934.07	956.35	0.00	0.00	0.00	180.00
3132.97	25.95	102.39	2922.26	-208.33	948.16	970.77	0.00	0.00	0.00	180.00

**Section 4 : Start Drop -2.50**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3200.00	24.27	102.39	2982.96	-214.43	975.94	999.22	2.50	-2.50	0.00	180.00
3300.00	21.77	102.39	3074.99	-222.82	1014.13	1038.32	2.50	-2.50	0.00	180.00
3400.00	19.27	102.39	3168.63	-230.34	1048.36	1073.37	2.50	-2.50	0.00	180.00
3500.00	16.77	102.39	3263.72	-236.98	1078.58	1104.30	2.50	-2.50	0.00	180.00
3600.00	14.27	102.39	3360.07	-242.72	1104.71	1131.06	2.50	-2.50	0.00	180.00
3677.00	12.35	102.39	3435.00	-246.53	1122.02	1148.78	2.50	-2.50	0.00	180.00
3700.00	11.77	102.39	3457.49	-247.56	1126.71	1153.59	2.50	-2.50	0.00	-180.00
3800.00	9.27	102.39	3555.80	-251.48	1144.54	1171.85	2.50	-2.50	0.00	180.00
3900.00	6.77	102.39	3654.81	-254.47	1158.17	1185.80	2.50	-2.50	0.00	180.00
4000.00	4.27	102.39	3754.34	-256.53	1167.57	1195.42	2.50	-2.50	0.00	180.00
4025.72	3.63	102.39	3780.00	-256.91	1169.30	1197.19	2.50	-2.50	0.00	180.00
4100.00	1.77	102.39	3854.19	-257.67	1172.71	1200.68	2.50	-2.50	0.00	-180.00
4170.82	0.00	102.39	3925.00	-257.90	1173.78	1201.78	2.50	-2.50	0.00	-180.00

**Section 5 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
4200.00	0.00	102.39	3954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4300.00	0.00	102.39	4054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4400.00	0.00	102.39	4154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4500.00	0.00	102.39	4254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4600.00	0.00	102.39	4354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4700.00	0.00	102.39	4454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4800.00	0.00	102.39	4554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
4900.00	0.00	102.39	4654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5000.00	0.00	102.39	4754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5045.82	0.00	102.39	4800.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39



# Ryan Energy Technologies Planning Report



<b>Company:</b> Dominion E & P <b>Field:</b> Natural Buttes Field <b>Site:</b> HCU 15-32F <b>Well:</b> HCU 15-32F <b>Wellpath:</b> 1	<b>Date:</b> 11/14/2005 <b>Time:</b> 07:47:03 <b>Page:</b> 3 <b>Co-ordinate(NE) Reference:</b> HCU 15-32F, True North <b>Vertical (TVD) Reference:</b> east.KB @ 5025' 0.0 <b>Section (VS) Reference:</b> Site (0.00N,0.00E,102.39Azi) <b>Plan:</b> Plan #1
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**Section 5 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N-S ft	+E-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5100.00	0.00	102.39	4854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5200.00	0.00	102.39	4954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5300.00	0.00	102.39	5054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5400.00	0.00	102.39	5154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5500.00	0.00	102.39	5254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5600.00	0.00	102.39	5354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5700.00	0.00	102.39	5454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5800.00	0.00	102.39	5554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
5900.00	0.00	102.39	5654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6000.00	0.00	102.39	5754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6100.00	0.00	102.39	5854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6200.00	0.00	102.39	5954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6245.82	0.00	102.39	6000.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6300.00	0.00	102.39	6054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6400.00	0.00	102.39	6154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6500.00	0.00	102.39	6254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6600.00	0.00	102.39	6354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6700.00	0.00	102.39	6454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6800.00	0.00	102.39	6554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
6900.00	0.00	102.39	6654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7000.00	0.00	102.39	6754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7040.82	0.00	102.39	6795.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7100.00	0.00	102.39	6854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7200.00	0.00	102.39	6954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7300.00	0.00	102.39	7054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7400.00	0.00	102.39	7154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7500.00	0.00	102.39	7254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7600.00	0.00	102.39	7354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7700.00	0.00	102.39	7454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7800.00	0.00	102.39	7554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7900.00	0.00	102.39	7654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39
7995.82	0.00	102.39	7750.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	102.39

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	+N-S ft	+E-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	102.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	102.39	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	102.39	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	102.39	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	102.39	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	102.39	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	0.00	102.39	550.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP
600.00	1.75	102.39	599.99	-0.16	0.75	0.76	3.50	3.50	0.00	
700.00	5.25	102.39	699.79	-1.47	6.71	6.87	3.50	3.50	0.00	
800.00	8.75	102.39	799.03	-4.09	18.61	19.05	3.50	3.50	0.00	
900.00	12.25	102.39	897.34	-8.00	36.40	37.27	3.50	3.50	0.00	
1000.00	15.75	102.39	994.35	-13.19	60.03	61.46	3.50	3.50	0.00	
1100.00	19.25	102.39	1089.71	-19.64	89.40	91.53	3.50	3.50	0.00	
1200.00	22.75	102.39	1183.05	-27.33	124.39	127.36	3.50	3.50	0.00	
1291.32	25.95	102.39	1266.24	-35.41	161.16	165.00	3.50	3.50	0.00	
1300.00	25.95	102.39	1274.05	-36.22	164.87	168.80	0.00	0.00	0.00	
1400.00	25.95	102.39	1363.97	-45.61	207.60	212.55	0.00	0.00	0.00	
1500.00	25.95	102.39	1453.89	-55.00	250.33	256.31	0.00	0.00	0.00	
1600.00	25.95	102.39	1543.81	-64.39	293.07	300.06	0.00	0.00	0.00	
1700.00	25.95	102.39	1633.73	-73.78	335.80	343.81	0.00	0.00	0.00	
1800.00	25.95	102.39	1723.65	-83.17	378.53	387.56	0.00	0.00	0.00	
1900.00	25.95	102.39	1813.57	-92.56	421.27	431.32	0.00	0.00	0.00	
2000.00	25.95	102.39	1903.49	-101.95	464.00	475.07	0.00	0.00	0.00	



# Ryan Energy Technologies Planning Report



<b>Company:</b> Dominion E & P <b>Field:</b> Natural Buttes Field <b>Site:</b> HCU 15-32F <b>Well:</b> HCU 15-32F <b>Wellpath:</b> 1	<b>Date:</b> 11/14/2005 <b>Time:</b> 07:47:03 <b>Page:</b> 4 <b>Co-ordinate(NE) Reference:</b> HCU 15-32F, True North <b>Vertical (TVD) Reference:</b> KB @ 5025' 0.0 <b>Section (VS) Reference:</b> Site (0.00N,0.00E,102.39Azi) <b>Plan:</b> Plan #1
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**Survey**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2100.00	25.95	102.39	1993.41	-111.34	506.74	518.82	0.00	0.00	0.00	
2200.00	25.95	102.39	2083.33	-120.73	549.47	562.58	0.00	0.00	0.00	
2300.00	25.95	102.39	2173.25	-130.12	592.20	606.33	0.00	0.00	0.00	
2400.00	25.95	102.39	2263.17	-139.51	634.94	650.08	0.00	0.00	0.00	
2500.00	25.95	102.39	2353.09	-148.90	677.67	693.83	0.00	0.00	0.00	
2600.00	25.95	102.39	2443.01	-158.28	720.40	737.59	0.00	0.00	0.00	
2700.00	25.95	102.39	2532.93	-167.67	763.14	781.34	0.00	0.00	0.00	
2800.00	25.95	102.39	2622.85	-177.06	805.87	825.09	0.00	0.00	0.00	
2900.00	25.95	102.39	2712.78	-186.45	848.60	868.84	0.00	0.00	0.00	
3000.00	25.95	102.39	2802.70	-195.84	891.34	912.60	0.00	0.00	0.00	
3100.00	25.95	102.39	2892.62	-205.23	934.07	956.35	0.00	0.00	0.00	
3132.97	25.95	102.39	2922.26	-208.33	948.16	970.77	0.00	0.00	0.00	
3200.00	24.27	102.39	2982.96	-214.43	975.94	999.22	2.50	-2.50	0.00	
3300.00	21.77	102.39	3074.99	-222.82	1014.13	1038.32	2.50	-2.50	0.00	
3400.00	19.27	102.39	3168.63	-230.34	1048.36	1073.37	2.50	-2.50	0.00	
3500.00	16.77	102.39	3263.72	-236.98	1078.58	1104.30	2.50	-2.50	0.00	
3600.00	14.27	102.39	3360.07	-242.72	1104.71	1131.06	2.50	-2.50	0.00	
3677.00	12.35	102.39	3435.00	-246.53	1122.02	1148.78	2.50	-2.50	0.00	Wasatch Tongue
3700.00	11.77	102.39	3457.49	-247.56	1126.71	1153.59	2.50	-2.50	0.00	
3800.00	9.27	102.39	3555.80	-251.48	1144.54	1171.85	2.50	-2.50	0.00	
3900.00	6.77	102.39	3654.81	-254.47	1158.17	1185.80	2.50	-2.50	0.00	
4000.00	4.27	102.39	3754.34	-256.53	1167.57	1195.42	2.50	-2.50	0.00	
4025.72	3.63	102.39	3780.00	-256.91	1169.30	1197.19	2.50	-2.50	0.00	Uteland Limestone
4100.00	1.77	102.39	3854.19	-257.67	1172.71	1200.68	2.50	-2.50	0.00	
4170.82	0.00	102.39	3925.00	-257.90	1173.78	1201.78	2.50	-2.50	0.00	Wasatch
4200.00	0.00	102.39	3954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4300.00	0.00	102.39	4054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4400.00	0.00	102.39	4154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4500.00	0.00	102.39	4254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4600.00	0.00	102.39	4354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4700.00	0.00	102.39	4454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4800.00	0.00	102.39	4554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
4900.00	0.00	102.39	4654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5000.00	0.00	102.39	4754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5045.82	0.00	102.39	4800.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	Chapita Wells
5100.00	0.00	102.39	4854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5200.00	0.00	102.39	4954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5300.00	0.00	102.39	5054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5400.00	0.00	102.39	5154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5500.00	0.00	102.39	5254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5600.00	0.00	102.39	5354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5700.00	0.00	102.39	5454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5800.00	0.00	102.39	5554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
5900.00	0.00	102.39	5654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6000.00	0.00	102.39	5754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6100.00	0.00	102.39	5854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6200.00	0.00	102.39	5954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6245.82	0.00	102.39	6000.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	Uteland Buttes
6300.00	0.00	102.39	6054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6400.00	0.00	102.39	6154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6500.00	0.00	102.39	6254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6600.00	0.00	102.39	6354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6700.00	0.00	102.39	6454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	



# Ryan Energy Technologies Planning Report



<b>Company:</b> Dominion E & P <b>Field:</b> Natural Buttes Field <b>Site:</b> HCU 15-32F <b>Well:</b> HCU 15-32F <b>Wellpath:</b> 1	<b>Date:</b> 11/14/2005 <b>Time:</b> 07:47:03 <b>Page:</b> 5 <b>Co-ordinate(NE) Reference:</b> HCU 15-32F, True North <b>Vertical (TVD) Reference:</b> est.KB @ 5025' 0.0 <b>Section (VS) Reference:</b> Site (0.00N,0.00E,102.39Azi) <b>Plan:</b> Plan #1
--	--

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6800.00	0.00	102.39	6554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
6900.00	0.00	102.39	6654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7000.00	0.00	102.39	6754.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7040.82	0.00	102.39	6795.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	Mesaverde
7100.00	0.00	102.39	6854.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7200.00	0.00	102.39	6954.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7300.00	0.00	102.39	7054.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7400.00	0.00	102.39	7154.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7500.00	0.00	102.39	7254.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7600.00	0.00	102.39	7354.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7700.00	0.00	102.39	7454.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7800.00	0.00	102.39	7554.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7900.00	0.00	102.39	7654.18	-257.90	1173.78	1201.78	0.00	0.00	0.00	
7995.82	0.00	102.39	7750.00	-257.90	1173.78	1201.78	0.00	0.00	0.00	BHL (Proposed)

**Formations**

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
3677.00	3435.00	Wasatch Tongue		0.00	0.00
4025.72	3780.00	Uteland Limestone		0.00	0.00
4170.82	3925.00	Wasatch		0.00	0.00
5045.82	4800.00	Chapita Wells		0.00	0.00
6245.82	6000.00	Uteland Buttes		0.00	0.00
7040.82	6795.00	Mesaverde		0.00	0.00

**Annotation**

MD ft	TVD ft	
550.00	550.00	KOP
7995.82	7750.00	BHL (Proposed)

**SURFACE USE PLAN**  
**CONDITIONS OF APPROVAL**

*Attachment for Permit to Drill*

**Name of Operator:** Dominion Exploration & Production  
**Address:** 14000 Quail Springs Parkway, Suite 600  
Oklahoma City, OK 73134  
**Well Location:** HCU 15-32F  
SHL: 760' FSL & 2246' FWL Section 32-10S-20E  
BHL: 500' FSL & 1600' FEL Section 32-10S-20E  
Uintah County, UT

The dirt contractor will be provided with an approved copy of the surface use plan of operations before initiating construction.

The state and tribal onsite for the well is pending at this time

1. **Existing Roads:**
  - a. The proposed well site is located approximately 13.12 miles south of Ouray, UT.
  - b. Directions to the proposed well site have been attached at the end of Exhibit B.
  - c. The use of roads under State and County Road Department maintenance are necessary to access the Hill Creek Unit. However, an encroachment permit is not anticipated since no upgrades to the State or County Road system are proposed at this time.
  - d. All existing roads will be maintained and kept in good repair during all phases of operation.
  - e. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.
  - f. Since no improvements are anticipated to the State, County, Tribal or BLM access roads no topsoil striping will occur.
  - g. An off-lease federal right-of-way is not anticipated for the access road or utility corridor since both are located within the existing Hill Creek Unit boundary.
  - h. A tribal right-of-way has been submitted for the wellsite, access and pipeline disturbances on Ute Indian Tribe surface.

2. Planned Access Roads:

- a. From the existing Hill Creek Road an access is proposed trending south approximately 200' to the proposed well site. The access consists of entirely new disturbance and crosses no significant drainages.
- b. A road design plan is not anticipated at this time.
- c. The proposed access road will consist of a 24' travel surface within a 30' disturbed area across tribal lands.
- d. BLM approval to construct and utilize the proposed access road is requested with this application.
- e. A maximum grade of 10% will be maintained throughout the project with minor cuts and fills required to access the well.
- f. No turnouts are proposed since the access road is only 200' long and adequate site distance exists in all directions.
- g. No low water crossings or culverts are anticipated. Adequate drainage structures will be incorporated into the road.
- h. No surfacing material will come from federal or Indian lands.
- i. No gates or cattle guards are anticipated at this time.
- j. Surface disturbance and vehicular travel will be limited to the approved location access road.
- k. All access roads and surface disturbing activities will conform to the standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, (1989).
- l. The operator will be responsible for all maintenance of the access road including drainage structures.

3. Location of Existing Wells:

- a. Exhibit B has a map reflecting these wells within a one mile radius of the proposed well.

4. Location of Production Facilities:

- a. All permanent structures will be painted a flat, non-reflective Desert Brown to match the standard environmental colors. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.
- b. Site security guidelines identified in 43 CFR 3163.7-5 and Onshore Oil and Gas Order No. 3 will be adhered to.
- c. A gas meter run will be constructed and located on lease within 500 feet of the wellhead. Meter runs will be housed and/or fenced. All gas production and measurement shall comply with the provisions of 43 CFR 3162. 7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.

- d. A tank battery will be constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All liquid hydrocarbons production and measurement shall conform to the provisions of 43 CFR 3162.7-3 and Onshore Oil and Gas Order No. 4 and Onshore Oil and Gas Order No. 5 for natural gas production and measurement.
- e. Any necessary pits will be properly fenced to prevent any wildlife and livestock entry.
- f. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic. The road will be maintained in a safe useable condition.
- g. The site will require periodic maintenance to ensure that drainages are kept open and free of debris, ice, and snow, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.
- h. A gas pipeline is associated with this application and is being applied for at this time. The proposed gas pipeline corridor will leave the northeast side of the well site and traverse 2,100' northeast to the proposed 6" pipeline corridor proposed for the HCU 11-32F. The pipeline crosses entirely tribal surface.
- i. The new gas pipeline will be a 6" steel surface line within a 20' wide utility corridor. The use of the proposed well site and access roads will facilitate the staging of the pipeline construction. A new pipeline length of approximately 2,100' is associated with this well.
- j. Dominion intends on installing the pipeline on the surface by welding many joints into long lengths, dragging the long lengths into position and then completing a final welding pass to join the long lengths together. Dominion intends on connecting the pipeline together utilizing conventional welding technology.

5. Location and Type of Water Supply:

- a. The location and type of water supply has been addressed as number 11 within the previous drilling plan information.

6. Source of Construction Material:

- a. The use of materials will conform to 43 CFR 3610.2-3.
- b. No construction materials will be removed from Ute Tribal or BLM lands.
- c. If any gravel is used, it will be obtained from a state approved gravel pit.

7. Methods of Handling Waste Disposal:

- a. All wastes associated with this application will be contained and disposed of utilizing approved facilities.
- b. Drill cuttings will be contained and buried on site.
- c. The reserve pit will be located outboard of the location and along the northwest side of the pad.

- d. The reserve pit will be constructed so as not to leak, break, or allow any discharge.
- e. The reserve pit will be lined with 12 mil minimum thickness plastic nylon reinforced liner material. The liner will overlay a felt liner pad only if rock is encountered during excavation. The pit liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. Pit walls will be sloped no greater than 2:1. A minimum 2-foot freeboard will be maintained in the pit at all times during the drilling and completion operation.
- f. The reserve pit has been located in cut material. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. After the reserve pit has dried, all areas not needed for production will be rehabilitated.
- g. No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completion of the well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well.
- h. Trash will be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at the completion of drilling operations. The contents of the trash container will be hauled off periodically to the approved Uintah County Landfill near Vernal, Utah.
- i. Produced fluids from the well other than water will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas, salt water or other produced fluids will be cleaned up and removed.
- j. After initial clean-up, a 400 bbl tank will be installed to contain produced waste water. This water will be transported from the tank to an approved Dominion disposal well for disposal.
- k. **Produced water from the production well will be disposed of at the RBU 13-11F or RBU 16-19F disposal wells in accordance with Onshore Order #7.**
- l. Any salts and/or chemicals, which are an integral part of the drilling system, will be disposed of in the same manner as the drilling fluid.
- m. Sanitary facilities will be on site at all times during operations. Sewage will be placed in a portable chemical toilet and the toilet replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

8. Ancillary Facilities:

- a. Garbage Containers and Portable Toilets are the only ancillary facilities proposed in this application.

9. Well Site Layout: (See Exhibit B)

- a. The well will be properly identified in accordance with 43 CFR 3162.6.
- b. Access to the well pad will be from the north.

- c. The pad and road designs are consistent with tribal specification
- d. A pre-construction meeting with responsible company representative, contractors, and the Ute Tribe will be conducted at the project site prior to commencement of surface-disturbing activities. The pad and road will be construction-staked prior to this meeting.
- e. The pad has been staked at its maximum size of 355' X 200'; however it will be constructed smaller if possible, depending upon rig availability. Should the layout change, this application will be amended and approved utilizing a sundry notice.
- f. All surface disturbing activities, will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.
- g. All cut and fill slopes will be such that stability can be maintained for the life of the activity.
- h. Diversion ditches will be constructed as shown around the well site to prevent surface waters from entering the well site area.
- i. The site surface will be graded to drain away from the pit to avoid pit spillage during large storm events.
- j. The stockpiled topsoil (first 6 inches or maximum available) will be stored in a windrow on the uphill side of the location to prevent any possible contamination. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss and contamination.
- k. Pits will remain fenced until site cleanup.
- l. The blooie line will be located at least 100 feet from the well head.
- m. Water injection may be implemented if necessary to minimize the amount of fugitive dust.

10. Plans for Restoration of the Surface:

- a. Site reclamation for a producing well will be accomplished for portions of the site not required for the continued operation of the well.
- b. The Operator will control noxious weeds along access road use authorizations, pipeline route authorizations, well sites, or other applicable facilities by spraying or mechanical removal. A list of noxious weeds may be obtained from the BLM or the appropriate County Extension Office. On Tribal administered land, it is required that a Pesticide Use Proposal be submitted and approved prior to the application of herbicides, pesticides or possibly hazardous chemicals.
- c. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. Once the reserve pit is dry, the plastic nylon reinforced liner shall be torn and perforated before backfilling of the reserve pit. The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours.
- d. The cut and fill slopes and all other disturbed areas not needed for the production operation will be top soiled and re-vegetated. The stockpiled topsoil will be evenly distributed over the disturbed area.
- e. Prior to reseeding the site, all disturbed areas, including the access road, will be scarified and

left with a rough surface. The site will then be seeded and/or planted as prescribed by the Ute Indian Tribe. The Ute Indian Tribe recommended seed mix will be detailed within their approval documents.

11. Surface and Mineral Ownership:

- a. Surface Ownership – Ute Indian Tribe under the management of the Bureau of Indian Affairs – Uintah and Ouray Agency, P.O. Box 130, 988 South 7500 East, Ft. Duchesne, Utah 84026, 435-722-4300.
- b. Mineral Ownership – State of Utah – under the management of the SITLA -State Office, 675 East 500 South, Suite 500, Salt Lake, City, Utah 84102-2818; 801-538-5100.

12. Other Information:

- a. AIA Archaeological has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by AIA Archaeological.
- b. Alden Hamblin has conducted a paleontological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Alden Hamblin.

13. Operator's Representative and Certification

<u>Title</u>	<u>Name</u>	<u>Office Phone</u>
Company Representative (Roosevelt)	Ken Secrest	1-435-722-4521
Company Representative (Oklahoma)	Carla Christian	1-405-749-5263
Agent for Dominion	Don Hamilton	1-435-637-4075

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exists; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Dominion Exploration & Production, Inc. and its contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided under Dominion's BLM bond. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature: Don Hamilton Date: 11-23-05

ORIGINAL

**DOMINION EXPLR. & PROD., INC.**

**LOCATION LAYOUT FOR**

HCU #14-32F, #13-32F, & #15-32F

SECTION 32, T10S, R20E, S.L.B.&M.

SE 1/4 SW 1/4

Proposed Access Road

F-6.0'  
El. 5000.7'



SCALE: 1" = 50'  
DATE: 2-28-05  
Drawn By: K.G.

F-2.4'  
El. 5004.3'

F-3.2'  
El. 5003.5'

Sta. 4+05

Round Corners  
as Needed

Approx.  
Toe of  
Fill Slope

**NOTE:**

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

FLARE PIT

El. 5008.0'  
C-1.3'

El. 5010.7'  
C-12.0'  
(btm. pit)

20' WIDE BENCH

El. 5007.7'  
C-1.0'

PIPE RACKS

C-0.2'  
El. 5006.9'

C-0.7'  
El. 5007.4'

RIG DOG HOUSE

135' Sta. 1+80

C-1.8'  
El. 5008.5'

Proposed Road Re-Route

10' WIDE BENCH

Total Pit Capacity  
W/2' of Freeboard  
= 15,290 Bbls. ±  
Total Pit Volume  
= 4,420 Cu. Yds.

El. 5009.8'  
C-3.1'

El. 5008.2'  
C-1.5'

TRAILER

Approx.  
Top of  
Cut Slope

El. 5015.7'  
C-17.0'  
(btm. pit)

RESERVE PITS  
(8' Deep)

Slope = 1-1/2:1

MUD TANKS

PUMP

MUD SHED

HOPPER

POWER

TOOLS

FUEL

TRASH

FUEL

TOILET

FUEL

STORAGE TANK

20' WIDE BENCH

C-4.9'  
El. 5011.6'

C-6.6'  
El. 5013.3'

Sta. 0+00

C-5.9'  
El. 5012.6'

Reserve Pit Backfill  
& Spoils Stockpile

C-6.7'  
El. 5013.4'

Elev. Ungraded Ground at #14-32 Location Stake = 5008.2'

Elev. Graded Ground at #14-32 Location Stake = 5006.7'

Topsoil Stockpile

UINTAH ENGINEERING & LAND SURVEYING

85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

*[Handwritten Signature]*

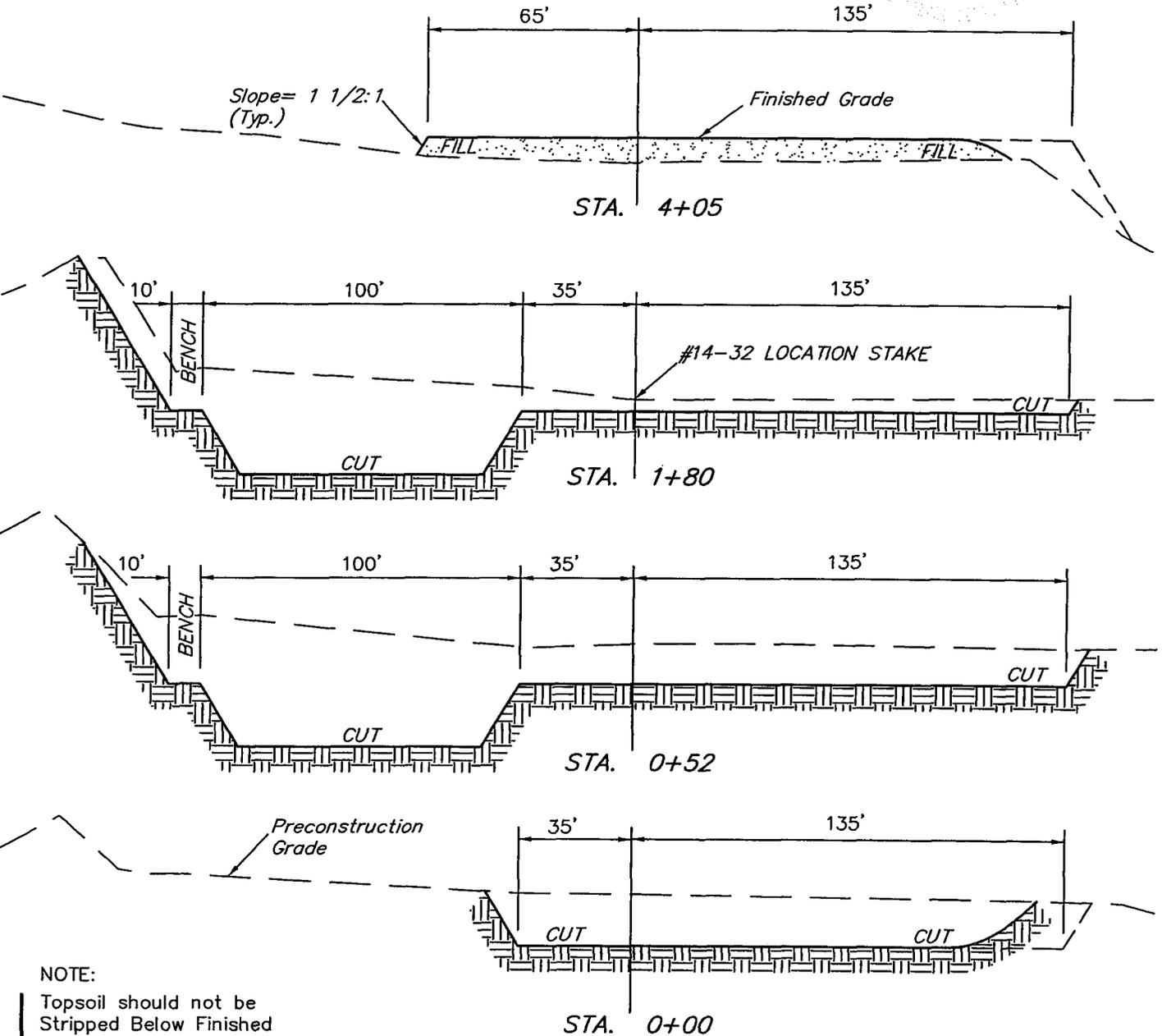
**DOMINION EXPLR. & PROD., INC.**

**TYPICAL CROSS SECTIONS FOR**

HCU #14-32F, #13-32F, & #15-32F  
SECTION 32, T10S, R20E, S.L.B.&M.  
SE 1/4 SW 1/4

*[Handwritten Signature]*

X-Section  
Scale  
1" = 50'  
DATE: 2-28-05  
Drawn By: K.G.



**NOTE:**

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

**APPROXIMATE YARDAGES**

<b>CUT</b>	
(12") Topsoil Stripping	= 4,150 Cu. Yds.
Remaining Location	= 12,550 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 16,700 CU.YDS.</b>
<b>FILL</b>	<b>= 2,940 CU.YDS.</b>

**\* NOTE:**

FILL QUANTITY INCLUDES 5% FOR COMPACTION

EXCESS MATERIAL	= 13,760 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 6,360 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 7,400 Cu. Yds.

# DOMINION EXPLR. & PROD., INC.

## HCU #13-32F, #14-32F & #15-32F

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 32, T10S, R20E, S.L.B.&M.



PHOTO: VIEW FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: SOUTHEASTERLY

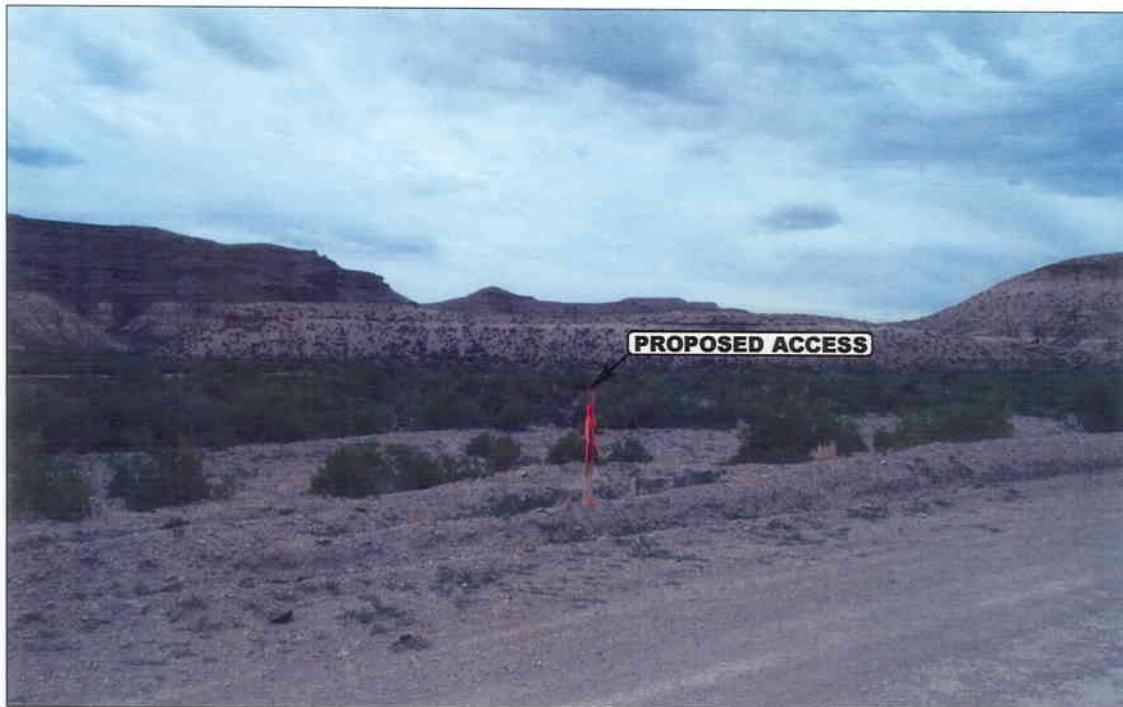


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY



- Since 1964 -

**U**  
**E**  
**L**  
**S** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

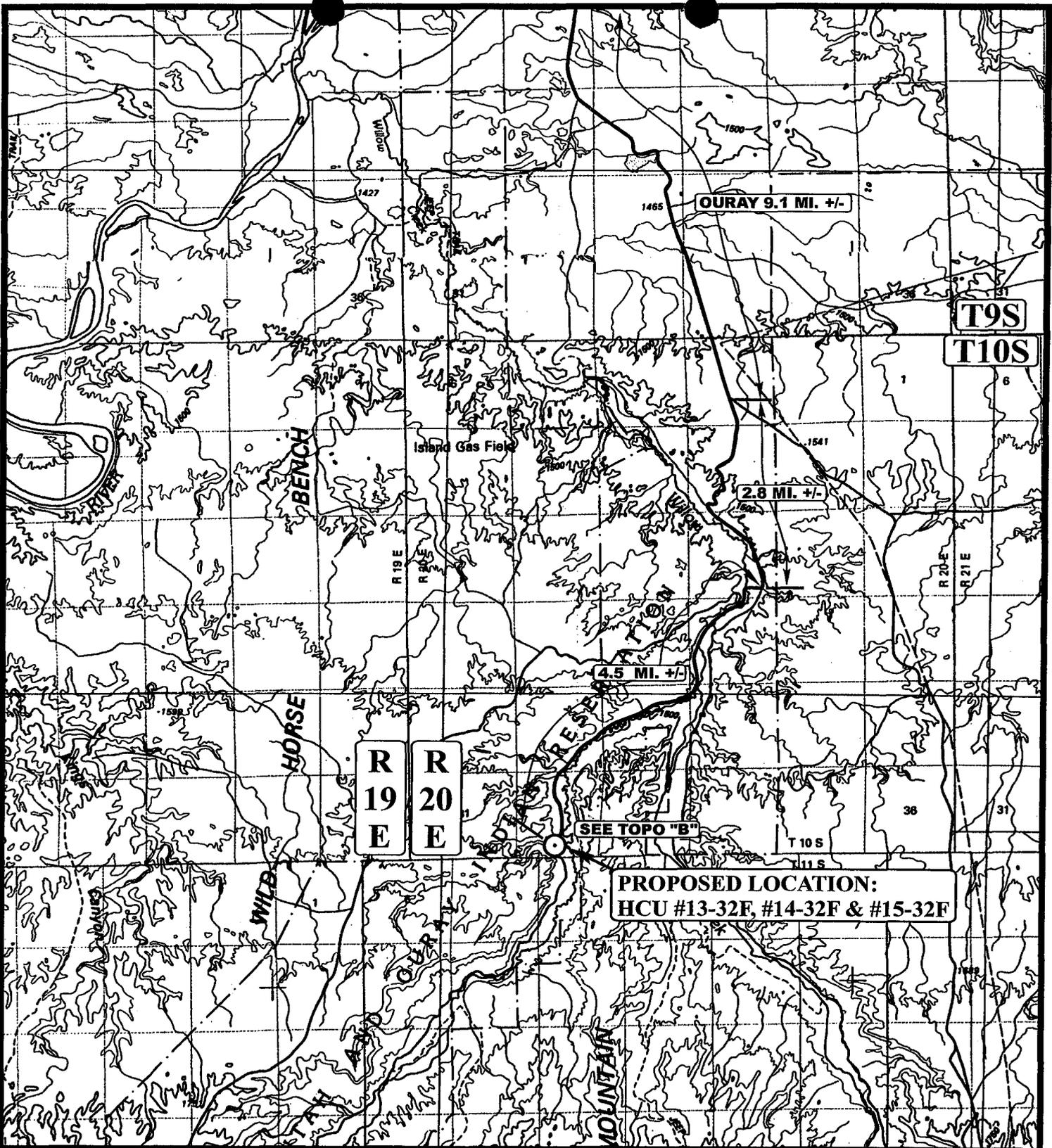
06 12 04  
MONTH DAY YEAR

PHOTO

TAKEN BY: B.B.

DRAWN BY: J.D.G.

REV: 02-17-05 P.M.



**PROPOSED LOCATION:  
HCU #13-32F, #14-32F & #15-32F**

**LEGEND:**

⊗ PROPOSED LOCATION

**DOMINION EXPLR. & PROD., INC.**

HCU #13-32F, #14-32F & #15-32F  
SECTION 32, T10S, R20E, S.L.B.&M.  
SE 1/4 SW 1/4



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

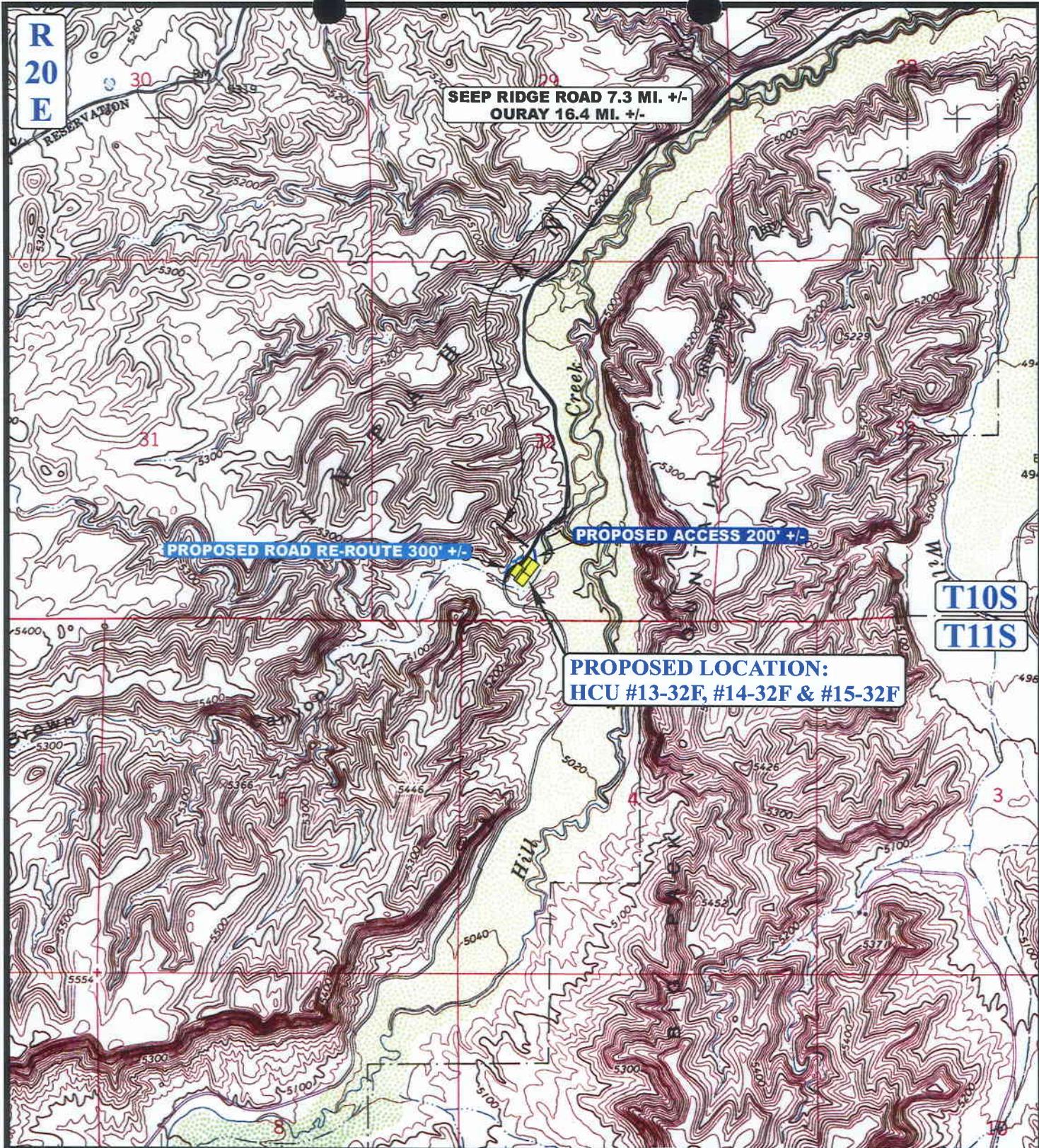


**TOPOGRAPHIC  
MAP**

**06 11 04**  
MONTH DAY YEAR

SCALE: 1:100,000 | DRAWN BY: J.G. | REV: 02-17-05 P.M.





SEEP RIDGE ROAD 7.3 MI. +/-  
OURAY 16.4 MI. +/-

PROPOSED ROAD RE-ROUTE 300' +/-

PROPOSED ACCESS 200' +/-

PROPOSED LOCATION:  
HCU #13-32F, #14-32F & #15-32F

T10S  
T11S

**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD
-  PROPOSED ROAD RE-ROUTE



**DOMINION EXPLR. & PROD., INC.**

HCU #13-32F, #14-32F & #15-32F  
SECTION 32, T10S, R20E, S.L.B.&M.  
SE 1/4 SW 1/4



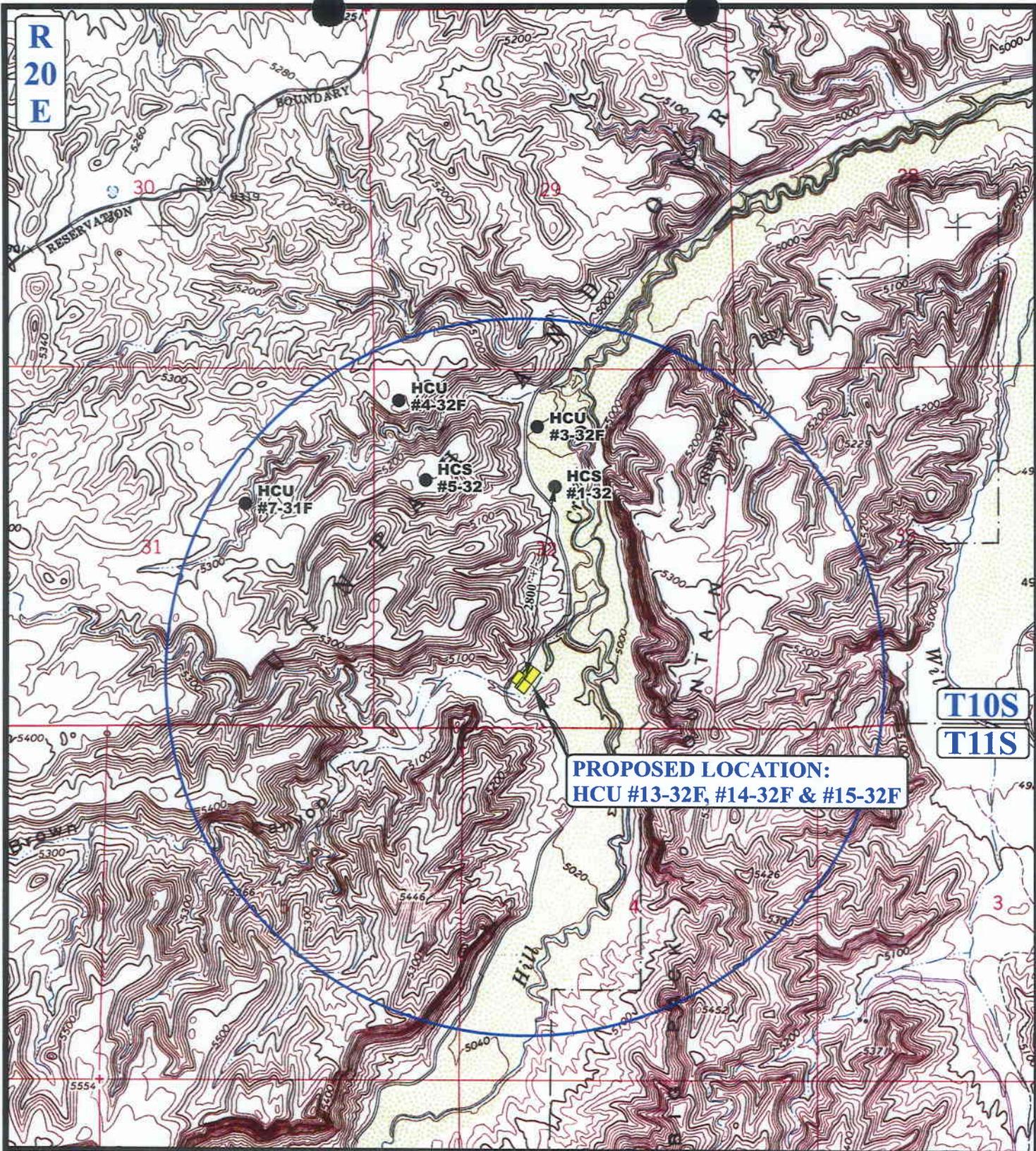
**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC  
MAP**

**06 11 04**  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: J.G. REV: 02-17-05 P.M.





R  
20  
E

T10S  
T11S

**PROPOSED LOCATION:  
HCU #13-32F, #14-32F & #15-32F**

**LEGEND:**

- |                   |                         |
|-------------------|-------------------------|
| ⊗ DISPOSAL WELLS  | ⊗ WATER WELLS           |
| ● PRODUCING WELLS | ● ABANDONED WELLS       |
| ⊖ SHUT IN WELLS   | ● TEMPORARILY ABANDONED |

**DOMINION EXPLR. & PROD., INC.**

**HCU #13-32F, #14-32F & #15-32F  
SECTION 32, T10S, R20E, S.L.B.&M.  
SE 1/4 SW 1/4**

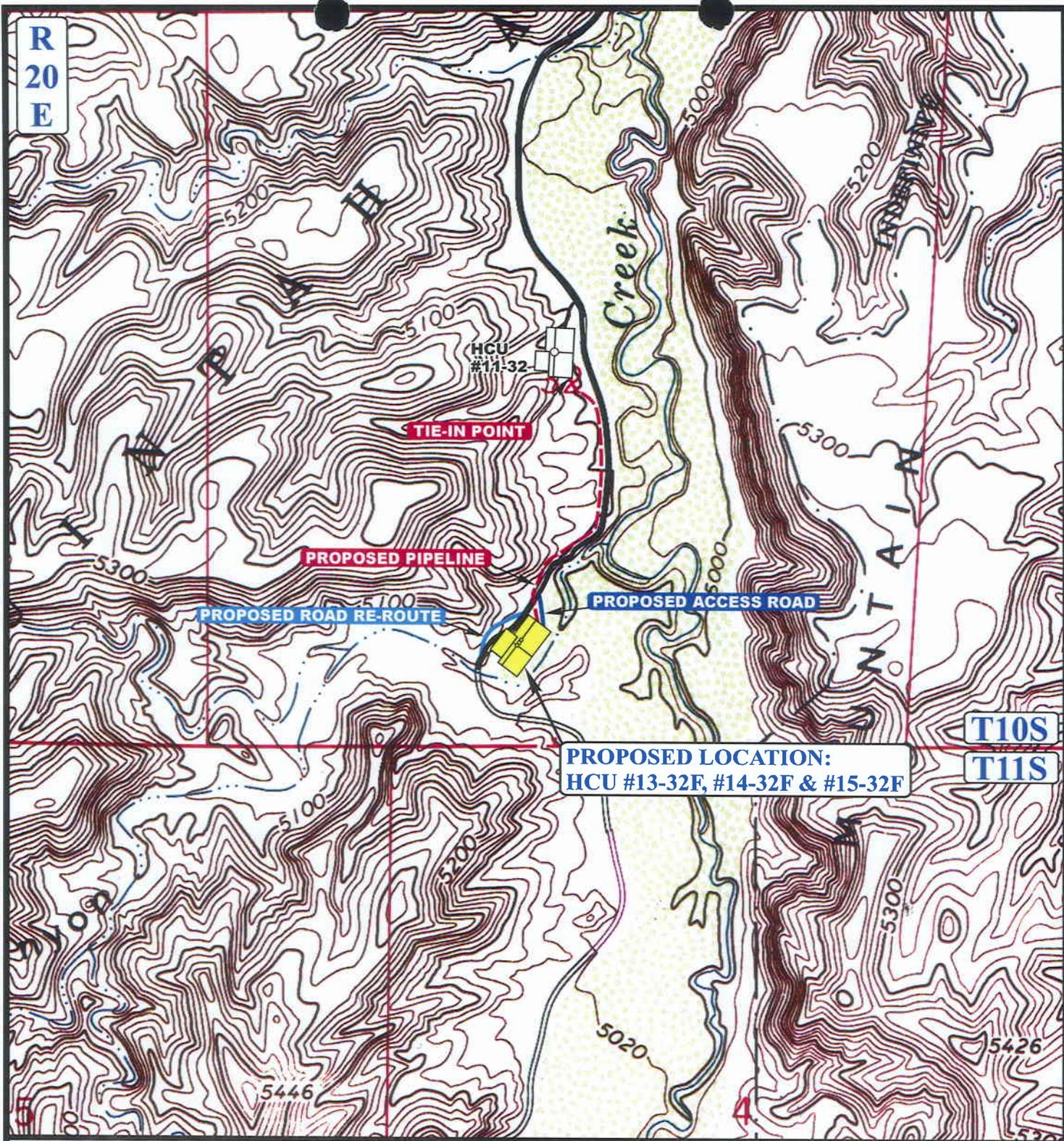


**Utah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC** 06 11 04  
**MAP** MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: J.G. REV: 02-17-05 P.M.





**APPROXIMATE TOTAL PIPELINE DISTANCE = 2,100' +/-**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE



**DOMINION EXPLR. & PROD., INC.**

HCU #13-32F, #14-32F & #15-32F  
 SECTION 32, T10S, R20E, S.L.B.&M.  
 SE 1/4 SW 1/4

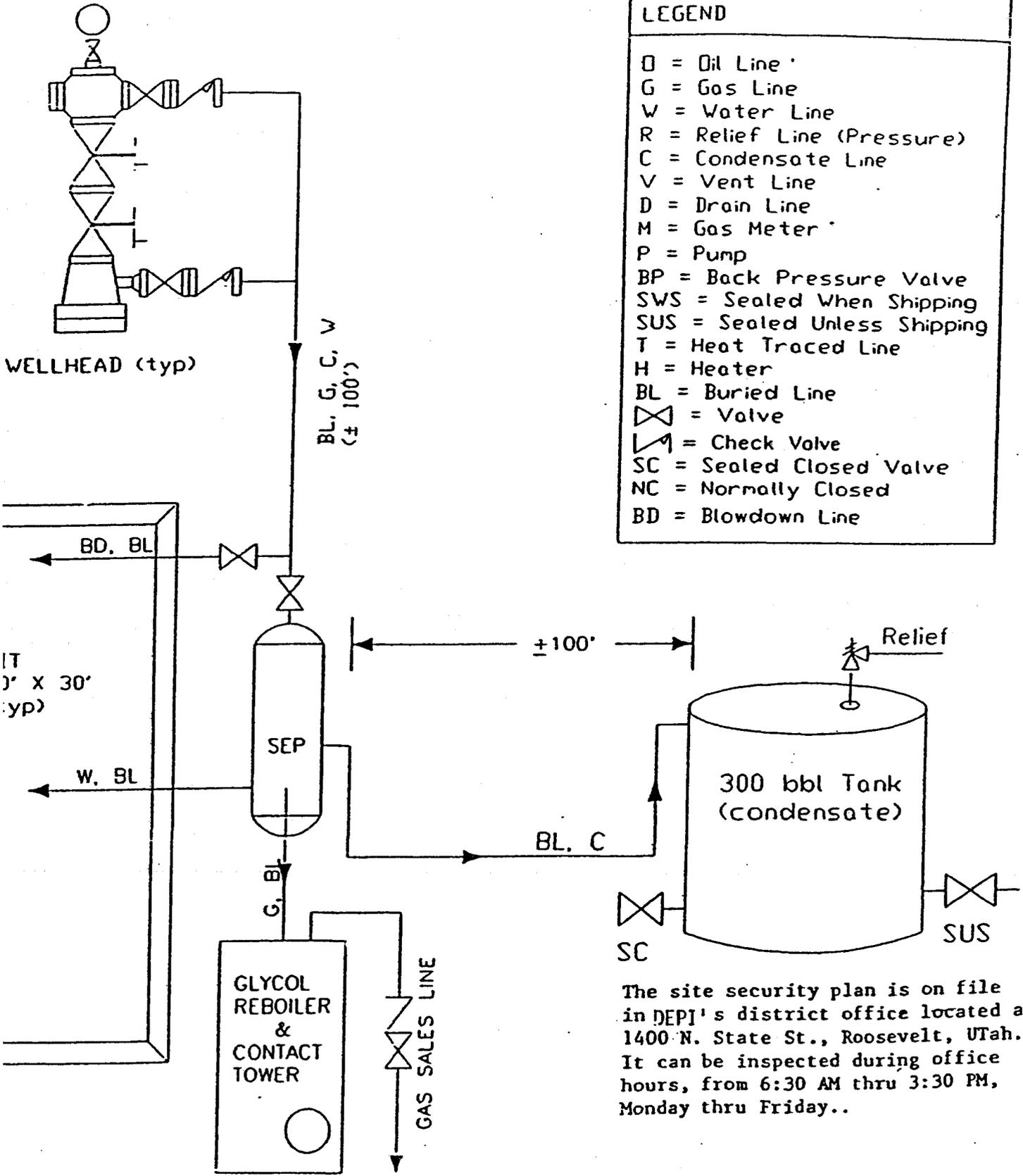
**UEIS** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP** 06 11 04  
 MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: J.D.G. REV: 02-17-05 P.M. **D TOPO**

CONFIDENTIAL

LEGEND

- O = Oil Line
- G = Gas Line
- W = Water Line
- R = Relief Line (Pressure)
- C = Condensate Line
- V = Vent Line
- D = Drain Line
- M = Gas Meter
- P = Pump
- BP = Back Pressure Valve
- SWS = Sealed When Shipping
- SUS = Sealed Unless Shipping
- T = Heat Traced Line
- H = Heater
- BL = Buried Line
- ⊗ = Valve
- ↗ = Check Valve
- SC = Sealed Closed Valve
- NC = Normally Closed
- BD = Blowdown Line



The site security plan is on file in DEPI's district office located at 1400 N. State St., Roosevelt, UTah. It can be inspected during office hours, from 6:30 AM thru 3:30 PM, Monday thru Friday..

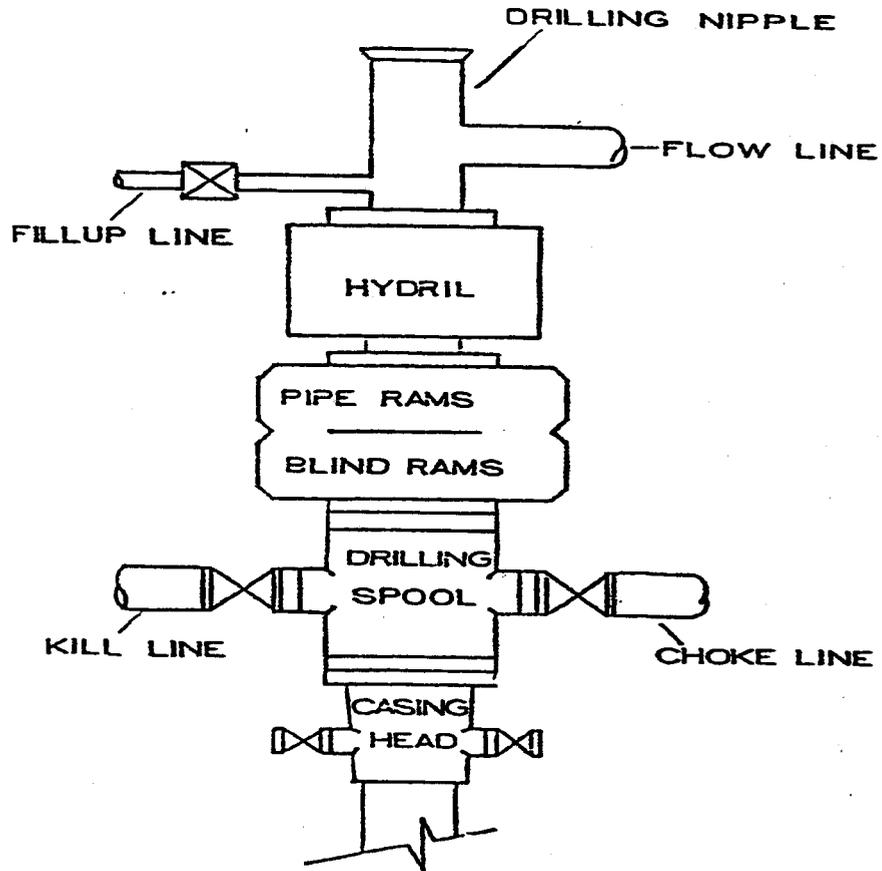
DOMINION EXPLORATION & PRODUCTION, INC.

TYPICAL FLOW DIAGRAM

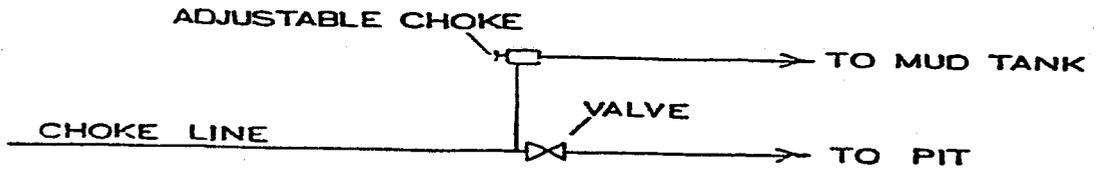
not to scale

date: / /

BOP STACK - 3000#



CHOKER MANIFOLD - 3000#



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 11/28/2005

API NO. ASSIGNED: 43-047-37422

WELL NAME: HCU 15-32F  
 OPERATOR: DOMINION EXPL & PROD ( N1095 )  
 CONTACT: DON HAMILTON

PHONE NUMBER: 435-650-1886

PROPOSED LOCATION:

SUSE

SESW 32 100S 200E  
 SURFACE: 0760 FSL 2246 FWL  
 BOTTOM: 0500 FSL 1600 FEL  
 UINTAH  
 NATURAL BUTTES ( 630 )

LEASE TYPE: 3 - State  
 LEASE NUMBER: ML-22313-2  
 SURFACE OWNER: 2 - Indian  
 PROPOSED FORMATION: MVRD  
 COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	11/5/05
Geology		
Surface		

LATITUDE: 39.89843  
 LONGITUDE: -109.6894

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]  
(No. 76S63050600 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 43-10447 )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

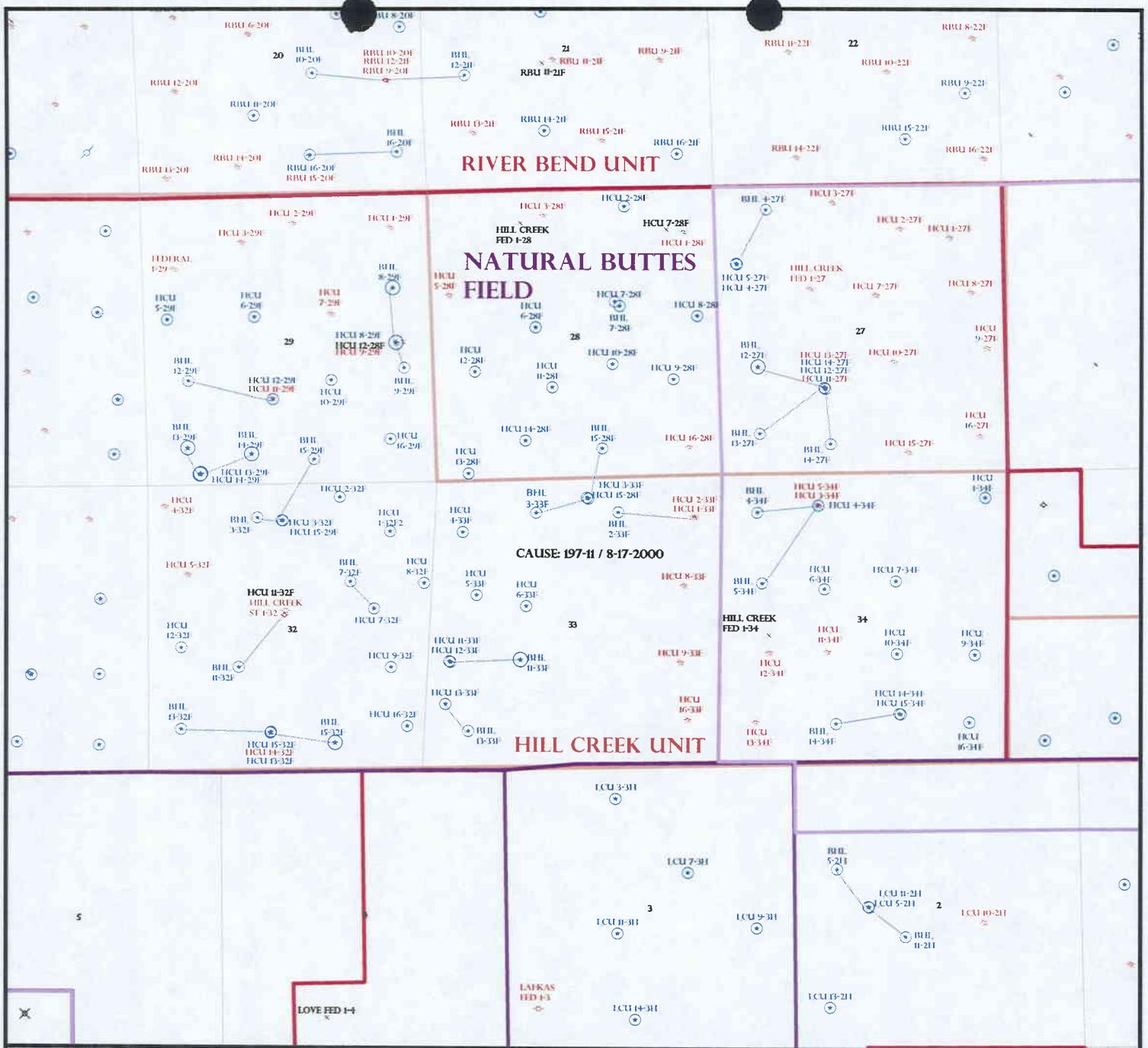
LOCATION AND SITING:

- \_\_\_ R649-2-3.
- Unit HILL CREEK
- \_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- \_\_\_ R649-3-3. Exception
- Drilling Unit  
Board Cause No: 197-11  
Eff Date: 8-17-2000  
Siting: Suspends Plans (Siting)
- R649-3-11. Directional Drill

COMMENTS: \_\_\_\_\_

S. IPULATIONS: ~~1- Federal Approval~~

2- Oil shale  
 3- STATEMENT OF BASIS



OPERATOR: DOMINION EXPL & PROD N1095)

SEC: 27,29,32 T. 10S R. 20E

FIELD: NATURAL BUTTES (630)

COUNTY: UINTAH

CAUSE: 197-11 / 8-17-2000

- Field Status**
- ABANDONED
  - ACTIVE
  - COMBINED
  - INACTIVE
  - PROPOSED
  - STORAGE
  - TERMINATED

- Unit Status**
- EXPLORATORY
  - GAS STORAGE
  - NF PP OIL
  - NF SECONDARY
  - PENDING
  - PI OIL
  - PP GAS
  - PP GEOTHERML
  - PP OIL
  - SECONDARY
  - TERMINATED

- Wells Status**
- GAS INJECTION
  - GAS STORAGE
  - LOCATION ABANDONED
  - NEW LOCATION
  - PLUGGED & ABANDONED
  - PRODUCING GAS
  - PRODUCING OIL
  - SHUT-IN GAS
  - SHUT-IN OIL
  - TEMP. ABANDONED
  - TEST WELL
  - WATER INJECTION
  - WATER SUPPLY
  - WATER DISPOSAL
  - DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY  
DATE: 29-NOVEMBER-2005

**DIVISION OF OIL, GAS AND MINING  
APPLICATION FOR PERMIT TO DRILL  
STATEMENT OF BASIS**

**OPERATOR:** Dominion Exploration & Production.  
**WELL NAME & NUMBER:** HCU 15-32F  
**API NUMBER:** 43-047-37422  
**LOCATION:** 1/4,1/4 SESW Sec: 32 TWP: 10S RNG: 20 E 760 FSL 2246 FWL  
BHL: 500 FSL 1600 FEL

**Geology/Ground Water:**

Dominion proposes to set 500 feet of surface casing and 2,800 feet of intermediate casing both cemented to the surface. The base of the moderately saline water is estimated at 5,000 feet. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. The surface formation at this location is the Uinta Formation. The Uinta Formation is made up of discontinuous sands interbedded with shales and are not expected to produce prolific aquifers. The proposed surface casing should adequately protect any near surface aquifers.

**Reviewer:** Brad Hill **Date:** 12-05-2005

**Surface:**

The Ute Tribe is the administrative agency over the ground surface at this location. The operator is responsible for obtaining any needed permits or rights of way before causing any surface disturbance.

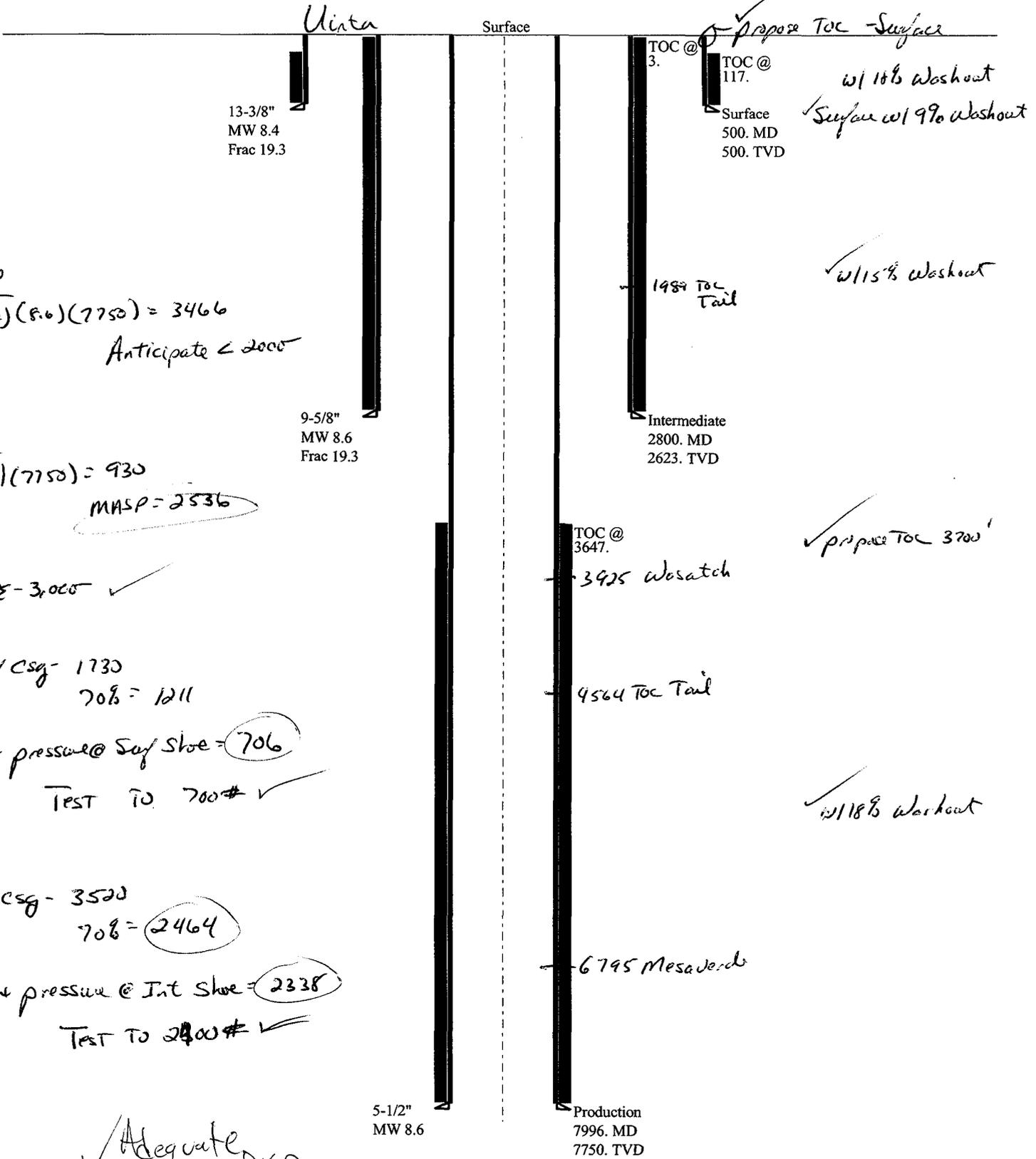
**Reviewer:** Brad Hill **Date:** 12-05-2005

**Conditions of Approval/Application for Permit to Drill:**

None.

# 12-05 Dominion HCU 15-52F

## Casing Schematic



BHP  
 $(6.052)(8.6)(7750) = 3466$   
 Anticipate  $< 2000$

Gao  
 $(0.12)(7750) = 930$   
 MASP = 2536

BOPE - 3,000 ✓

Surf csg - 1730  
 70% = 1211

Max pressure @ Surf shoe = 706  
 TEST TO 700# ✓

Int csg - 3520  
 70% = 2464

Max pressure @ Int shoe = 2338  
 TEST TO 2400# ✓

✓ Adequate DKO 12/5/05

Propose TOC - Surface  
 w/ 10% Washout  
 ✓ Surface w/ 9% Washout

✓ w/ 15% Washout

✓ propose TOC 3700'

✓ w/ 18% Washout

✓ Adequate DKO 12/5/05

Well name:	<b>12-05 Dominion HCU 15-32F</b>	
Operator:	<b>Dominion Exploration &amp; Production Inc.</b>	
String type:	Surface	Project ID: 43-047-37422
Location:	Uintah County, Utah	

**Design parameters:**

**Collapse**  
Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**  
Design factor 1.125

**Environment:**

H2S considered? No  
Surface temperature: 65 °F  
Bottom hole temperature: 72 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 299 ft

**Burst**

Max anticipated surface pressure: 27 psi  
Internal gradient: 0.436 psi/ft  
Calculated BHP 245 psi

**Burst:**  
Design factor 1.00

Cement top: 117 ft

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: 1.50 (B)

Non-directional string.

Tension is based on air weight.  
Neutral point: 438 ft

**Re subsequent strings:**  
Next setting depth: 2,623 ft  
Next mud weight: 8,600 ppg  
Next setting BHP: 1,172 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)	Internal Capacity (ft³)
1	500	13.375	48.00	H-40	ST&C	500	500	12.59	46.9
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	218	740	3.392	245	1730	7.05	24	322	13.42 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: (801) 538-5281  
FAX: (801)359-3940

Date: December 1,2005  
Salt Lake City, Utah

ENGINEERING STIPULATIONS -  
Collapse strength is based on the Westcott, Dunlop & Kernler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>12-05 Dominion HCU 15-32F</b>	
Operator:	<b>Dominion Exploration &amp; Production Inc.</b>	
String type:	Intermediate	Project ID: 43-047-37422
Location:	Uintah County, Utah	

**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: 65 °F  
Bottom hole temperature: 102 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 500 ft

Cement top: 4 ft

**Burst**

Max anticipated surface pressure: 857 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 1,172 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: 1.50 (B)

Tension is based on air weight.  
Neutral point: 2,429 ft

**Directional well information:**

Kick-off point 400 ft  
Departure at shoe: 825 ft  
Maximum dogleg: 3.5 °/100ft  
Inclination at shoe: 25.95 °

**Re subsequent strings:**

Next setting depth: 2,623 ft  
Next mud weight: 8.600 ppg  
Next setting BHP: 1,172 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,800 ft  
Injection pressure 2,800 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2800	9.625	36.00	J-55	LT&C	2623	2800	8.796	199.4
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	1172	2020	1.724	1172	3520	3.00	94	453	4.80 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & Mining

Phone: (801) 538-5281  
FAX: (801)359-3940

Date: December 1,2005  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS -**

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.*

Well name:	<b>12-05 Dominion HCU 15-32F</b>		
Operator:	<b>Dominion Exploration &amp; Production Inc.</b>		
String type:	Production	Project ID:	43-047-37422
Location:	Uintah County, Utah		

**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: 65 °F  
 Bottom hole temperature: 174 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,500 ft

Cement top: 3,647 ft

**Burst**

Max anticipated surface pressure: 81 psi  
 Internal gradient: 0.436 psi/ft  
 Calculated BHP 3,462 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: 1.50 (B)

**Directional well information:**

Kick-off point 400 ft  
 Departure at shoe: 1202 ft  
 Maximum dogleg: 3.5 °/100ft  
 Inclination at shoe: 0 °

Tension is based on air weight.

Neutral point: 6,985 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)	Internal Capacity (ft³)
1	7996	5.5	17.00	Mav-80	LT&C	7750	7996	4.767	275.5
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	3462	6290	1.817	3462	7740	2.24	132	273	2.07 B

Prepared by: Clinton Dworshak  
 Utah Div. of Oil & Mining

Phone: (801) 538-5281  
 FAX: (801)359-3940

Date: December 1,2005  
 Salt Lake City, Utah

**ENGINEERING STIPULATIONS -**

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.*

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

November 29, 2005

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2005 Plan of Development Hill Creek Unit Uintah County,  
Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2005 within the Hill Creek Unit, Uintah County, Utah.

API#	WELL NAME	LOCATION
(Proposed PZ MesaVerde)		
43-047-37422	HCU 15-32F Sec 32 T10S R20E 0760 FSL 2246 FWL	
	BHL Sec 32 T10S R20E 0500 FSL 1600 FEL	
43-047-37424	HCU 12-27F Sec 27 T10S R20E 1607 FSL 1885 FWL	
	BHL Sec 27 T10S R20E 1980 FSL 0660 FWL	
43-047-37425	HCU 14-29F Sec 29 T10S R20E 0232 FSL 0971 FWL	
	BHL Sec 29 T10S R20E 0600 FSL 1900 FWL	
43-047-37426	HCU 13-29F Sec 29 T10S R20E 0209 FSL 0961 FWL	
	BHL Sec 29 T10S R20E 0700 FSL 0750 FWL	
43-047-37427	HCU 8-29F Sec 29 T10S R20E 2593 FSL 0675 FEL	
	BHL Sec 29 T10S R20E 1700 FNL 0700 FEL	

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

December 5, 2005

Dominion Exploration & Production, Inc.  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, OK 73134

Re: Hill Creek Unit 15-32F Well, 760' FSL, 2246' FWL, SE SW, Sec. 32,  
T. 10 South, R. 20 East, Bottom Location 500' FSL, 1600' FEL, SW SE,  
Sec. 32, T. 10 South, R. 20 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

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. The API identification number assigned to this well is 43-047-37422.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
SITLA  
Bureau of Land Management, Vernal District Office



Page 2  
43-047-37422  
December 5, 2005

7. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.

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

FORM 9

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML - 22313-2
2. NAME OF OPERATOR: Dominion Exploration & Production, Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Indian Tribe
3. ADDRESS OF OPERATOR: 14000 Quail Springs CITY Oklahoma City STATE OK ZIP 73134		7. UNIT or CA AGREEMENT NAME: Hill Creek Unit
4. LOCATION OF WELL FOOTAGES AT SURFACE: 760' FSL & 2246' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 32 10S 20E		8. WELL NAME and NUMBER: HCU 15-32F
PHONE NUMBER: (405) 749-5237		9. API NUMBER: 43-047-37422
		10. FIELD AND POOL, OR WILDCAT: Natural Buttes
		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 (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>APD Expiration</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

The state APD for this well expires December 5, 2006. Dominion is hereby requesting a one year extension.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 11-21-06  
By: [Signature]

COPY SENT TO OPERATOR  
Date: 11-21-06  
Initial: RM

NAME (PLEASE PRINT) <u>Barbara Lester</u>	TITLE <u>Regulatory Specialist</u>
SIGNATURE <u>[Signature]</u>	DATE <u>11/16/2006</u>

(This space for State use only)

RECEIVED  
NOV 20 2006

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 43-047-37422  
**Well Name:** HCU 15-32F *20*  
**Location:** Section 32-10S-10E, 760' FSL & 2246' FWL  
**Company Permit Issued to:** Dominion Exploration & Production, Inc.  
**Date Original Permit Issued:** 12/5/2005

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes  No

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes  No

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes  No

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes  No

Has the approved source of water for drilling changed? Yes  No

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes  No

Is bonding still in place, which covers this proposed well? Yes  No

  
\_\_\_\_\_  
Signature

11/16/2006  
\_\_\_\_\_  
Date

Title: Regulatory Specialist

Representing: Dominion Exploration & Production, Inc.



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Uintah and Ouray Agency

P. O. Box 130

988 South 7500 East

Fort Duchesne, Utah 84026-0130

Ph (435) 722 4300 Fax (435) 722-2323

43-047-37422

IN REPLY REFER TO:  
Real Estate Services  
MS 420 - ROW

March 28, 2007

Mr. Ken Secrest  
Dominion Exploration & Production, Inc.  
P.O. Box 1360  
Roosevelt, Utah 84066

Dear Mr. Secrest:

This is your authority to proceed with construction of the following Administrative Modifications to provide additional well bores on the existing well pads:

ROW No.	New Well Name	Type of Modification
H62-1982-017	RBU 16-16F & RBU 13-15F	Adding the RBU 13-15F Well Bore
H62-2001-330	HCU 8-30F & HCU 7-30F	Adding the HCU 7-30F Well Bore
H62-2004-445	HCU 13-34F & LCU 1-3H	Adding the LCU 1-3H Well Bore
H62-2005-013	HCU 15-29F & HCU 2-23F	Adding the HCU 2-23F Well Bore
H62-2005-014	HCU 11-32F & HCU 10-32F	Adding the HCU 10-32F Well Bore
H62-2005-015	HCU 13-32F/14-32F/15-32F	Adding the HCU 15-32F Well Bore

Unless otherwise authorized, the Bureau of Indian Affairs and the Ute Indian Tribe do not authorize any additional or excess surface damage than that of the existing well pads.

Enclosed are the Administrative Modifications for each additional well bore. Upon completion, please submit an Affidavit of Completion so that we may record the Administrative Modification with our title plant.

Please contact the Ute Indian Tribe's Energy and Mineral Department prior to construction to obtain an access permit and retain this letter as your permit to construct upon tribal lands. **Also, remind your field personnel of the firearm restrictions on the Uintah and Ouray Reservation.**

If you have any questions please contact Bucky Secakuku, Realty Specialist, at (435) 722-4331.

Sincerely,

*D. A. Pelt*  
Acting Superintendent

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS

ADMINISTRATIVE  
MODIFICATION

ALLOTMENT NO.: \_\_\_\_\_  
ROW NO.: H62-2005-015

CONTRACT NO. \_\_\_\_\_  
T.B. \_\_\_\_\_  
PAGE \_\_\_\_\_

It is hereby agreed by and between the Superintendent for the Bureau of Indian Affairs, lessor(s), and Dominion Exploration & Production, Inc., lessee, that GRANT OF RIGHT OF WAY EASEMENT NO. H62-2005-015 be modified to provide the following:

1. Construct the HCU 15-32F well bore on the existing HCU 13-32F & HCU 14-32F well pad.
2. Change well name to read:

**HCU 13-32F & HCU 14-32F & HCU 15-32F**

RECORDED NO: 687-548-04

This modification does not change any of the terms, conditions, or stipulations except as specifically set forth herein.

(An Administrative Modification does not require the signature or approval of the Lessee)

\_\_\_\_\_  
N/A  
(Additional Lessee's of Record, if applicable)

\_\_\_\_\_  
N/A  
(Lessee)

\_\_\_\_\_  
N/A  
(Lessor)

\_\_\_\_\_  
N/A  
(Lessor)

UNITED STATES INDIAN SERVICE

The within the modification is hereby approved and declared to be made in accordance with the law and the rules and regulations prescribed by the Secretary of the Interior thereunder, and now in force.

Pursuant to authority delegated to the Assistant Secretary - Indian Affairs by 209 DM 8, 230 DM 1, and to the Western Regional Director by 3 IAM 4 (Release No. 99-03), and to the Superintendent/Field Representatives by 10 BIAM 11, as amended by Western Regional Release No. 97-1 an any further delegation needed to effectuate the reorganization embodied in DM Releases dated April, 2003.

DATE APPROVED: March 28, 2007

*D.M. Peltier*  
Acting Superintendent  
Uintah and Ouray Agency  
Fort Duchesne, Utah

**ACKNOWLEDGEMENT OF SUPERINTENDENT**

STATE OF UTAH            )  
                                  )ss  
COUNTY OF UINTAH    )

The foregoing instrument was acknowledged before me this 28<sup>th</sup> day of March, 2008, by Dinah M. Peltier, Acting Superintendent for the Bureau of Indian Affairs, Uintah & Ouray Agency.

Witness my hand and official seal.

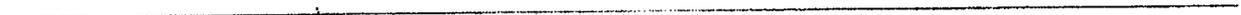
 Notary Public  
SARAH A. JACK  
981 S. 7500 E., P.O. Box 130  
Fort Duchesne, UT 84026  
My Commission Expires June 15, 2010

My Commission Expires: June 15, 2010

*Sarah A. Jack*  
Sarah A. Jack, Notary Public

*[Handwritten mark]*

**Did not include field Onsite EA**



Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

<b>ROUTING</b>
1. DJJ
2. CDW

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

7/1/2007

<b>FROM:</b> (Old Operator): N1095-Dominion Exploration & Production, Inc 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134  Phone: 1 (405) 749-1300	<b>TO:</b> ( New Operator): N2615-XTO Energy Inc 810 Houston St Fort Worth, TX 76102  Phone: 1 (817) 870-2800
--	--

WELL NAME	CA No.	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED LIST									

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 8/6/2007
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/6/2007
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/6/2007
- 4a. Is the new operator registered in the State of Utah: Business Number: 5655506-0143
- 4b. If **NO**, the operator was contacted on: \_\_\_\_\_
- 5a. (R649-9-2)Waste Management Plan has been received on: IN PLACE
- 5b. Inspections of LA PA state/fee well sites complete on: n/a
- 5c. Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA
- Federal and Indian Units:**  
 The BLM or BIA has approved the successor of unit operator for wells listed on: \_\_\_\_\_
- Federal and Indian Communization Agreements ("CA"):**  
 The BLM or BIA has approved the operator for all wells listed within a CA on: \_\_\_\_\_
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: \_\_\_\_\_

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 9/27/2007
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/27/2007
- Bond information entered in RBDMS on: 9/27/2007
- Fee/State wells attached to bond in RBDMS on: 9/27/2007
- Injection Projects to new operator in RBDMS on: 9/27/2007
- Receipt of Acceptance of Drilling Procedures for APD/New on: 9/27/2007

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UTB000138
- Indian well(s) covered by Bond Number: n/a
- 3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 104312762
- 3b. The **FORMER** operator has requested a release of liability from their bond on: 1/23/2008  
 The Division sent response by letter on: \_\_\_\_\_

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: \_\_\_\_\_

**COMMENTS:**

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

		5. LEASE DESIGNATION AND SERIAL NUMBER:
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: <b>SEE ATTACHED</b>
2. NAME OF OPERATOR: <b>XTO Energy Inc.</b> <i>N2615</i>		9. API NUMBER: <b>SEE ATTACHED</b>
3. ADDRESS OF OPERATOR: <b>810 Houston Street</b> CITY <b>Fort Worth</b> STATE <b>TX</b> ZIP <b>76102</b>		10. FIELD AND POOL, OR WILDCAT: <b>Natural Buttes</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>SEE ATTACHED</b>		COUNTY: <b>Uintah</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <b>UTAH</b>

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

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

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

Effective July 1, 2007, XTO Energy Inc. has purchased the wells listed on the attachment from:

Dominion Exploration & Production, Inc. *N1095*  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, OK 73134

*James D. Abercrombie* *(405) 749-1300*  
James D. Abercrombie  
Sr. Vice President, General Manager - Western Business Unit

Please be advised that XTO Energy Inc. is considered to be the operator on the attached list and is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands. Bond coverage is provided by Nationwide BLM Bond #104312750 and Department of Natural Resources Bond #104312762.

NAME (PLEASE PRINT) Edwin S. Ryan, Jr. TITLE Sr. Vice President - Land Administration  
SIGNATURE *Edwin S. Ryan, Jr.* DATE 7/31/2007

(This space for State use only)

**APPROVED** 9127107  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

**RECEIVED**  
**AUG 06 2007**  
DIV. OF OIL, GAS & MINING

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

**Request to Transfer Application or Permit to Drill**

(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

Well name:	SEE ATTACHED LIST
API number:	
Location:	Qtr-Qtr:                      Section:                      Township                      Range
Company that filed original application:	DOMINION E&P
Date original permit was issued:	
Company that permit was issued to:	DOMINION E&P

Check one	Desired Action:
<input type="checkbox"/>	<b>Transfer pending (unapproved) Application for Permit to Drill to new operator</b>
<input type="checkbox"/>	The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application.
<input checked="" type="checkbox"/>	<b>Transfer approved Application for Permit to Drill to new operator</b>
<input type="checkbox"/>	The undersigned as owner with legal rights to drill on the property as permitted, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.	Yes	No
If located on private land, has the ownership changed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If so, has the surface agreement been updated?	<input type="checkbox"/>	<input type="checkbox"/>
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the approved source of water for drilling changed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is bonding still in place, which covers this proposed well? Bond No. <u>104312762</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

Name (please print) HOLLY C. PERKINS Title REGULATORY COMPLIANCE TECH  
 Signature *Holly C. Perkins* Date 08/27/2007  
 Representing (company name) XTO ENERGY INC.

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

**AUG 30 2007**

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

api	well_name	qtr_qtr	sec	tpw	rng	lease_num	entity	Lease	well	stat
4304735938	HCU 15-29F	NENW	32	100S	200E	U-28203		Federal	GW	APD
4304736047	HCU 15-31F	SWSE	31	100S	200E	U-30693		Federal	GW	APD
4304737361	HCU 2-28F	NWNE	28	100S	200E	U-28203		Federal	OW	APD
4304737444	HCU 15-33F	SWSE	33	100S	200E	14-20-H62-4782		Indian	OW	APD
4304738450	HCU 16-31F	NESE	31	100S	200E	U-30693		Federal	GW	APD
4304739611	HCU 12-29F	NWSW	29	100S	200E	U-28203		Federal	OW	NEW
4304737359	HCU 2-32F	NWNE	32	100S	200E	ML-22313-2		State	GW	APD
4304737422	HCU 15-32F	SESW	32	100S	200E	ML-22313-2		State	GW	APD
4304739063	HCU 10-32F	SESW	32	100S	200E	ML-22313-2		State	GW	APD



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3180  
UT-922

Dominion Exploration & Production, Inc.  
Attn: James D. Abercrombie  
14000 Quail Springs Parkway, #600  
Oklahoma City, OK 73134-2600

August 10, 2007

Re: Hill Creek Unit  
Uintah County, Utah

Gentlemen:

On August 8, 2007, we received an indenture dated June 30, 2007, whereby Dominion Exploration & Production, Inc. resigned as Unit Operator and XTO Energy Inc. was designated as Successor Unit Operator for the Hill Creek Unit, Uintah County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective August 15, 2007. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Hill Creek Unit Agreement.

Your statewide oil and gas Bond No. UTB000138 will be used to cover all operations within the River Bend Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

*/s/ Greg J. Noble*

Greg J. Noble  
Acting Chief, Branch of Fluid Minerals

Enclosure

RECEIVED

AUG 16 2007

DIV. OF OIL, GAS & MINING

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

<b>1. TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-22312-2
<b>2. NAME OF OPERATOR:</b> XTO Energy, Inc.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> N/A
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 1360      CITY Roosevelt      STATE CO      ZIP 84066		<b>7. UNIT or CA AGREEMENT NAME:</b> Hill Creek Unit
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: 760' FSL & 2,246' FWL  QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 32 10S 20E S		<b>8. WELL NAME and NUMBER:</b> HCU 15-32F  <b>9. API NUMBER:</b> 4304737422  <b>10. FIELD AND POOL, OR WLD/CAT:</b> Natural Buttes
		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"/> <b>NOTICE OF INTENT</b> (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Permit Extension</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

XTO Energy, Inc. hereby requests a one year extension of the state permit for the referenced well.

This is the second extension that has been requested.

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

Date: 10-29-07  
 By: [Signature]

NAME (PLEASE PRINT) <u>Marnie Griffin</u>	TITLE <u>Agent for XTO Energy, Inc.</u>
SIGNATURE <u>[Signature]</u>	DATE <u>10/26/2007</u>

(This space for State use only)

COPY SENT TO OPERATOR  
 Date: 10-30-07  
 Initials: RM

(See Instructions on Reverse Side)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>ML 22313-2</b>
2. Name of Operator <b>XTO Energy Inc.</b>		6. If Indian, Allottee or Tribe Name <b>UTE INDIAN TRIBE</b>
3a. Address <b>382 CR 3100 Aztec, NM 87410</b>	3b. Phone No. (include area code) <b>505-333-3100</b>	7. If Unit or CA/Agreement, Name and/or No. <b>HILL CREEK UNIT</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>760' FSL &amp; 2246' FWL SESW, SEC 32, T10S, R20E, S</b>		8. Well Name and No. <b>HCU 15-32F</b>
		9. API Well No. <b>43-047-37422</b>
		10. Field and Pool, or Exploratory Area <b>NATURAL BUTTES</b>
		11. County or Parish, State <b>UINTAH UT</b>

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

XTO Energy Inc. proposes to change elements of the drilling program as detailed in the attached document.

**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**  
DATE: 6/13/08  
BY: [Signature]  
\* See cause 190-5(b)

**COPY SENT TO OPERATOR**  
Date: 6.17.2008  
Initials: KS

**RECEIVED**  
**JUN 09 2008**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>WANETT MCCAULEY</b>		Title <b>FILE CLERK</b>
Signature <u>Wanett McCauley</u>		Date <b>06/04/2008</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

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

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

**DOG M. COPY**

# XTO ENERGY INC.

HCU 15-32F

APD Data

June 3, 2008

Location: 760' FSL & 2246' FWL, Sec. 32, T10S, R20E County: Uintah

State: Utah

Bottomhole Location: 500' FSL & 1600' FEL, Sec. 32, T10S, R20E

GREATEST PROJECTED TD: 7947' MD/ 7750' TVD  
APPROX GR ELEV: 5007'

OBJECTIVE: Wasatch/Mesaverde  
Est KB ELEV: 5021' (14' AGL)

## 1. MUD PROGRAM:

INTERVAL	0' to 2292'	2292' to 7947'
HOLE SIZE	12.25"	7.875"
MUD TYPE	FW/Spud Mud	KCl Based LSND / Gel Chemical
WEIGHT	8.80	8.6-9.2
VISCOSITY	NC	30-60
WATER LOSS	NC	8-15

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing purposes. The mud system will be monitored visually/manually.

## 2. CASING PROGRAM:

Surface Casing: 9.625" casing set at  $\pm 2292'$  MD/2200' TVD in a 12.25" hole filled with 8.8 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-2292'	2292'	36#	J-55	ST&C	2020	3520	394	8.921	8.765	2.57	4.47	4.78

Production Casing: 5.5" casing set at  $\pm 7947'$  MD/7750' TVD in a 7.875" hole filled with 9.20 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-7947'	7947'	17#	N-80	LT&C	6280	7740	348	4.892	4.767	2.14	2.64	2.58

Collapse and burst loads calculated at TVD with 0.1 psi/ft gas gradient back up.

## 3. WELLHEAD:

- A. Casing Head: Larkin Fig 92 (or equivalent), 9" nominal, 2,000 psig WP (4,000 psig test) with 9-5/8" 8rnd thread on bottom (or slip-on, weld-on) and 11-3/4" 8rnd thread on top.
- B. Tubing Head: Larkin Fig 612 (or equivalent), 6.456" nominal, 5,000 psig WP, 5-1/2" 8rnd female thread on bottom (or slip-on, weld-on), 8-5/8" 8rnd thread on top.

## 4. CEMENT PROGRAM:

- A. Surface: 9.625", 36#, J-55 (or equiv.), ST&C casing to be set at  $\pm 2292'$  in 12.25" hole.

### LEAD:

$\pm 228$  sx of Premium Plus V Blend. (Type V/Poz/Gel) or equivalent, with dispersant, fluid loss, accelerator, & LCM mixed at 11.0 ppg, 3.82 ft<sup>3</sup>/sk, 22.95 gal wtr/sx.

TAIL:

350 sx Class G or equivalent cement with bonding additive, LCM, dispersant, & fluid loss mixed at 15.6 ppg, 1.2 cuft/sx

*Total estimated slurry volume for the 9.625" surface casing is 1290.3 ft<sup>3</sup>. Slurry includes 75% excess of calculated open hole annular volume to 2292'.*

B. Production: 5.5", 17#, N-80 (or equiv.), LT&C casing to be set at ±7947' in 7.875" hole.

LEAD:

±216 sx of Premium Plus V Blend. (Type V/Poz/Gel) or equivalent, with dispersant, fluid loss, accelerator, & LCM mixed at 11.6 ppg, 3.10 ft<sup>3</sup>/sk, 17.71 gal wtr/sx.

TAIL:

400 sx Class G or equivalent cement with poz, bonding additive, LCM, dispersant, & fluid loss mixed at 13.0 ppg, 1.49 cuft/sx, 9.09 gal/sx.

*Total estimated slurry volume for the 5.5" production casing is 1267.1 ft<sup>3</sup>. Slurry includes 15% excess of calculated open hole annular volume.*

*Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined from the caliper logs plus 15% or greater excess. The cement is designed to circulate on surface casing string. The production casing is designed for 1792' top of cement..*

**5. LOGGING PROGRAM:**

- A. Mud Logger: The mud logger will come on at intermediate casing point and will remain on the hole until TD. The mud will be logged in 10' intervals.
- B. Open Hole Logs as follows: Run Array Induction/SFL/GR/SP fr/TD (7947') to the bottom of the surface csg. Run Neutron/Lithodensity/Pe/GR/Cal from TD (7947') to 2292'. Run Gamma Ray to surface.

**8. BOP EQUIPMENT:**

Surface will not utilize a bop stack.

Production hole will be drilled with a 3000 psi BOP stack.

Minimum specifications for pressure control equipment are as follows:

Ram Type: 11" Hydraulic double ram with annular, 3000 psi w.p.

Ram type preventers and associated equipment shall be tested to stack working pressure if isolated by test plug or to 70% of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10% in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.

Annular type preventers (if used) shall be tested to 50% of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above test shall be performed:

- a. when initially installed:
- b. whenever any seal subject to test pressure is broken
- c. following related repairs: and
- d. at 30 day intervals

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s) shall be held open or the ball removed.

Annular preventers (if used) shall be functionally operated at least weekly.

Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No.2 for equipment and testing requirements, procedures, etc., and individual components shall be operable as designed. Chart recorders shall be used for all pressure tests. Pressure tests shall apply to all related well control equipment.

BOP systems shall be consistent with API RP53. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Test pressures for BOP equipment are as follows:

- Annular BOP -- 1500 psi
- Ram type BOP -- 3000 psi
- Kill line valves -- 3000 psi
- Choke line valves and choke manifold valves -- 3000 psi
- Chokes -- 3000 psi
- Casing, casinghead & weld -- 1500 psi
- Upper kelly cock and safety valve -- 3000 psi
- Dart valve -- 3000 psi

Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

The BLM in Vernal, UT shall be notified, at least 24 hours prior to initiating the pressure test, in order to have a BLM representative on location during pressure testing.

- a. The size and rating of the BOP stack is shown on the attached diagram.
- b. A choke line and a kill line are to be properly installed.
- c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.

d. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

e. See attached BOP & Choke manifold diagrams.

9. **COMPANY PERSONNEL:**

<b><u>Name</u></b>	<b><u>Title</u></b>	<b><u>Office Phone</u></b>	<b><u>Home Phone</u></b>
John Egelston	Drilling Engineer	505-333-3163	505-330-6902
Bobby Jackson	Drilling Superintendent	505-333-3224	505-486-4706
Glen Christiansen	Project Geologist	817-885-2800	



# Well Name: HCU 15-32F

San Juan Division  
Drilling Department

Calculation Method: Minimum Curvature  
Geodetic Datum: North American Datum 1983  
Lat: 39° 53' 54.521 N  
Long: 109° 41' 23.978 W



Azimuths to True North  
Magnetic North: 11.53°

Magnetic Field  
Strength: 52583.3nT  
Dip Angle: 65.83°  
Date: 4/22/2008  
Model: IGRF200510

### SECTION DETAILS

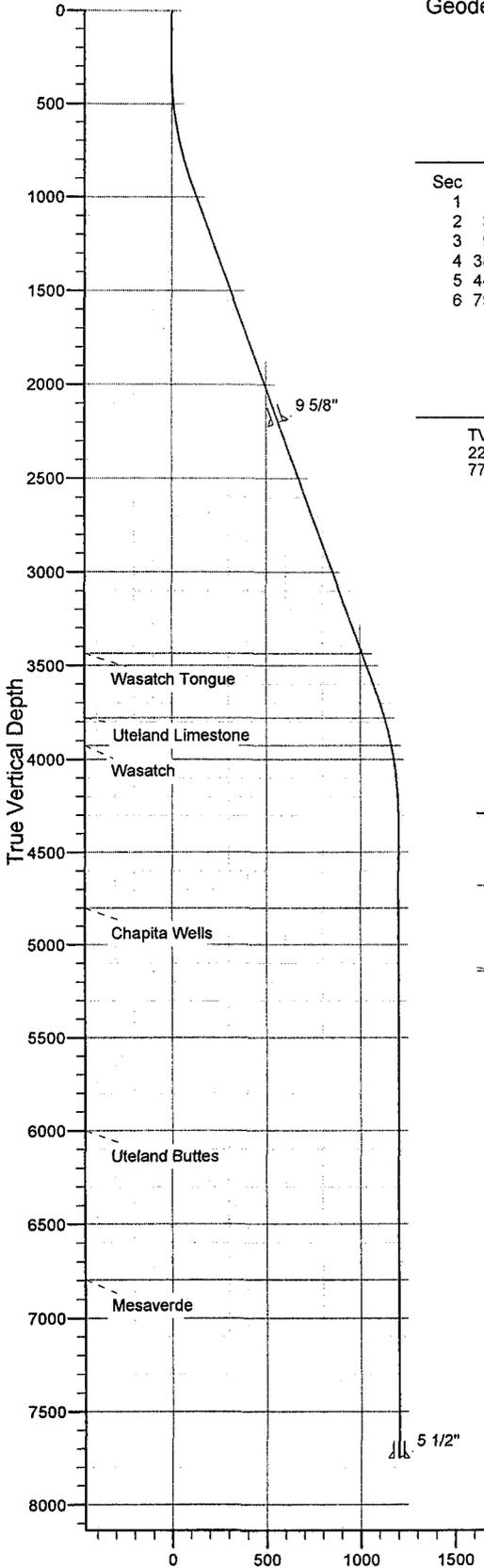
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	961.1	19.83	102.39	947.9	-24.3	110.6	3.00	102.39	113.3	
4	3835.7	19.83	102.39	3652.1	-233.6	1063.2	0.00	0.00	1088.5	
5	4496.7	0.00	0.00	4300.0	-257.9	1173.8	3.00	180.00	1201.8	HCU 15-32F -- Requested BHL
6	7946.7	0.00	0.00	7750.0	-257.9	1173.8	0.00	0.00	1201.8	

### CASING DETAILS

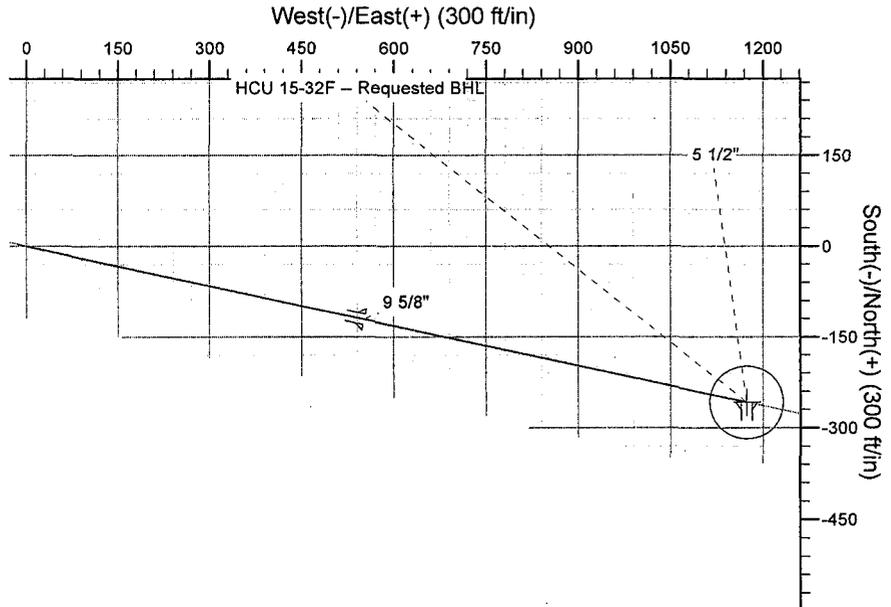
TVD	MD	Name	Size
2200.0	2292.1	9 5/8"	9-5/8
7750.0	7946.7	5 1/2"	5-1/2

### FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
3435.0	3604.9	Wasatch Tongue
3780.0	3970.1	Uteland Limestone
3925.0	4119.3	Wasatch
4800.0	4996.7	Chapita Wells
6000.0	6196.7	Uteland Buttes
6795.0	6991.7	Mesaverde



Vertical Section at 102.39°



# **XTO Energy**

**Natural Buttes Wells(NAD83)**

**HCU 15-32F**

**HCU 15-32F**

**HCU 15-32F**

**Plan: Sundry'd Wellbore (4-22-8)**

## **Standard Planning Report**

**03 June, 2008**

# XTO Energy, Inc.

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** XTO Energy  
**Project:** Natural Buttes Wells(NAD83)  
**Site:** HCU 15-32F  
**Well:** HCU 15-32F  
**Wellbore:** HCU 15-32F  
**Design:** Sundry'd Wellbore (4-22-8)

**Local Co-ordinate Reference:** Well HCU 15-32F  
**TVD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**MD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b> Natural Buttes Wells(NAD83), Vernal, UT	
<b>Map System:</b> US State Plane 1983	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> North American Datum 1983	Using Well Reference Point
<b>Map Zone:</b> Utah Northern Zone	

<b>Site</b> HCU 15-32F, T10S, R20E		
<b>Site Position:</b>	<b>Northing:</b> 3,127,684.19 ft	<b>Latitude:</b> 39° 53' 54.521 N
<b>From:</b> Lat/Long	<b>Easting:</b> 2,148,344.89 ft	<b>Longitude:</b> 109° 41' 23.978 W
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b> "	<b>Grid Convergence:</b> 1.19 °

<b>Well</b> HCU 15-32F, S-Well to Wasatch/Mesaverde			
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 3,127,684.19 ft	<b>Latitude:</b> 39° 53' 54.521 N
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,148,344.89 ft	<b>Longitude:</b> 109° 41' 23.978 W
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> 5,007.0 ft	<b>Ground Level:</b> 5,007.0 ft

<b>Wellbore</b> HCU 15-32F					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF200510	4/22/2008	(°) 11.53	(°) 65.83	(nT) 52,583

<b>Design</b> Sundry'd Wellbore (4-22-8)				
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b> PROTOTYPE	<b>Tie On Depth:</b> 0.0		
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	102.39

<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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
961.1	19.83	102.39	947.9	-24.3	110.6	3.00	3.00	0.00	102.39	
3,835.7	19.83	102.39	3,652.1	-233.6	1,063.2	0.00	0.00	0.00	0.00	
4,496.7	0.00	0.00	4,300.0	-257.9	1,173.8	3.00	-3.00	0.00	180.00	HCU 15-32F -- Reque
7,946.7	0.00	0.00	7,750.0	-257.9	1,173.8	0.00	0.00	0.00	0.00	

# XTO Energy, Inc.

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** XTO Energy  
**Project:** Natural Buttes Wells(NAD83)  
**Site:** HCU 15-32F  
**Well:** HCU 15-32F  
**Wellbore:** HCU 15-32F  
**Design:** Sundry'd Wellbore (4-22-8)

**Local Co-ordinate Reference:** Well HCU 15-32F  
**TVD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**MD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	3.00	102.39	400.0	-0.6	2.6	2.6	3.00	3.00	0.00
500.0	6.00	102.39	499.6	-2.2	10.2	10.5	3.00	3.00	0.00
600.0	9.00	102.39	598.8	-5.0	23.0	23.5	3.00	3.00	0.00
700.0	12.00	102.39	697.1	-9.0	40.8	41.7	3.00	3.00	0.00
800.0	15.00	102.39	794.3	-14.0	63.6	65.1	3.00	3.00	0.00
900.0	18.00	102.39	890.2	-20.1	91.3	93.5	3.00	3.00	0.00
961.1	19.83	102.39	947.9	-24.3	110.6	113.3	3.00	3.00	0.00
1,000.0	19.83	102.39	984.6	-27.1	123.5	126.5	0.00	0.00	0.00
1,100.0	19.83	102.39	1,078.6	-34.4	156.7	160.4	0.00	0.00	0.00
1,200.0	19.83	102.39	1,172.7	-41.7	189.8	194.3	0.00	0.00	0.00
1,300.0	19.83	102.39	1,266.8	-49.0	222.9	228.3	0.00	0.00	0.00
1,400.0	19.83	102.39	1,360.8	-56.3	256.1	262.2	0.00	0.00	0.00
1,500.0	19.83	102.39	1,454.9	-63.5	289.2	296.1	0.00	0.00	0.00
1,600.0	19.83	102.39	1,549.0	-70.8	322.3	330.0	0.00	0.00	0.00
1,700.0	19.83	102.39	1,643.1	-78.1	355.5	364.0	0.00	0.00	0.00
1,800.0	19.83	102.39	1,737.1	-85.4	388.6	397.9	0.00	0.00	0.00
1,900.0	19.83	102.39	1,831.2	-92.7	421.8	431.8	0.00	0.00	0.00
2,000.0	19.83	102.39	1,925.3	-99.9	454.9	465.7	0.00	0.00	0.00
2,100.0	19.83	102.39	2,019.3	-107.2	488.0	499.7	0.00	0.00	0.00
2,200.0	19.83	102.39	2,113.4	-114.5	521.2	533.6	0.00	0.00	0.00
2,292.1	19.83	102.39	2,200.0	-121.2	551.7	564.8	0.00	0.00	0.00
<b>9 5/8"</b>									
2,300.0	19.83	102.39	2,207.5	-121.8	554.3	567.5	0.00	0.00	0.00
2,400.0	19.83	102.39	2,301.5	-129.0	587.4	601.4	0.00	0.00	0.00
2,500.0	19.83	102.39	2,395.6	-136.3	620.6	635.4	0.00	0.00	0.00
2,600.0	19.83	102.39	2,489.7	-143.6	653.7	669.3	0.00	0.00	0.00
2,700.0	19.83	102.39	2,583.7	-150.9	686.8	703.2	0.00	0.00	0.00
2,800.0	19.83	102.39	2,677.8	-158.2	720.0	737.1	0.00	0.00	0.00
2,900.0	19.83	102.39	2,771.9	-165.4	753.1	771.1	0.00	0.00	0.00
3,000.0	19.83	102.39	2,866.0	-172.7	786.3	805.0	0.00	0.00	0.00
3,100.0	19.83	102.39	2,960.0	-180.0	819.4	838.9	0.00	0.00	0.00
3,200.0	19.83	102.39	3,054.1	-187.3	852.5	872.9	0.00	0.00	0.00
3,300.0	19.83	102.39	3,148.2	-194.6	885.7	906.8	0.00	0.00	0.00
3,400.0	19.83	102.39	3,242.2	-201.8	918.8	940.7	0.00	0.00	0.00
3,500.0	19.83	102.39	3,336.3	-209.1	951.9	974.6	0.00	0.00	0.00
3,600.0	19.83	102.39	3,430.4	-216.4	985.1	1,008.6	0.00	0.00	0.00
3,604.9	19.83	102.39	3,435.0	-216.8	986.7	1,010.2	0.00	0.00	0.00
<b>Wasatch Tongue</b>									
3,700.0	19.83	102.39	3,524.4	-223.7	1,018.2	1,042.5	0.00	0.00	0.00
3,800.0	19.83	102.39	3,618.5	-231.0	1,051.3	1,076.4	0.00	0.00	0.00
3,835.7	19.83	102.39	3,652.1	-233.6	1,063.2	1,088.5	0.00	0.00	0.00
3,900.0	17.90	102.39	3,712.9	-238.0	1,083.5	1,109.3	3.00	-3.00	0.00
3,970.1	15.80	102.39	3,780.0	-242.4	1,103.3	1,129.6	3.00	-3.00	0.00
<b>Uteland Limestone</b>									
4,000.0	14.90	102.39	3,808.9	-244.1	1,111.1	1,137.5	3.00	-3.00	0.00
4,100.0	11.90	102.39	3,906.1	-249.1	1,133.7	1,160.7	3.00	-3.00	0.00
4,119.3	11.32	102.39	3,925.0	-249.9	1,137.5	1,164.6	3.00	-3.00	0.00
<b>Wasatch</b>									
4,200.0	8.90	102.39	4,004.5	-252.9	1,151.3	1,178.8	3.00	-3.00	0.00

# XTO Energy, Inc.

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** XTO Energy  
**Project:** Natural Buttes Wells(NAD83)  
**Site:** HCU 15-32F  
**Well:** HCU 15-32F  
**Wellbore:** HCU 15-32F  
**Design:** Sundry'd Wellbore (4-22-8)

**Local Co-ordinate Reference:** Well HCU 15-32F  
**TVD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**MD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### 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)
4,300.0	5.90	102.39	4,103.6	-257.7	1,163.9	1,191.7	3.00	-3.00	0.00
4,400.0	2.90	102.39	4,203.3	-257.3	1,171.4	1,199.3	3.00	-3.00	0.00
4,496.7	0.00	0.00	4,300.0	-257.9	1,173.8	1,201.8	3.00	-3.00	0.00
<b>HCU 15-32F – Requested BHL</b>									
4,500.0	0.00	0.00	4,303.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
4,600.0	0.00	0.00	4,403.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,503.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,603.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,703.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
4,996.7	0.00	0.00	4,800.0	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
<b>Chapita Wells</b>									
5,000.0	0.00	0.00	4,803.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,100.0	0.00	0.00	4,903.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,003.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,103.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,203.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,303.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,403.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,503.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,603.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,703.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,803.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,100.0	0.00	0.00	5,903.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,196.7	0.00	0.00	6,000.0	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
<b>Uteland Buttes</b>									
6,200.0	0.00	0.00	6,003.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,103.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,203.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,303.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,403.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,700.0	0.00	0.00	6,503.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,603.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,900.0	0.00	0.00	6,703.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
6,991.7	0.00	0.00	6,795.0	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
<b>Mesaverde</b>									
7,000.0	0.00	0.00	6,803.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,100.0	0.00	0.00	6,903.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,003.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,300.0	0.00	0.00	7,103.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,203.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,500.0	0.00	0.00	7,303.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,403.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,700.0	0.00	0.00	7,503.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,603.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,703.3	-257.9	1,173.8	1,201.8	0.00	0.00	0.00
7,946.7	0.00	0.00	7,750.0	-257.9	1,173.8	1,201.8	0.00	0.00	0.00

5 1/2"

# XTO Energy, Inc.

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** XTO Energy  
**Project:** Natural Buttes Wells(NAD83)  
**Site:** HCU 15-32F  
**Well:** HCU 15-32F  
**Wellbore:** HCU 15-32F  
**Design:** Sundry'd Wellbore (4-22-8)

**Local Co-ordinate Reference:** Well HCU 15-32F  
**TVD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**MD Reference:** Rig KB @ 5021.0ft (Frontier #6)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
HCU 15-32F -- Request - plan hits target - Circle (radius 60.0)	0.00	0.00	4,300.0	-257.9	1,173.8	3,127,450.83	2,149,523.80	39° 53' 51.973 N	109° 41' 8.922 W

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,292.1	2,200.0	9 5/8"	9-5/8	12-1/4
7,946.7	7,750.0	5 1/2"	5-1/2	7-7/8

### Formations

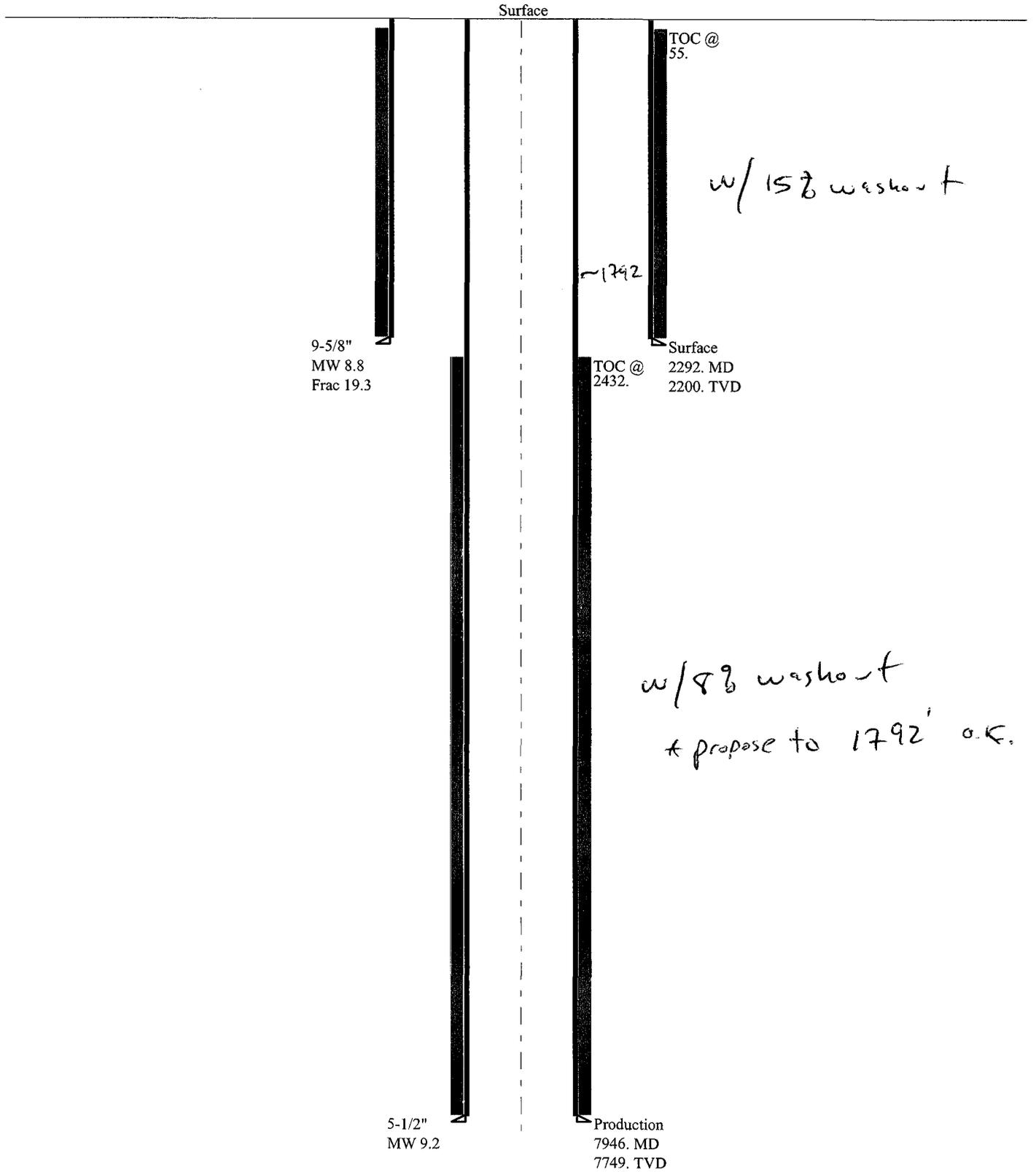
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,604.9	3,435.0	Wasatch Tongue		0.00	
3,970.1	3,780.0	Uteland Limestone		0.00	
4,119.3	3,925.0	Wasatch		0.00	
4,996.7	4,800.0	Chapita Wells		0.00	
6,196.7	6,000.0	Uteland Buttes		0.00	
6,991.7	6,795.0	Mesaverde		0.00	

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
360.0	360.0	0.0	0.0	Start Build 3.00
1,149.7	1,130.1	-33.0	150.0	Start 2189.7 hold at 1149.7 MD
3,339.5	3,206.6	-182.1	829.0	Start Drop -3.00
4,129.2	3,955.5	-235.9	1,073.8	Start 3850.0 hold at 4129.2 MD
7,979.2				TD at 7979.2

# 12-05 XTO HCU 15-32FRev6/08

## Casing Schematic



Well name:	<b>12-05 XTO HCU 15-32FRev6/08</b>		
Operator:	<b>XTO Energy, Inc.</b>		
String type:	Production	Project ID:	43-047-37422
Location:	Uintah County, Utah		

<b>Design parameters:</b>	<b>Minimum design factors:</b>	<b>Environment:</b>
<u><b>Collapse</b></u>	<u><b>Collapse:</b></u>	H2S considered? No
Mud weight: 9.200 ppg	Design factor 1.125	Surface temperature: 65 °F
Design is based on evacuated pipe.		Bottom hole temperature: 173 °F
		Temperature gradient: 1.40 °F/100ft
		Minimum section length: 1,500 ft
	<u><b>Burst:</b></u>	Cement top: 2,432 ft
	Design factor 1.00	
<u><b>Burst</b></u>		
Max anticipated surface pressure: 1,999 psi	<u><b>Tension:</b></u>	<b>Directional well information:</b>
Internal gradient: 0.220 psi/ft	8 Round STC: 1.80 (J)	Kick-off point 400 ft
Calculated BHP 3,704 psi	8 Round LTC: 1.80 (J)	Departure at shoe: 1202 ft
No backup mud specified.	Buttress: 1.60 (J)	Maximum dogleg: 3 °/100ft
	Premium: 1.50 (J)	Inclination at shoe: 0 °
	Body yield: 1.50 (B)	
	Tension is based on air weight.	
	Neutral point: 6,865 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)	Internal Capacity (ft³)
1	7946	5.5	17.00	N-80	LT&C	7749	7946	4.767	1037.2

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	3704	6290	1.698	3704	7740	2.09	132	348	2.64 J

Prepared by: Dustin K. Doucet Div of Oil, Gas & Minerals	Phone: (801) 538-5281 FAX: (801) 359-3940	Date: June 13, 2008 Salt Lake City, Utah
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ENGINEERING STIPULATIONS -  
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.*

Well name:	<b>12-05 XTO HCU 15-32FRev6/08</b>	
Operator:	<b>XTO Energy, Inc.</b>	Project ID:
String type:	Surface	43-047-37422
Location:	Uintah County, Utah	

<b>Design parameters:</b>	<b>Minimum design factors:</b>	<b>Environment:</b>
<u><b>Collapse</b></u>	<u><b>Collapse:</b></u>	H2S considered? No
Mud weight: 8.800 ppg	Design factor 1.125	Surface temperature: 65 °F
Design is based on evacuated pipe.		Bottom hole temperature: 96 °F
		Temperature gradient: 1.40 °F/100ft
		Minimum section length: 299 ft
	<u><b>Burst:</b></u>	Cement top: 55 ft
	Design factor 1.00	
<u><b>Burst</b></u>		
Max anticipated surface pressure: 1,716 psi	<u><b>Tension:</b></u>	<b>Directional well information:</b>
Internal gradient: 0.220 psi/ft	8 Round STC: 1.80 (J)	Kick-off point 400 ft
Calculated BHP 2,200 psi	8 Round LTC: 1.80 (J)	Departure at shoe: 565 ft
No backup mud specified.	Buttress: 1.60 (J)	Maximum dogleg: 3 °/100ft
	Premium: 1.50 (J)	Inclination at shoe: 19.83 °
	Body yield: 1.50 (B)	<b>Re subsequent strings:</b>
	Tension is based on air weight.	Next setting depth: 7,749 ft
	Neutral point: 1,987 ft	Next mud weight: 9.200 ppg
		Next setting BHP: 3,704 psi
		Fracture mud wt: 19.250 ppg
		Fracture depth: 2,200 ft
		Injection pressure: 2,200 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)	Internal Capacity (ft <sup>3</sup> )
1	2292	9.625	36.00	J-55	ST&C	2200	2292	8.796	994.9

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	1006	2020	2.009	2200	3520	1.60	79	394	4.97 J

Prepared by: Dustin K. Doucet  
 Div of Oil, Gas & Minerals

Phone: (801) 538-5281  
 FAX: (801) 359-3940

Date: June 13, 2008  
 Salt Lake City, Utah

ENGINEERING STIPULATIONS -  
 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.*

**BOPE REVIEW**

**XTO HCU 15-32F API 43-047-37422**

**INPUT**

Well Name

XTO HCU 15-32F API 43-047-37422	
String 1	String 2
Casing Size (")	9 5/8
Setting Depth (TVD)	2200
Previous Shoe Setting Depth (TVD)	0
Max Mud Weight (ppg)	8.8
BOPE Proposed (psi)	0
Casing Internal Yield (psi)	3520
Operators Max Anticipated Pressure (psi)	2000

**Calculations**

		String 1	9 5/8 "	
Max BHP [psi]	$.052 * \text{Setting Depth} * \text{MW} =$		1007	
				<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) [psi]	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$		743	NO
MASP (Gas/Mud) [psi]	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$		523	NO <i>→ No expected pressure, reasonable depth for area</i>
				<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$		523	NO
<b>Required Casing/BOPE Test Pressure</b>				2200 psi
<b>*Max Pressure Allowed @ Previous Casing Shoe =</b>				0 psi <i>←</i>
*Assumes 1psi/ft frac gradient				

**Calculations**

		String 2	5 1/2 "	
Max BHP [psi]	$.052 * \text{Setting Depth} * \text{MW} =$		3708	
				<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) [psi]	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$		2778	YES ✓
MASP (Gas/Mud) [psi]	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$		2003	YES
				<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$		2487	NO <i>o.k.</i>
<b>Required Casing/BOPE Test Pressure</b>				3000 psi
<b>*Max Pressure Allowed @ Previous Casing Shoe =</b>				2200 psi <i>←</i>
*Assumes 1psi/ft frac gradient				



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
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

November 12, 2008

XTO Energy Inc.  
P.O. BOX 1360; 978 North Crescent Road  
Roosevelt, UT 84066

Re: APD Rescinded – Hill Creek Unit 15-32F, Sec. 32 T. 10S, R. 20E  
Uintah County, Utah API No. 43-047-37422

Gentlemen: .

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 5, 2005. On November 21, 2006 and on October 29, 2007, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective November 12, 2008.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner  
Bureau of Land Management, Vernal

