

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

FORM 3  
 AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL**

<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>1. WELL NAME and NUMBER</b> WR 16G-32-10-17	
<b>4. TYPE OF WELL</b> Oil Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> EIGHT MILE FLAT	
<b>6. NAME OF OPERATOR</b> QEP ENERGY COMPANY		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>	
<b>8. ADDRESS OF OPERATOR</b> 11002 East 17500 South, Vernal, Ut, 84078		<b>7. OPERATOR PHONE</b> 303 308-3068	
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> ML-47056		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>	
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>	
<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/>		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>	
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>
<b>LOCATION AT SURFACE</b>	635 FSL 1282 FEL	SESE	32
<b>Top of Uppermost Producing Zone</b>	635 FSL 1282 FEL	SESE	32
<b>At Total Depth</b>	1700 FSL 660 FWL	NWSW	32
<b>21. COUNTY</b> DUCHESNE	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 635	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640	
	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 0	<b>26. PROPOSED DEPTH</b> MD: 8115 TVD: 4716	
<b>27. ELEVATION - GROUND LEVEL</b> 6245	<b>28. BOND NUMBER</b> 965003033	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> A36125 - 49-2153	

**ATTACHMENTS**

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

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

<b>NAME</b> Jan Nelson	<b>TITLE</b> Permit Agent	<b>PHONE</b> 435 781-4331
<b>SIGNATURE</b>	<b>DATE</b> 05/18/2010	<b>EMAIL</b> jan.nelson@questar.com
<b>API NUMBER ASSIGNED</b> 43013503700000	<b>APPROVAL</b> <div style="text-align: center;">                       Permit Manager                 </div>	

**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
Surf	12.25	9.625	0	480		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade J-55 ST&C	480	36.0			

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**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
I1	8.75	7	0	4899		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade N-80 LT&C	4899	26.0			

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**Proposed Hole, Casing, and Cement**

<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Top (MD)</b>	<b>Bottom (MD)</b>		
L1	6.125	4.5	0	8115		
<b>Pipe</b>	<b>Grade</b>	<b>Length</b>	<b>Weight</b>			
	Grade N-80 LT&C	3236	11.6			

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ONSHORE OIL & GAS ORDER NO. 1  
 QUESTAR EXPLORATION AND PRODUCTION COMPANY  
 WR 16G-32-10-17

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1  
 Approval of Operations on Onshore  
 Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. **Formation Tops**

The estimated top of important geologic markers are as follows:

\*This is a horizontal welll:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,400'	1,400'
Kick Off Point	4,344'	4,345'
Uteland Butte A Sand	4,699'	4,899'
TD	4,716'	8,115'

2. **Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones**

The estimated depths at which the top an bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	Uteland Butte A Sand	4,699' – 4,716'	4,899' – 8,115'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

ONSHORE OIL & GAS ORDER NO. 1  
 QUESTAR EXPLORATION AND PRODUCTION COMPANY  
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**3. Operator's Specification for Pressure Control Equipment**

- A. 3,000 psi double gate, 3,000 psi annular (schematic attached)
- B. Function test daily.
- C. All casing strings shall be pressure tested (0.22 psi/ft or 1,500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield of the casing.
- D. Ram type preventers and associated equipment shall be tested to rated working pressure if isolated by a test plug or to 50% of the internal yield pressure of casing, whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil & Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 3M system and individual components shall be operable as designed.

**4. Casing Program**

Hole Size	Casing Size	Top, MD	Bottom, MD	Weight, lb/ft	Grade	Thread	Condition	MW
17 1/2"	14"	sfc	40'	Steel	Cond.	None	Used	Air
12 1/4"	9 5/8"	sfc	480'	36.0	J-55	STC	New	Air
8 3/4"	7"	sfc	4,899'	26.0	N-80	LTC	New	8-9 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
9 5/8"	36.0 lb.	J-55	STC	2,020 psi	3,520 psi	394,000 lb.
7"	26.0 lb.	N-80	LTC	5,410 psi	7,240 psi	519,000 lb.

The lateral will be lined with casing.

Lateral:

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,879'	8,115'	11.6	N-80	8 – 10 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
4 1/2"	11.6 lb.	N-80	LTC	6,350 psi	7,780 psi	223,000 lb.

Please refer to the attached wellbore diagram for further details.

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5. **Cementing Program**

**20" Conductor:**

Cement to surface with construction cement.

**9-5/8" Surface Casing: sfc – 480' (MD)**

**Lead/Tail Slurry:** 0' – 480'. 170 sks (310 cu ft) Rockies LT cement + 0.25 lb/sk Kwik Seal + 0.125 lb/sk Poly-E-Flake. Slurry wt: 13.5 ppg, Slurry yield: 1.81 ft<sup>3</sup>/sk, Slurry volume: 12-1/4" hole + 100% excess.

**7" Intermediate Casing: sfc – 4,899' (MD)**

**Lead/Tail Slurry:** sfc – 4,899'. 595 sks (736 cu ft) 50/50 Poz Premium + 0.6% Halad (R)-322 fluid loss + 2.0% Microbond M expander + 5% salt + 0.125 lb/sk Poly-E-Flake. Slurry wt: 14.35 ppg, Slurry yield: 1.24 ft<sup>3</sup>/sk, Slurry volume: 8-3/4" hole + 40% excess.

**WNW Lateral #1: 4,879' – 8,115'**

No cement, liner hung in open hole.

6. **Auxilliary Equipment**

- a. Kelly Cock – Yes
- b. Float at the bit – No
- c. Monitoring equipment on the mud system – visually and/or PVT or Flow Show
- d. Fully opening safety valve on the rig floor – Yes
- e. Rotating Head – Yes

Drilling the surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III requirements, subsection E Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is less than 500 feet and high pressures are not expected.

- f. **Properly lubricated and maintained rotating head.** A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
- g. **Bloolie line discharge 100' from well bore and securely anchored.** The bloolie line discharge for this operation will be located 50 to 70 feet from the

ONSHORE OIL & GAS ORDER NO. 1  
QUESTAR EXPLORATION AND PRODUCTION COMPANY  
WR 16G-32-10-17

wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.

- h. **Automatic ignitor or continuous pilot light on the blooie line.** A diffuser will be used rather than an automatic pilot/ignitor. Water is injected into the compressed air and eliminates the need for the pilot light and the need for dust suppression equipment.
- i. **Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore.** Compressors located 50 feet on the opposite side of the well bore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valve on the compressor, 3) spark arrestors on the motors.

Drilling of the lateral will be done with fresh water NaCl based mud systems consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash, polymers, and NaCl. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used the concentration will be less than 4% by volume. Maximum anticipated mud weight is 10.0 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow show will be used upon exit of surface casing to TD.

Gas detector will be used upon exit of surface casing to TD.

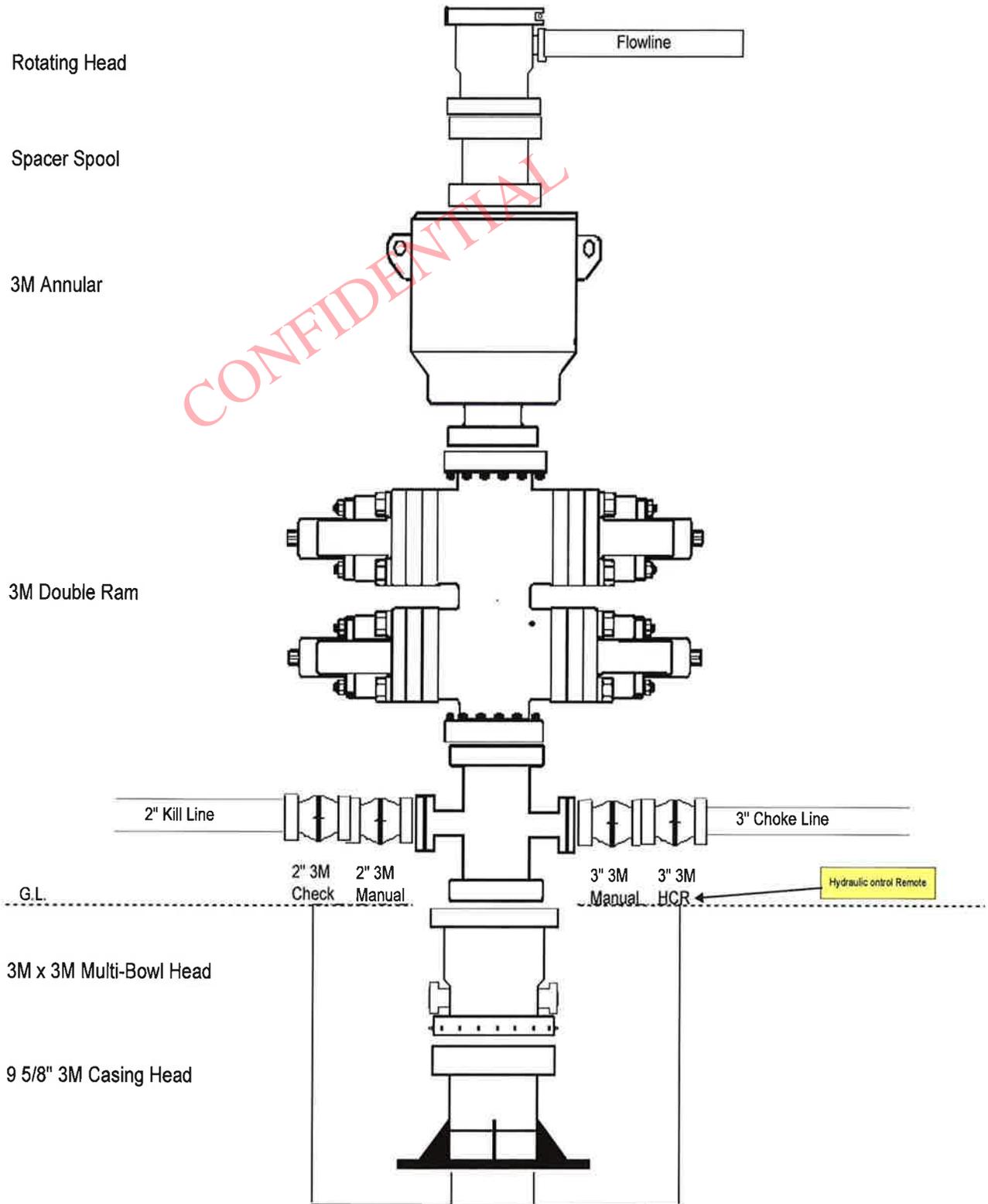
**7. Testing, Logging, and Coring Program**

- a. Cores – None Anticipated
- b. DST – None Anticipated
- c. Logging:
  - i. Mud logging from casing exit to TD
  - ii. MWD-GR will be utilized during drilling operations to aid in landing the curve and maintaining the laterals within the desired zone.
- d. Formation and completion interval: G1 Lime interval, final determination of completion will be made by analysis of mud logging data. Stimulation: stimulation will be designed for the particular area of interest encountered.

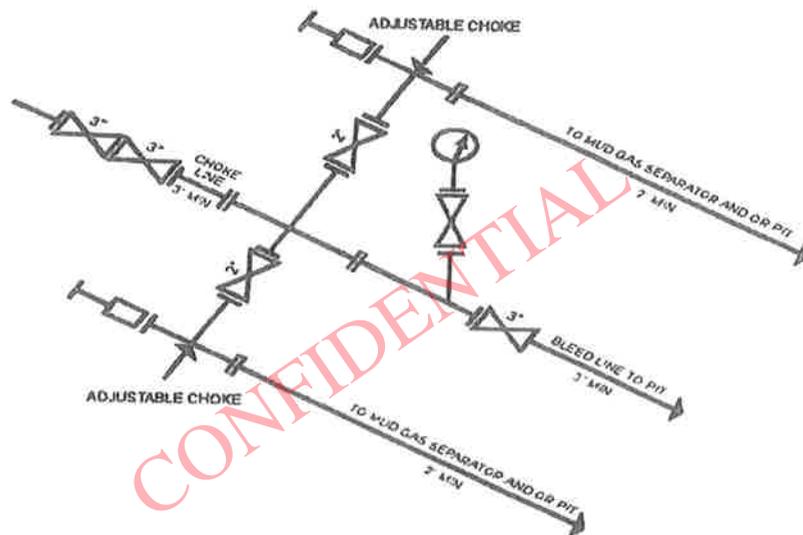
**8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or is known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom-hole pressure equals approximately 3,500 psi. Maximum anticipated bottom hole temperature is approximately 150°F.

ONSHORE OIL & GAS ORDER NO. 1  
QUESTAR EXPLORATION AND PRODUCTION COMPANY  
BOP Schematic, 3M  
3M BOP STACK



ONSHORE OIL & GAS ORDER NO. 1  
QUESTAR EXPLORATION AND PRODUCTION COMPANY  
BOP Schematic, 3M



**3M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY**  
[54 FR 39528, Sept. 27, 1989]

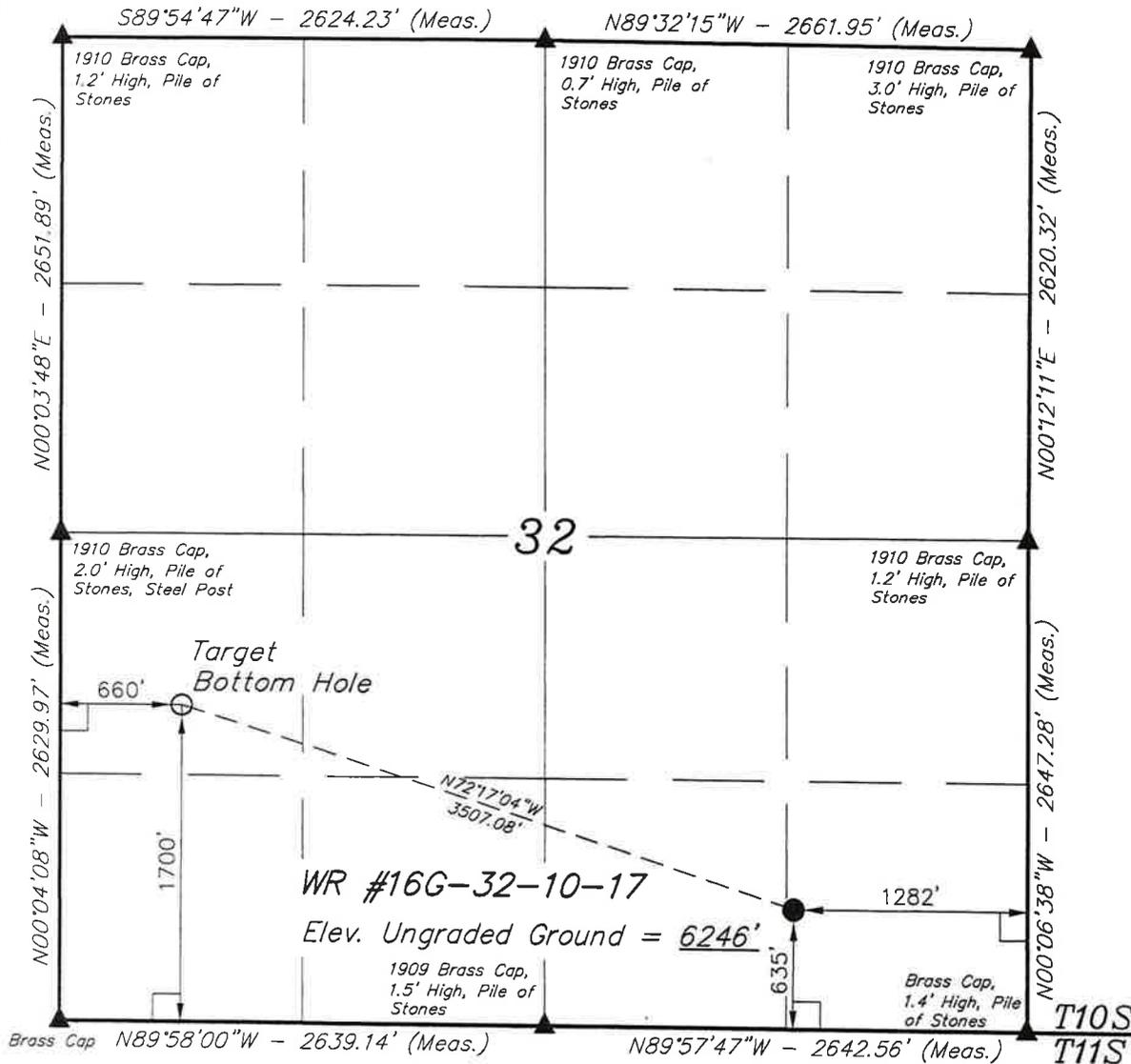
# T10S, R17E, S.L.B.&M.

## QUESTAR EXPLR. & PROD.

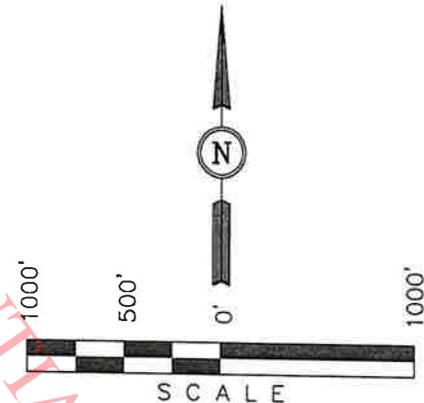
Well location, WR #16G-32-10-17, located as shown in the SE 1/4 SE 1/4 of Section 32, T10S, R17E, S.L.B.&M., Duchesne County, Utah.

### BASIS OF ELEVATION

SPOT ELEVATION AT THE NORTHWEST CORNER OF SECTION 14, T10S, R18E, S.L.B.&M. TAKEN FROM THE MOON BOTTOM QUADRANGLE, UTAH, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5129 FEET.



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### 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 H. Hays*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH

Revised: 05-07-10

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 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

### LEGEND:

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

### BASIS OF BEARINGS

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

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°53'52.30" (39.897861)	LATITUDE = 39°53'41.81" (39.894947)
LONGITUDE = 110°02'13.83" (110.037175)	LONGITUDE = 110°01'30.96" (110.025267)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 39°53'52.43" (39.897897)	LATITUDE = 39°53'41.94" (39.894983)
LONGITUDE = 110°02'11.29" (110.036469)	LONGITUDE = 110°01'28.42" (110.024561)

SCALE 1" = 1000'	DATE SURVEYED: 02-26-10	DATE DRAWN: 03-01-10
PARTY D.R. K.A. K.G.		REFERENCES G.L.O. PLAT
WEATHER COLD		FILE QUESTAR EXPLR. & PROD.

# QUESTAR EXPLR. & PROD.

## WR #16G-32-10-17

LOCATED IN DUCHESNE COUNTY, UTAH  
SECTION 32, T10S, R17E, S.L.B.&M.

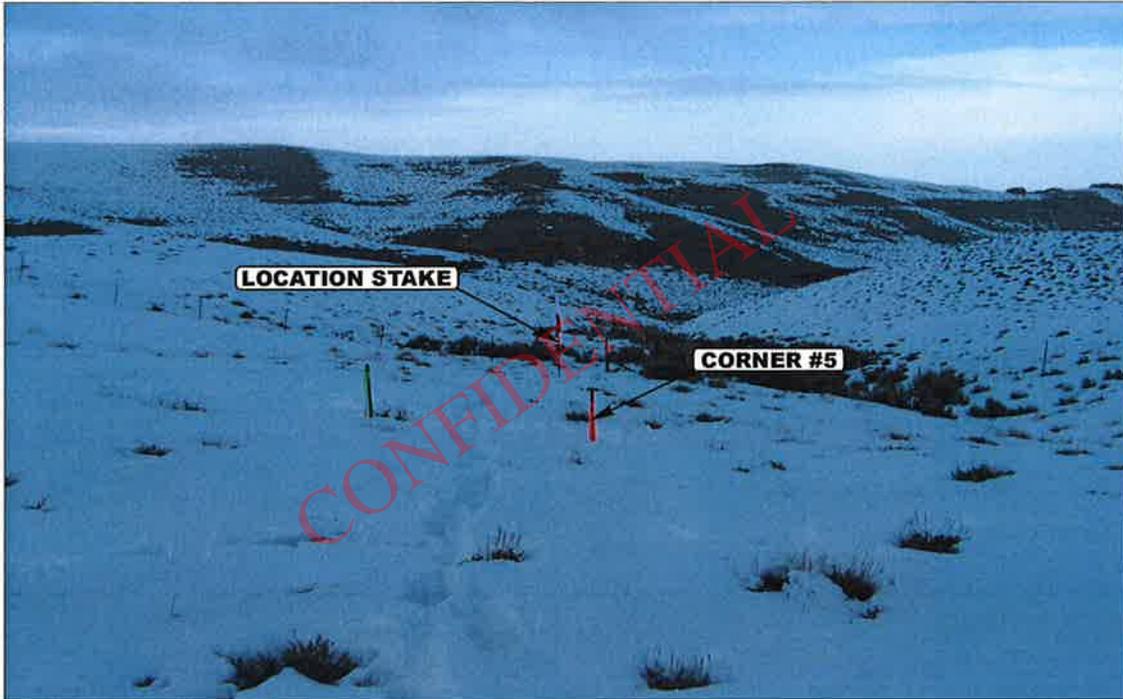


PHOTO: VIEW FROM LOCATION STAKE TO CORNER #1

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: WESTERLY



- Since 1964 -

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 85 South 200 East Vernal, Utah 84078  
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<b>LOCATION PHOTOS</b>			<b>03</b>	<b>02</b>	<b>10</b>	<b>PHOTO</b>
			MONTH	DAY	YEAR	
TAKEN BY: D.R.	DRAWN BY: J.H.	REVISED: 00-00-00				

QUESTAR EXPLR. & PROD.  
WR #16G-32-10-17  
SECTION 32, T10S, R17E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM MYTON, UTAH ON U.S. HIGHWAY 40 APPROXIMATELY 1.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 11.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE WEST; FOLLOW ROAD FLAGS IN A WESTERLY, THEN NORTHERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM MYTON, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 26.8 MILES.

# QUESTAR EXPLR. & PROD.

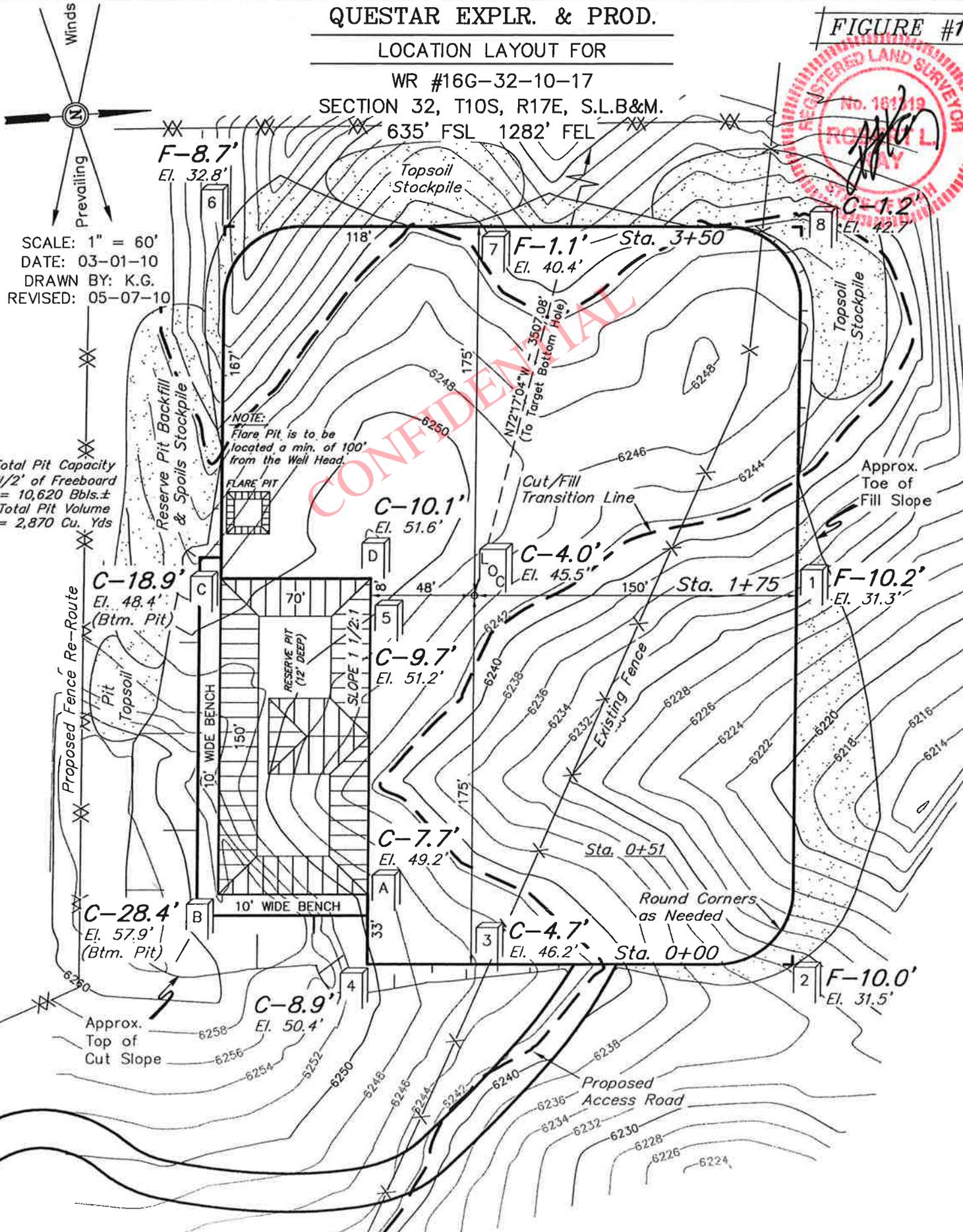
## LOCATION LAYOUT FOR

WR #16G-32-10-17

SECTION 32, T10S, R17E, S.L.B&M.

635' FSL 1282' FEL

FIGURE #1



SCALE: 1" = 60'  
DATE: 03-01-10  
DRAWN BY: K.G.  
REVISED: 05-07-10

Total Pit Capacity  
W/2' of Freeboard  
= 10,620 Bbls.±  
Total Pit Volume  
= 2,870 Cu. Yds

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

Proposed Fence Re-Route

10' WIDE BENCH

10' WIDE BENCH

Elev. Ungraded Ground At Loc. Stake = 6245.5'  
FINISHED GRADE ELEV. AT LOC. STAKE = 6241.5'

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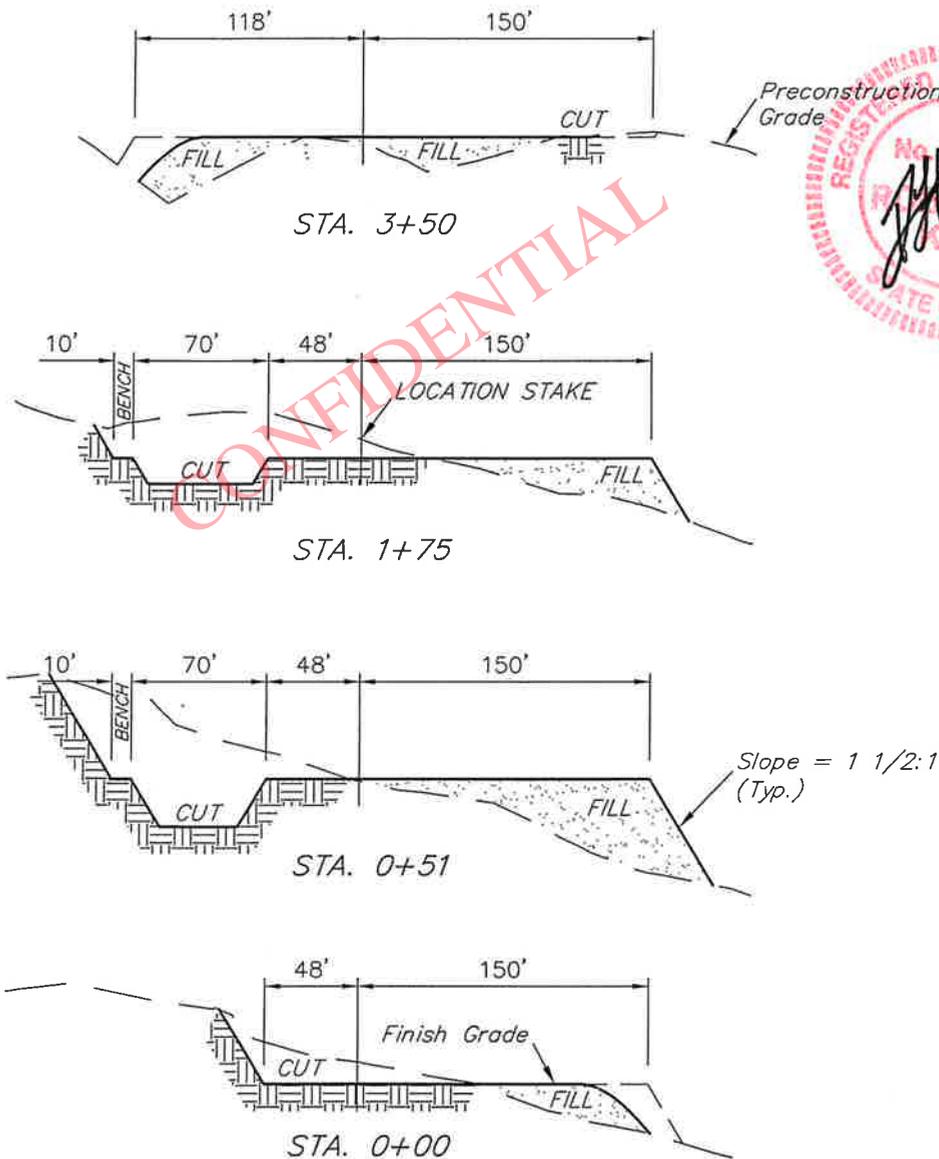
FIGURE #2

TYPICAL CROSS SECTION FOR

WR #16G-32-10-17  
SECTION 32, T10S, R17E, S.L.B&M.  
635' FSL 1282' FEL

1" = 40'  
X-Section Scale  
1" = 100'

DATE: 03-01-10  
DRAWN BY: K.G.



NOTE:

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

APPROXIMATE ACREAGES  
WELL SITE DISTURBANCE = ± 2.918 ACRES  
ACCESS ROAD DISTURBANCE = ± 0.297 ACRES  
TOTAL = ± 3.215 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,150 Cu. Yds.  
Remaining Location = 15,680 Cu. Yds.  
TOTAL CUT = 17,830 CU.YDS.  
FILL = 14,240 CU.YDS.

EXCESS MATERIAL = 3,590 Cu. Yds.  
Topsoil & Pit Backfill = 3,590 Cu. Yds.  
(1/2 Pit Vol.)  
EXCESS UNBALANCE = 0 Cu. Yds.  
(After Interim Rehabilitation)

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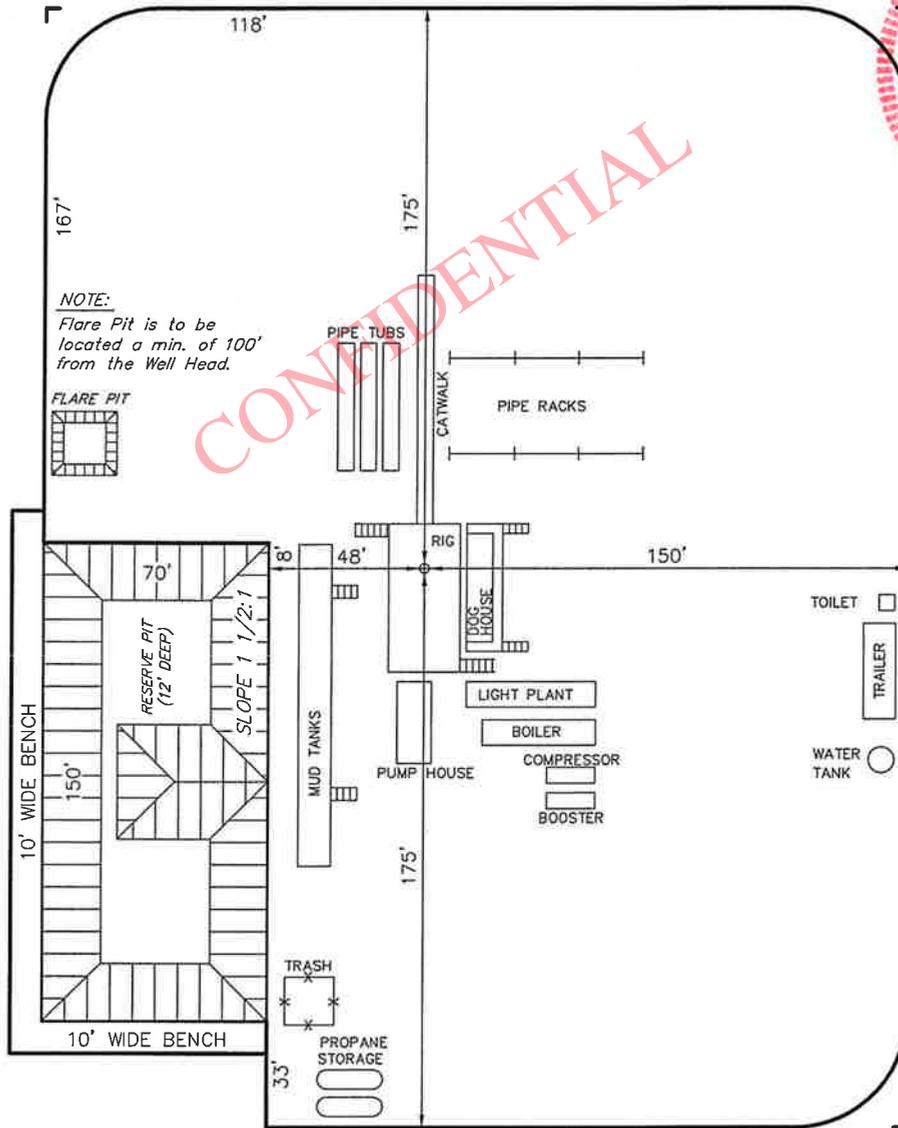
FIGURE #3

## TYPICAL RIG LAYOUT FOR

WR #16G-32-10-17  
SECTION 32, T10S, R17E, S.L.B&M.  
635' FSL 1282' FEL



SCALE: 1" = 60'  
DATE: 03-01-10  
DRAWN BY: K.G.



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Proposed Access Road

QUESTAR EXPLR. & PROD.

INTERIM RECLAMATION PLAN FOR

WR #16G-32-10-17

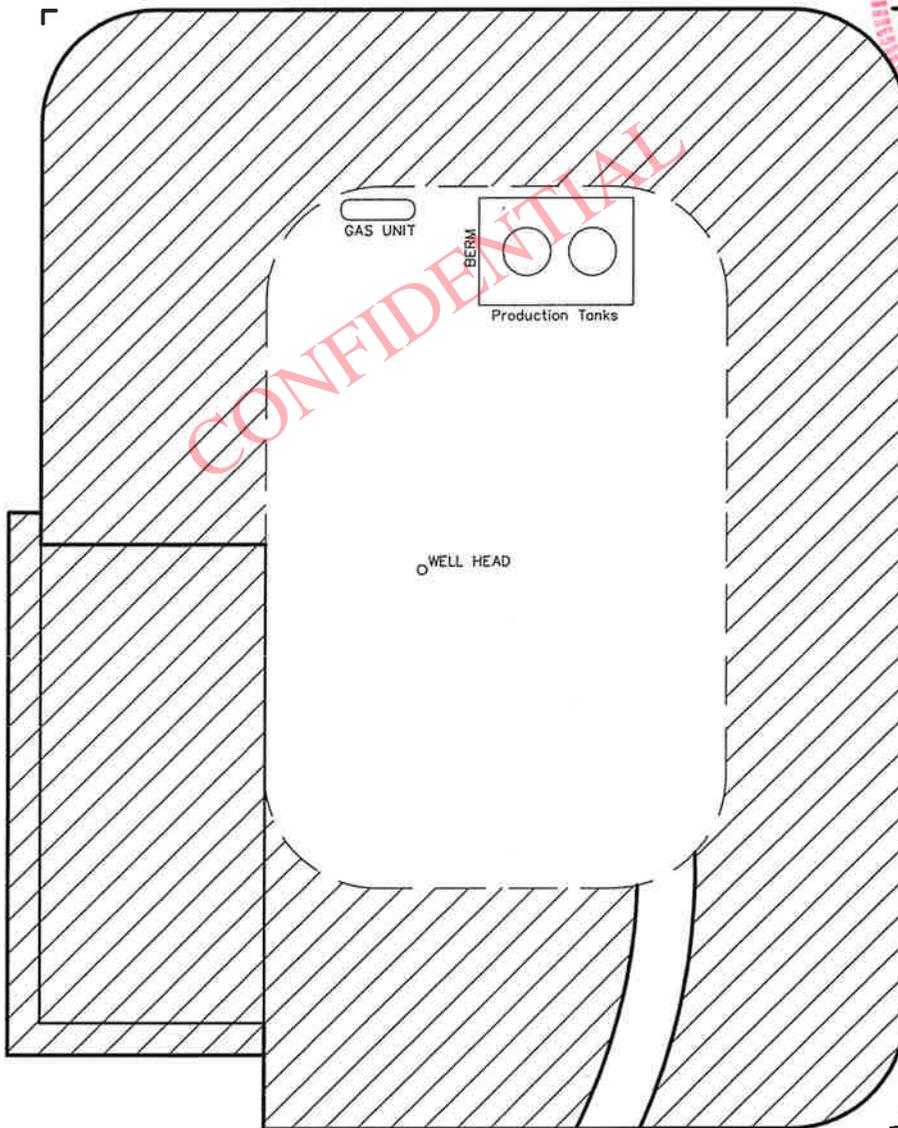
SECTION 32, T10S, R17E, S.L.B&M.

635' FSL 1282' FEL

FIGURE #4

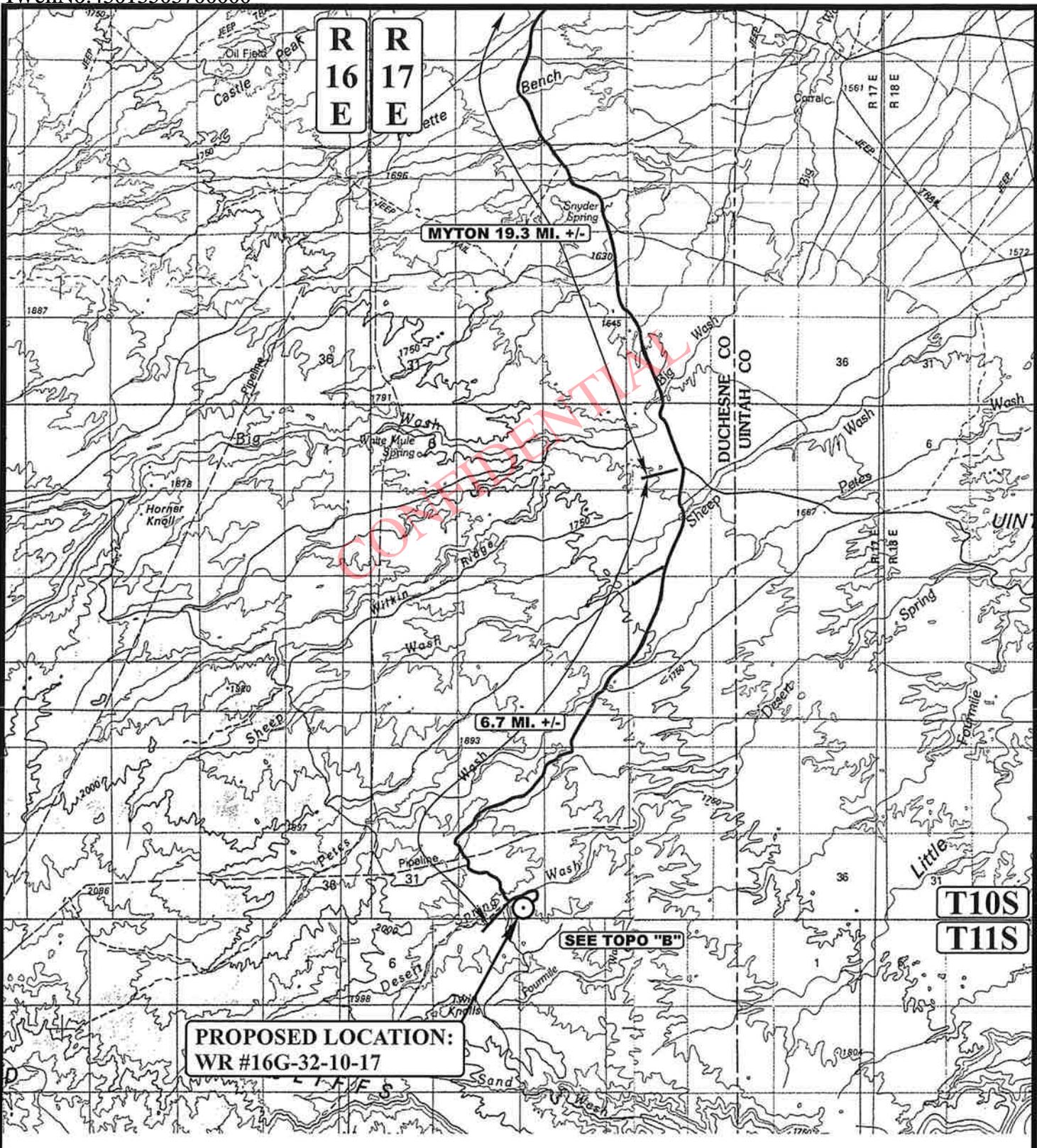


SCALE: 1" = 60'  
DATE: 03-01-10  
DRAWN BY: K.G.



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 INTERIM RECLAMATION



**PROPOSED LOCATION:**  
**WR #16G-32-10-17**

**SEE TOPO "B"**

**LEGEND:**

○ PROPOSED LOCATION



**QUESTAR EXPLR. & PROD.**

**WR #16G-32-10-17**  
**SECTION 32, T10S, R17E, S.L.B.&M.**  
**635' FSL 1282' FEL**



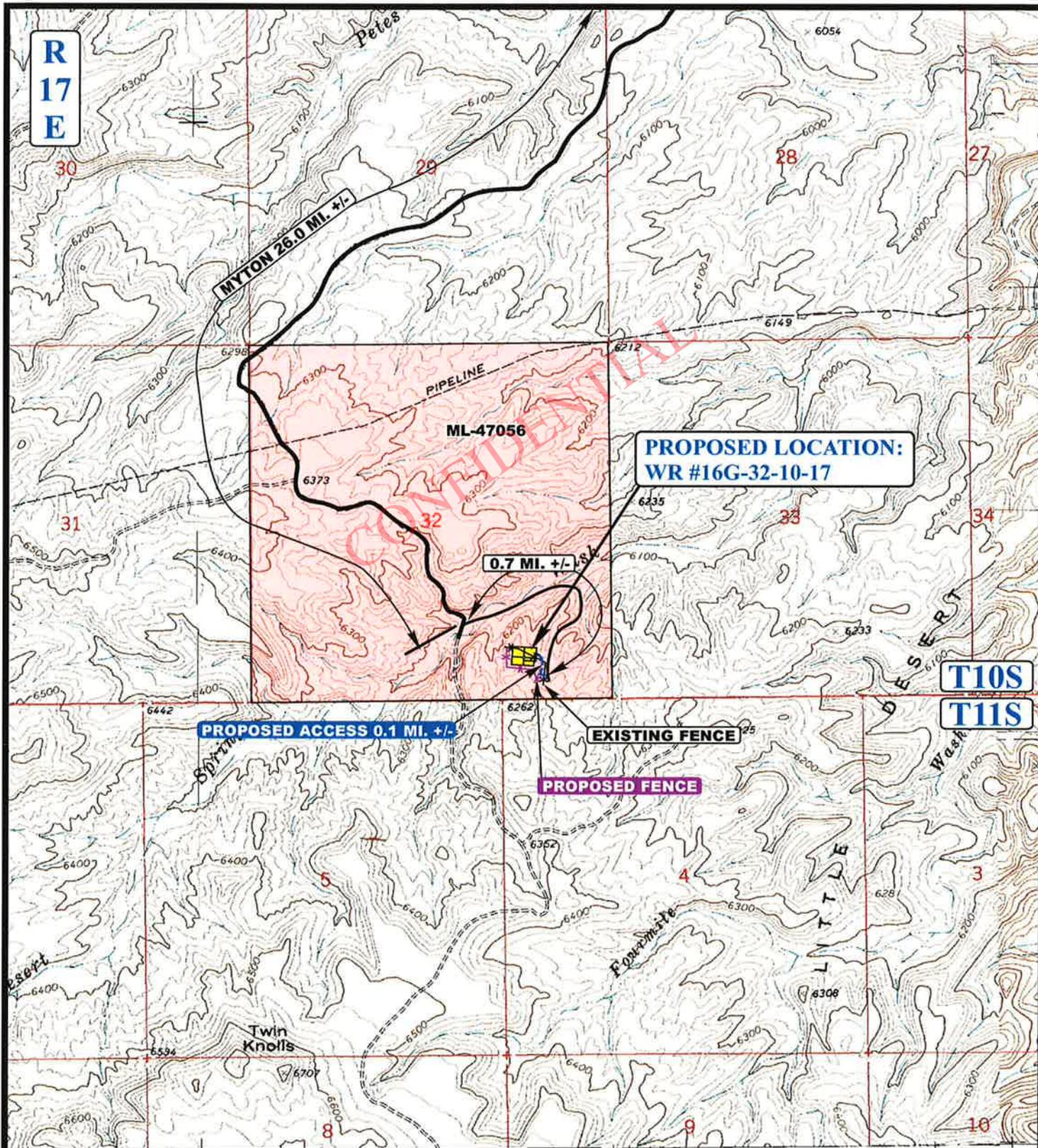
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**TOPOGRAPHIC**  
**MAP**

<b>03</b>	<b>02</b>	<b>10</b>
MONTH	DAY	YEAR

SCALE: 1:100,000 DRAWN BY: J.H. REVISED: 00-00-00





**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD
- EXISTING FENCE
- EXISTING FENCE



**QUESTAR EXPLR. & PROD.**

**WR #16G-32-10-17**  
**SECTION 32, T10S, R17E, S.L.B.&M.**  
**635' FSL 1282' FEL**



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**TOPOGRAPHIC**  
**MAP**

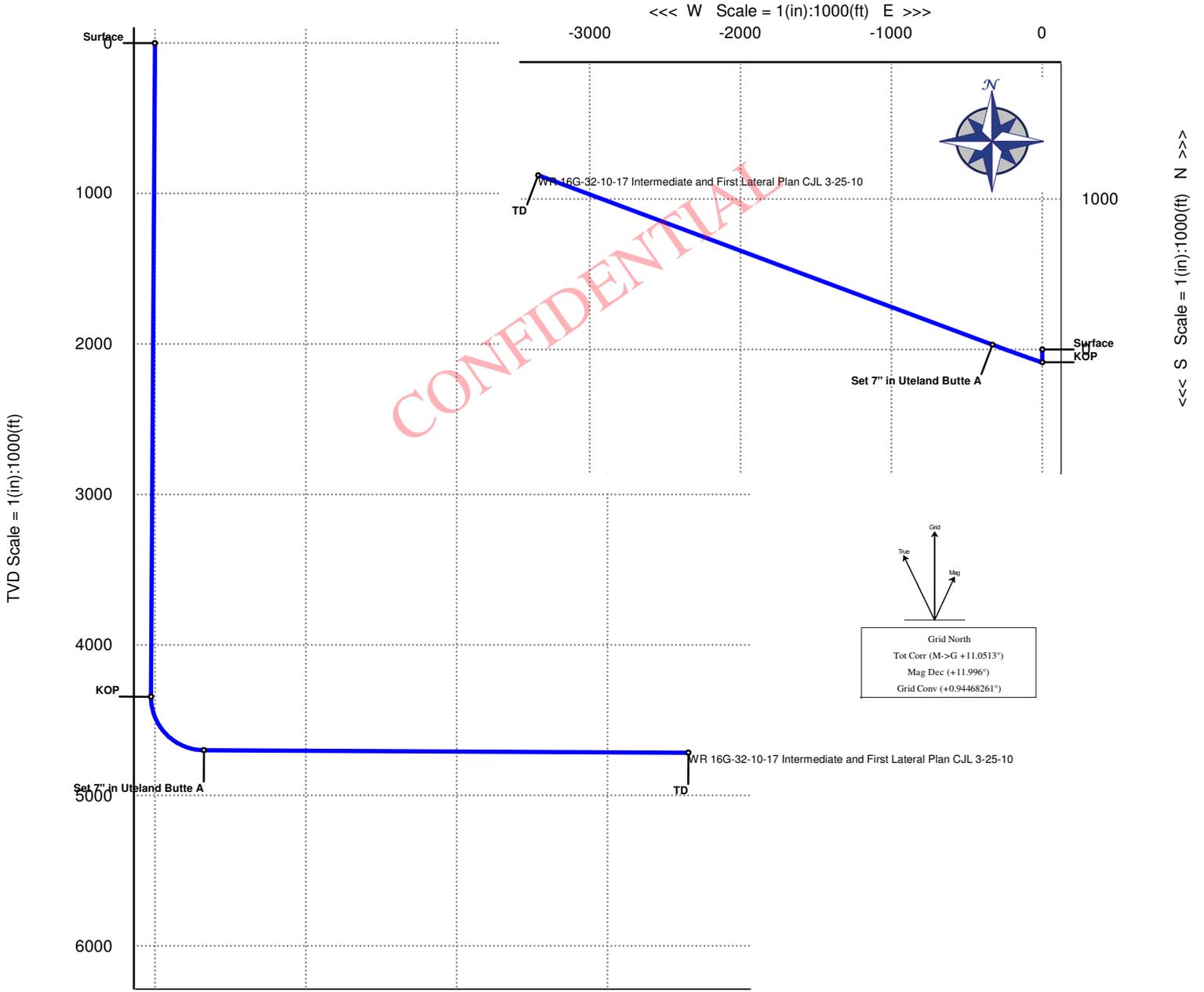
**03 02 10**  
 MONTH DAY YEAR



SCALE: 1" = 2000' DRAWN BY: J.H. REVISED: 00-00-00



WELL <b>WR 16G-32-10-17</b>		FIELD <b>Uinta</b>		STRUCTURE <b>Wilkin Ridge</b>	
Magnetic Parameters Model: IGRF 2005 Dip: 65.824° Mag Dec: +11.996°		Date: March 25, 2010 FS: 52767.2 nT		Surface Location NAD83 Utah State Planes, Central Zone, US Feet Lat: N39 53 41.810 Lon: W110 1 30.960 Northing: 7133869.43 ftUS Easting: 2054154.47 ftUS Grid Conv: +0.94468261° Scale Fact: 0.999893665	
				Miscellaneous Slot: WR 16G-32-10-17 Plan: WR 16G-32-10-17 Intermediate and First Lateral Plan CJL 3-25-10 TVD Ref: KB (6260.00 ft above MSL)	



Vertical Section (ft) Azim = 287.7°, Scale = 1(in):1000(ft) Origin = 0 N/-S, 0 E/-W  
 Surface Location  
 Northing: 7133869.43 ft Easting: 2054154.47 ft

Target Name	Shape	Major Axis	N(°)/S(°)	E(°)/W(°)	TVD	YSec	N(°)/S(°)	E(°)/W(°)
Surface	0.00	1.12	180.00	0.00	0.00	0.00	0.00	0.00
KOP	4345.00	1.12	180.00	4344.17	-25.82	-84.93	0.00	0.00
Set 7" in Uteland Butte A	4899.24	89.70	290.50	4699.00	324.70	31.81	-330.69	16.25
TD	8115.00	89.70	290.50	4715.84	3536.58	1157.97	-3342.76	0.00

**Legend**

WR 16G-32-10-17 Intermediate and First Lateral Plan CJL 3-25-10

Quality Control  
 Date Drawn: Thu 01:12 PM March 25, 2010  
 Drawn by: Current User  
 Checked by:  
 Client OK:

**WR 16G-32-10-17**

Updated 5-10-10 MPG

API # 43-013

Proposed WBD

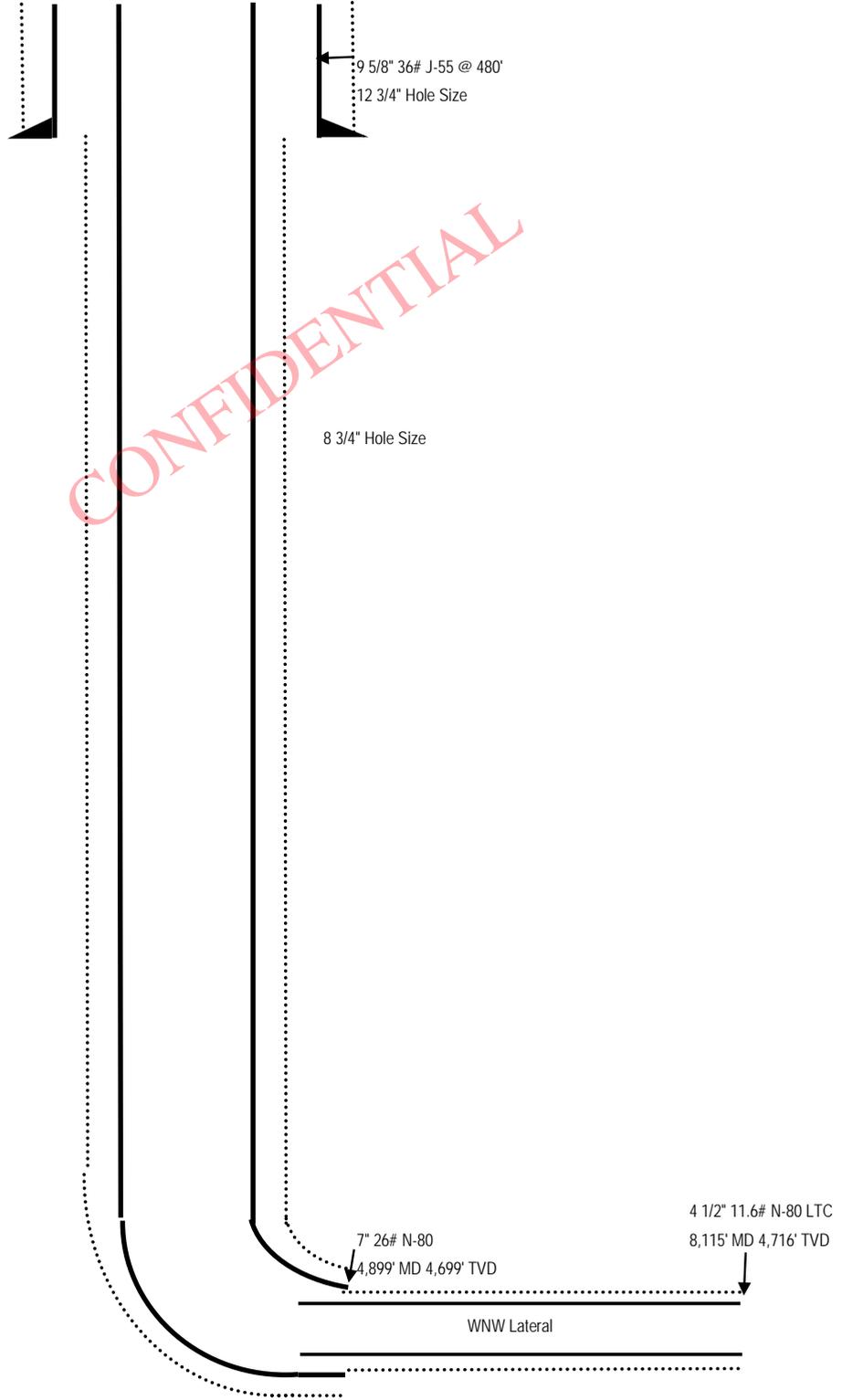
Uinta Basin

Sec 32-T10S-R17E, Duchesne County, UT

KB 6,260'

GL 6,246'

NOTE: NOT TO SCALE



### **Additional Operator Remarks**

Questar Exploration & Production Company proposes to drill a horizontal lateral to total depth of 8,115' MD to test the Uteland Butte Member of the Green River Formation. The lateral will not be closer than 660' to the section/lease line. If productive, casing will be run and the well completed. If, dry the will well be plugged and abandoned as per BLM and State of Utah requirements.

See Onshore Oil & Gas Order No. 1

Please be advised that Questar Exploration & Production Company agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Bond No.965003033. The principal is Questar Exploration & Production Company via surety as consent as provided for the 43 CFR 3104.2.

**QUESTAR EXPLORATION & PRODUCTION COMPANY  
WR 16G-32-10-17  
635 FSL 1282 FEL  
SESE, SECTION 32, T10S, R17E  
DUCHESNE COUNTY, UTAH  
LEASE # UTSL ML-47056**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. Existing Roads:**

See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.

The proposed well site is located approximately 26 miles south of Myton, Utah.  
-See attached TOPO Map "A".

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Existing roads will be maintained and repaired as necessary.

**2. Planned Access Roads:**

New access roads on State surface will be crowned (2 to 3%), ditched, and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet. Any additional disturbance required due to intersections or sharp curves will be discussed at the on-site and approved by the State.

Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. Surface disturbance and vehicular traffic will be limited to the approved location and access route or, as proposed by the Operator.

The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards.

If culverts are needed, the location and size of the culverts will be proposed during the on-site. The operator will clean and maintain approved culverts as needed. All drainage ditches and culverts will be kept clear and free-flowing and will be maintained according to original construction standards.

The access road disturbed area will be kept free of trash during operations. All traffic will be confined to the approved road running surface. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause excess siltation or accumulation of debris in the drainage nor shall the drainage be blocked by the roadbed.

Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Should mud holes develop, the holes shall be filled in and detours around the holes avoided.

When snow is removed from the road during the winter months, the snow should be pushed outside of the borrow ditches, and the turnouts kept clear so that snowmelt will be channeled away from the road.

At the proposed access road we encounter an existing fence to be crossed. The fence will be braced and tied off before cutting the wire. As operator, Questar Exploration and Production Company shall be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation. Size and location of cattleguards, gates, etc., will be determined during on-site.

Refer to Topo Map B for the location of the proposed access road.

3. **Location of Existing Wells Within a 1-Mile Radius:**

A map will be provided with the site-specific APD showing the location of existing wells within a one mile radius.

Please refer to Topo map C.

4. **Location of Existing and Proposed Facilities:**

Please refer to Topo map D.

No pipeline will be required for this location.

The following guidelines will apply if the well is productive.

- A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed.
- All loading lines will be placed inside the berm surrounding the tank batteries.
- All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a color approved by the State.

5. **Location and Type of Water Supply:**

Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right

A chemical porta-toilet will be furnished with the drilling rig. The chemical porta-toilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

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 completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APD's shall address any modifications from this policy.

**8. Ancillary Facilities:**

This will be an independent well location. Product will be contained in two 500 bbl tanks and then transported from location to delivery site.

A suitable muffler will be installed on pumping unit to help reduce noise control.

**9. Well Site Layout:**

A Location Layout Diagram describing drill pad cross-sections, cuts and fills, and locations of mud tanks, reserve pits, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and the surface material stockpile(s) will be included with the site specific APD.

Please see the attached diagram rig orientation, parking areas, and access roads, as well as the location of the following:

- The reserve pit.
- The stockpiled topsoil (first six inches), will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with the topsoil.
- The flare pit or flare box will be located downwind from the prevailing wind direction.
- Any drainage that crosses the well location will be diverted around the location by using ditches, water diversion drains or berms. If deemed necessary at the on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

It was determined at the on-site inspection that a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced liner, a minimum of 20 millimeters thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order # 7, all produced water will be contained in tanks on location and then hauled to Wonsits Valley water injection station located in the SWNW Section 12, T8S, R21E; or, the Red Wash disposal well located in the NESW, Section 28, T7S, R22E; or, the Red Wash Central Battery Disposal located in SWSE, Section 27, T7S, R23E, or third-party surface evaporative pits.

Produced water, oil, and other byproducts will not be applied to roads or well pads for control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

## 10. Fencing Requirements:

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

- 39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched using a stretching device before it is attached to corner posts.
- The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If drilling operations does not commence within 3 days, the fourth side of the fence will be installed.

## 11. Reclamation Plan:

### Long-Term Reclamation

Long-term reclamation will be conducted on all disturbed areas no longer required for field operations. This includes unnecessary portions of the well pads after completion and throughout the well's production period, road outslopes, and pipeline corridors. Long-term reclamation will be conducted on pads and roads for non-producing wells and on pads for wells that have reached the end of their productive life (includes facility removal and complete well pad and access road reclamation). Because long-term reclamation will occur throughout the life of the project, this plan does not differentiate between "interim" and "final" reclamation. All long-term reclamation is considered final unless monitoring shows the need for additional reclamation action. Long-term reclamation will return as much of the well pad as possible to its predisturbance condition as quickly as possible. Long-term reclamation will increase habitat patch sizes and reduce habitat fragmentation for sagebrush obligate species.

## **Temporary Reclamation, Soil Stabilization, and Erosion Control**

Topsoil that will be stored more than 2 years before long-term reclamation begins will be stabilized and windrowed, where possible, to a depth of 2 – 3 feet at a specified location near the margin of the well site as determined at the on-site inspection.

- Windrowed topsoil will then be broadcast-seeded with an approved seed mixture and raked or dragged with a chain, immediately after windrowing.
- Other erosion control techniques will be applied where necessary and may include:
  - diversion ditch design and construction
  - sediment control basin design and construction
  - straw or hay bale check dams
  - rock check dams
  - sediment fence
  - energy dissipaters

All runoff and erosion control structures will be inspected, maintained, and cleaned-out by the Operator on a regular basis throughout the life of the project. Inspections will occur after runoff events (e.g., spring runoff, storm events).

### Topsoil and Spoil Handling

Topsoil will be salvaged from all proposed disturbance areas and stockpiled separately from subsoil materials. Topsoil salvaged from the reserve pit will be stockpiled separately near the reserve pit.

Topsoil stockpiles will be adequately protected until replaced on the surface during reclamation. Temporary erosion control measures such as temporary vegetation cover, application of mulch, netting, or soil stabilizers may be used in some areas to minimize wind and water erosion and sedimentation prior to vegetation establishment.

## **Surface Preparation**

### Backfilling, Grading, and Contouring

Areas to be reclaimed will be graded to approximate original contours and to blend in with adjacent topography. Area-wide drainage will be restored so that surface runoff flows and gradients are returned to the condition present prior to development. Graded surfaces will be suitable for the replacement of a uniform depth of topsoil, will promote cohesion between subsoil and topsoil layers, will reduce wind erosion, and will facilitate moisture capture. Specialized grading techniques may be applied, if warranted, and could include slope rounding, bench grading, stair-step grading/terracing, and/or contour furrowing.

Dozers, loaders, scrapers, and motor graders are typically used for backfilling and grading.

### Reserve Pit Evaporation

After the well has been completed and is put into production, the reserve pit will be evaporated. Depending on the time of year and precipitation accumulations, the reserve pit may evaporate naturally. If the reserve pit will not evaporate naturally within one summer season (i.e., June – August) after drilling is completed, alternative evaporation techniques may be applied. Some alternative techniques may include:

- Trickle Systems
- Evaporation Misters and Aerators
- Evaporation Ponds (with approved regulatory filings)
- Pit Solidification
- Water Hauling
  - Haul non-reusable water to an approved disposal facility.
  - Haul or polypipe re-useable water to another reserve pit to be used in the drilling process; water filters may be used if necessary.

Once the reserve pit is as dry as possible, all debris in the pit will be removed. Excess pit liner will be cut off and removed and the remaining liner will be torn and perforated while backfilling the pit. The liner will be buried to a minimum of 4 feet deep. The reserve pit will be backfilled and recontoured to blend with the natural landscape. The reserve pit will be crowned convexly to allow for settling and prevent standing water.

### Ripping and Discing

Compacted areas such as roads and well pads will be ripped to a depth of 12 – 18 inches to improve soil aeration, water infiltration, and root penetration. Ripped areas will be disced, if necessary, to fill in deep furrows (where topsoil would be lost) and break up large clods (to which topsoil will not adhere).

Motor graders or tractors equipped with ripping shanks are typically used for ripping. Ripper shanks will be set approximately 1 – 2 feet apart. Discing is typically accomplished using a tractor-drawn disc set 2 – 6 inches deep.

### **Seedbed Preparation**

Seedbed preparation maximizes seeding efficiency and improves reclamation success. It includes topsoil replacement and various cultivation techniques. Cultivation techniques may include one or more of the following:

- plowing
- chisel plowing
- discing
- chaining
- rotary hoeing
- harrowing
- cultipacking
- extreme surface roughening
- pitting

## Topsoil Replacement

Waterbars and erosion control devices will be installed on reclaimed areas prior to topsoil replacement, as necessary, to control topsoil erosion. Stockpiled topsoil will be redistributed uniformly on areas to be reclaimed.

Topsoil is typically replaced using scrapers, dozers, and/or motorgraders.

## **Revegetation**

### Seeding

Once the topsoil is replaced, seeding will occur generally between September 15 and freeze-up. If fall seeding is not feasible, seeding may occur between spring thaw and May 15. Seeding will not be applied to wet or frozen ground. In this circumstance, seeding will take place when the ground dries or thaws to the point where soils are friable.

Reclaimed areas will be seeded with seed mixtures that will restore disturbed sites so that they closely resemble pre-disturbance plant communities. Seed mixtures will be developed based on the following criteria: general conditions within the analysis area, species adaptations to site condition, usefulness of the species for rapid site stabilization, species success in past revegetation efforts, and seed costs and availability.

The seed mixture and seeding rates will be recommended by the State authorized officer (AO) at the on-site inspection and included in the Application for Permit to Drill (APD) or Right-of-Way (ROW). Alternative species and seeding rates may be used at the Operator's discretion with State approval, if warranted by site-specific conditions or seed availability, provided that the alternative species/seeding rates facilitate achieving reclamation success and all modifications are documented.

Seed mixtures will be certified weed-free.

Seed will be drilled on the contour to an appropriate depth. When drill-seeding is not practical due to steep slopes or rocky surfaces, seeding rates would be doubled, seed would be broadcast, and the area would be raked, "walked" with tracked equipment, or dragged with a chain or harrow to cover seed.

## **Mulching**

Dry mulch may be considered as one method to enhance the reestablishment of desired plant communities. Where mulching is deemed appropriate, the reclaimed area will be uniformly mulched with certified weed-free grass, hay, small grain straw, wood fiber, and/or live mulch at a rate of 1.5 - 2 tons/acre. Alternatively, cotton, jute, or synthetic netting could be applied. Mulch will be crimped into the soil, tackified, or incorporated into erosion control blankets to prevent it from blowing or washing away and from entering waterways. Mulch will protect the soil from wind and water erosion, raindrop impact, and surface runoff and will help to hold seeds in place.

Alternative mulching techniques may be considered on steep slopes where it is unsafe to operate equipment, at sites where soils have 35 percent or more surface rock content, or on notably unstable areas. Alternative techniques may include hydromulch,

biodegradable erosion control netting, or matting and will be firmly attached to the surface.

### **Monitoring**

QEP will monitor the success of interim and final reclamation. QEP will monitor the success of reclamation with documentation for 3 years. If QEP and an authorized officer for the State determine the reclamation has not been successful after the second growing season, QEP will take remedial action.

### **Debris**

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

### **Weed Control**

The Operator will be responsible for noxious and invasive weed control from all project activities for the life of project. If use of herbicides is deemed necessary by Operators, a Pesticide Use Permit will be submitted for approval to the BLM. Herbicides will be used only in the season or growth stage during which they are most effective. Herbicides will be applied only by certified personnel using approved precautionary and application procedures in compliance with all applicable federal, state, and local regulations. Herbicides will not be used within 100 feet of open water or during extremely windy conditions. Aerial application of herbicides will be prohibited within 0.25 mile of known special status plant species locations and hand application of herbicides will not occur within 500 feet of such occurrences. Certified weed-free seed mixtures and mulches will be used, thereby minimizing the potential for noxious weed introduction.

Mowing may be considered as an alternative to herbicide applications. Mowing would be implemented prior to seed head establishment or bloom.

A weed control program will be applied to all existing and proposed access roads, pipeline ROWs, and well pads. Weed control involves annual treatments that are monitored and continued until desirable vegetation out-competes invasive or noxious weeds.

### **Dry Hole/Abandoned Location**

On lands administered by the State abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions may include the reestablishment of irrigation systems; reestablishment of appropriate soil conditions; and, the reestablishment of vegetation as specified.

All disturbed surfaces will be recontoured to approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment.

At final abandonment, the Operator will cap the casing with a metal plate a minimum of 0.25 inch thick. The cap will be welded in place and the well location and identity will be permanently inscribed on the cap. The cap will be constructed with a weep hole. The depth of the permanent cap will be determined at the time of final abandonment. Long-term reclamation will then be applied and will follow the reclamation process described in

this plan. When reclamation is deemed successful by the Operator and the State, the Operator will request a bond release.

**12. Surface Ownership:**

The well pad and access road are located on lands owned by:  
State of Utah  
Trust Lands Administration  
675 East, 500 South – Suite 500  
Salt Lake City, UT. 84102

**13. Other Information:**

Drilling rigs and/or equipment used during drilling operations will not be stacked or stored on Federal lands on State administered lands after the conclusion of drilling operations or at any other time without authorization by the State Authorized Officer. If State authorization is obtained, such storage is only a temporary measure.

A Class III archeological survey was conducted by Montgomery Archaeology Consultants, **MOAC Report No. 10-017**. A copy of the report was submitted directly to the appropriate agencies by Montgomery Archaeology Consultants. Cultural resource clearance has been recommended for this project. If these surveys identify areas with a high probability of encountering potentially significant subsurface archaeological sites, QEP would provide a qualified archaeologist to monitor surface disturbance. If historic or archaeological materials are uncovered during construction, the Operator is to immediately stop work that might further disturb such materials and contact the Authorized Officer.

A paleontological survey was conducted by Intermountain Paleo Consulting. A copy of this report was submitted directly to the appropriate agencies by Stephen D. Sandau, **Report No. IPC 10-27**. The inspection for this project resulted in some signs of vertebrate fossils, therefore, we advise that a permitted paleontologist be present to monitor the beginning of the construction process. QEP will provide a qualified paleontologist to monitor surface disturbance.

A habitat assessment and inventory was surveyed on April 20, 2010 by Western Biota, Inc. The inspection for this project resulted in no suitable or potential habitat within the proposed WR 16G-32-10-17.

**Lessee's or Operator's Representative & Certification:**

Jan Nelson  
Permit Agent  
Questar Exploration & Production Company  
11002 East 17500 South  
Vernal, UT 84078  
(435) 781-4331

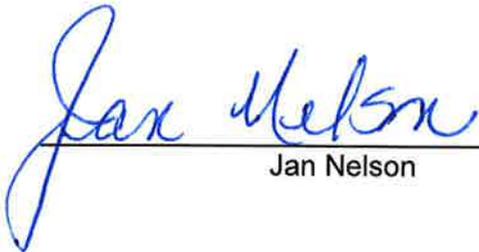
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Questar Exploration & Production Company is considered to be the operator of the subject well. Questar Exploration & Production Company agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104.2 for lease activities is being provided by Bond No. 965003033

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operations; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

  
\_\_\_\_\_  
Jan Nelson

5/17/2010  
\_\_\_\_\_  
Date

CULTURAL RESOURCE INVENTORY OF  
QUESTAR EXPLORATION AND PRODUCTION'S  
PROPOSED WELL LOCATION WR #16G-32-10-17  
(T10S, R17E, SECTION 32)  
DUCHESNE COUNTY, UTAH

Kelly Jo Jackson

CONFIDENTIAL

CULTURAL RESOURCE INVENTORY OF  
QUESTAR EXPLORATION AND PRODUCTION'S  
PROPOSED WELL LOCATION WR #16G-32-10-17  
(T10S, R17E, SECTION 32)  
DUCHESNE COUNTY, UTAH

By:

Kelly Jo Jackson

Prepared For:

State of Utah  
Trust Lands Administration  
Salt Lake City, Utah

Prepared Under Contract With:

Questar Exploration and Production  
11002 East 17500 South  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

April 10, 2010

MOAC Report No. 10-017

United States Department of Interior (FLPMA)  
Permit No. 10-UT-60122

State of Utah Public Lands Policy Coordination Office  
Permit No. 117

State of Utah Antiquities Project (Survey)  
Permit No. U-10-MQ-0130s

## INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants, Inc. (MOAC) in April, 2010 of Questar Exploraton and Production's proposed well location WR 16G-32-10-17. The inventory is situated in Township 10S, Range 17E, Section 32. The project area is located south of the town of Myton in Duchesne County, Utah. The survey was implemented at the request of Jan Nelson on behalf of Questar E&P, Vernal, Utah. The parcel is located on School and Institutional Trust Lands Administration property (SITLA) encompassing a total of 10.7 acres.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed on April 7, 2010 by Kelly Jo Jackson (Project Archaeologist) and Vanessa Mitas under the auspices of U.S.D.I. (FLPMA) Permit No. 10-UT-60122, State of Utah Public Lands Policy Coordination Office Permit No 117, and State of Utah Antiquities Permit (Survey) No. U-10-MQ-0130s issued to MOAC, Moab, Utah. A file search was performed by Marty Thomas at Utah SHPO in Salt Lake City on March 15, 2010. This consultation indicated that one cultural resource inventory has been conducted in the vicinity. In 2006, Grand River Institute performed a cultural resource inventory for Gasco Production of two proposed well locations (Fed. #12-33-10-17 and #23-33-10-17) and 1.67 miles of linear routes. The survey resulted in the identification of no cultural resources (Connor and Davenport 2006).

## DESCRIPTION OF PROJECT AREA

The inventory area is located south of the town of Myton in Duchesne County, Utah, and northeast of Gate Canyon (Figure 1). The legal description is Township 11S, Range 17E, Section 32 (Figure 1). A total of 10.7 acres was inspected on SITLA property.

The project area is located south of Desert Spring Wash and northeast of Twin Knolls. In general, the area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The area is characterized by steep-sided narrow ridges and benches dissected by intermittent drainages. Outcrops of the Uinta formation are characterized by a dense dendritic drainage pattern and topographic relief. This Eocene-age formation occurs as fluvial deposited interbedded sandstone and mudstone and is well-known for its fossil vertebrate turtles, crocodylians, fish, and mammals. Elevation of the project area ranges from 6180 to 6280 ft a.s.l. Vegetation in the area includes sagebrush, saltbush, various bunch grasses and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

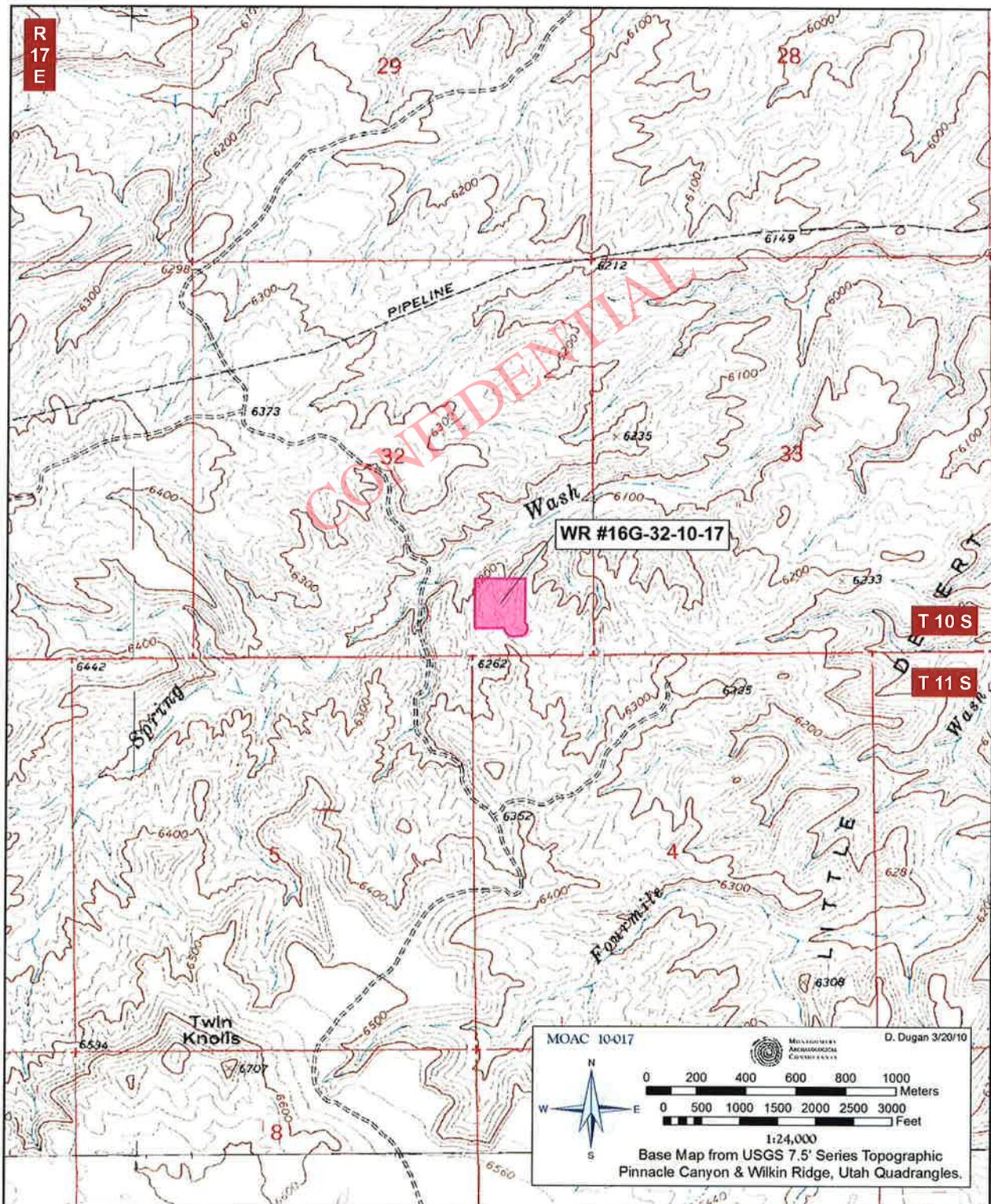


Figure 1. Questar Exploration and Production's proposed well location WR 16G-32-10-17, Duchesne County, Utah.

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At the proposed well location a 10 acre parcel was identified, centered on the well pad center stake. The location was then surveyed by the archaeologist walking parallel transects spaced no more than 10 m (33 ft) apart. The pipeline/access corridor was surveyed to a width of 61 m (200 ft) employing the same methods. Ground visibility was considered good. A total of 10.7 acres was inspected of which all occur on SITLA property.

## RESULTS AND RECOMMENDATIONS

The inventory of Questar Exploration and Production's proposed well location WR 16G-32-10-17 resulted in no cultural resources. Based on these findings, a recommendation of "no historic properties affected" pursuant to Section 106, CFR 800 is proposed for this project.

## REFERENCES CITED

- Stokes, W.L.  
1986      *Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, University of Utah, Salt Lake City.
- Connor, C. and Davenport, B.  
2006      Class III Cultural Resource Inventory of Two Proposed Well Locations and Related Linear Routes (1.67 miles) in Duchesne County, Utah for Gasco Production Company. Grand River Institute, Grand Junction, Colorado. Project No. U-06-GB-0226b,s.



**INTERMOUNTAIN  
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**IPC #10-27**

# **Paleontological Reconnaissance Survey Report**

**Survey of QEP's Proposed Well Pad & Access Road for  
"WR #16G-32-10-17" (Sec. 32, T 10 S, R 17 E)**

**Wilkin Ridge Topographic Quadrangle  
Duchesne County, Utah**



**April 13, 2010**

**Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078**

## INTRODUCTION

At the request of Jan Nelson of Questar Exploration and Production and authorized by James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of QEP's proposed well pad & access road for "WR #16G-32-10-17" (Sec. 32, T 10 S, R 17 E) was conducted by Dave Alderks and Shaun McClure on April 12, 2010. The reconnaissance survey was conducted under the Utah Paleontological Investigations Permit #2010-386. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

## SUMMARY OF SURVEY RESULTS

Project, Location & Land Administration	Paleontological Findings	Recommendations
WR #16G-32-10-17  (Sec. 32, T 10 S, R 17 E)  (SITLA)	One large Testudinoidea plastral fragment (? hyoplastron) was found in a small drainage roughly 15 meters from the center stake in an east-northeast direction. A second unidentifiable turtle shell fragment was found at the top of a small hill, approximately 10 meters from the center stake in a south-southwest direction. The area where the fossils were discovered is designated as the new vertebrate fossil locality "42Du360V."	Due to the rarity of fossils vertebrate found in the general project area and the projected disturbance the fossil bearing layers, we recommend that a permitted paleontologist be present to monitor the beginning of the construction process for the proposed well pad, access road and pipeline for "WR #16G-32-10-17," and thereafter conduct a spot-monitor as paleontological condition merit. <b>Class 4a</b>

## FEDERAL AND STATE REQUIREMENTS

As mandated by the US Department of the Interior Bureau of Land Management, paleontologically sensitive geologic formations in BLM lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
- 3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

BLM, 2008: BLM IM 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources. USDI – BLM Washington Office directive, October 29, 2008 replaces the Condition Classification System from Handbook H-8270-1. The following section outlines the new Potential Fossil Yield Classification (PFYC) System. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
  - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
  - **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - **Class 4a –** Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 4b –** Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - **Class 5a –** Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 5b –** Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

## LOCATION

QEP's proposed well pad & access road for "WR #16G-32-10-17" (Sec. 32, T 10 S, R 17 E) are on land managed by the State of Utah Trust Lands Administration (SITLA) in the Desert Spring Wash area of Little Desert, some 21 miles south of Myton, Utah. The project area can be found on the Wilkin Ridge 7.5 minute U. S. Geological Survey Quadrangle Map, Duchesne County, Utah.

## FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. The proposed access road was surveyed with a 400 foot corridor (200 feet either side of the stake), and the staked well pad was surveyed along with a 200 foot area surrounding the staked locations. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

A brief history and description of the geological formations, together with an overview of the paleontological resources found therein, is included in (Appendix A.) of the Intermountain Paleo-Consulting "Catalog of Appendices for Selected Geographic Provinces in the Intermountain West" supplement submitted annually to the offices of the "Regional Paleontologists for the BLM", the offices of the "State Paleontologist" in the Intermountain Region and the Ute Indian Tribe's Department of Energy and Minerals.

## PROJECT AREA

The project area is situated in the Upper Member of the Green River Formation and the Lower Member of the Uinta Formation. Questar Exploration and Production's proposed well pad and access road for "WR #16G-32-10-17" are located in the SE/SE quarter-quarter section of Sec 32, T 10 S, R 17 E (Figure 1). The access road is on the southeast side of a small hill coming off of an existing well pad access road. The access road crosses an existing fence line and approaches the well pad at the southeast corner. The road traverses yellowish-brown sandstone that is covered by a thin layer of weathered mudstone/sandstone. The well pad is situated in a small saddle surrounded by small rolling hills on the south. There are two drainages that run east to west, crossing the southern boundary of the well pad and flow into a large drainage that runs north-south, on the western edge of the well pad. Drainage starts near the center stake and runs to the north, exposing large sandstone cliffs in the bottom of the drainage. The southern end of the well pad contains a yellowish-brown, medium to fine-grained fluvial sandstone that is cross-bedded in places along with some laminar bedding. This fluvial sandstone also contains red-brown concretions and is covered by a thin layer of colluvium under most of the pad. Toward the western edge of the pad the underlying bedrock is a light to medium gray mudstone about three meters thick.

One large Testudinoidea plastral fragment (? hyoplastron) was found in a small drainage roughly 15 meters from the center stake in an east-northeast direction. A second unidentifiable turtle shell fragment was found at the top of a small hill, approximately 10 meters from the center stake in a south-southwest direction. The area where the fossils were discovered is designated as the new vertebrate fossil locality "42Du360V."

## RECOMMENDATIONS

A reconnaissance survey was conducted for QEP's proposed well pad & access road for "WR #16G-32-10-17" (Sec. 32, T 10 S, R 17 E). The well pad & access road covered in this report showed some signs of vertebrate fossils, therefore, we advise the following recommendations.

**Due to the rarity of fossils vertebrate found in the general project area and the projected disturbance the fossil bearing layers, we recommend that a permitted paleontologist be present to monitor the beginning of the construction process for the proposed well pad, access road and pipeline for "WR #16G-32-10-17," and thereafter conduct a spot-monitor as paleontological condition merit.** Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.

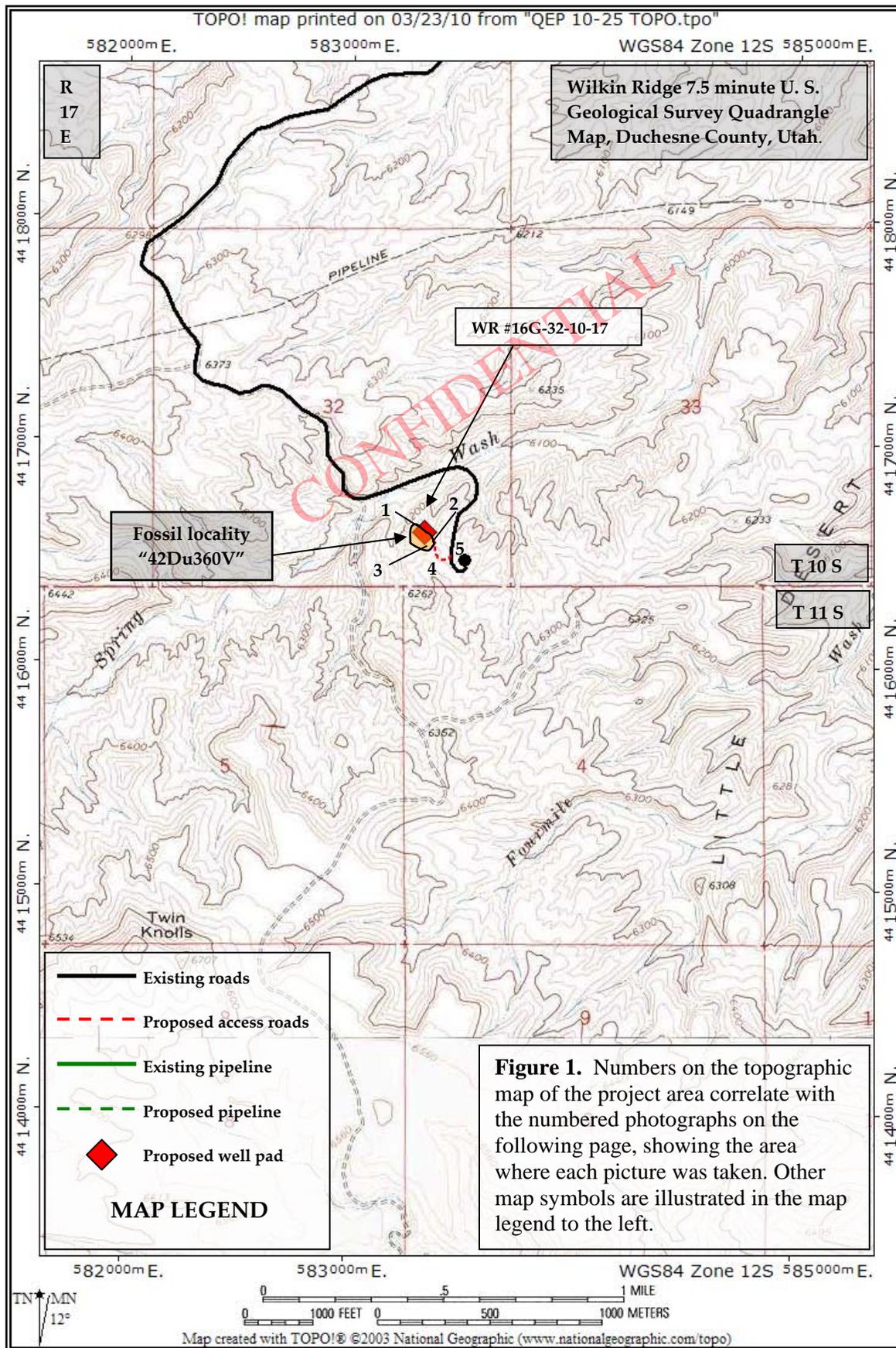


Figure 1. continued...



**T&E Survey**  
Questar Exploration & Production  
WR #16G-32-10-17



Prepared for:

The State of Utah School and Institutional Trust Lands Administration  
675 East, 500 South – Suite 500  
Salt Lake City, UT 84102

&

Questar Exploration & Production  
Redwash Field Office, Vernal UT

Prepared by:



314 S. Vernal Ave, Vernal Utah, 84078  
435-789-1798  
westernbiota.com

April, 2010

## Introduction

Questar Exploration & Production (QEP) is proposing the construction of the WR #16G-32-10-17 well pad and associated pipeline and road Right-of-way (ROW) in Section 32, Township 10 South, Range 17 East; of Duchesne County, Utah. The proposed development is located on surface managed by The State of Utah School and Institutional Trust Lands Administration (SITLA). SITLA and the United State Fish and Wildlife Service (USFWS) generally require surveys be conducted before any surface disturbing activity can commence to confirm the presence or absence of any threatened, endangered or sensitive plant and animal species within the appropriate protective buffer. See **Map A** of proposed action and project area.

On April 20, 2010 Western Biota, Inc. conducted a habitat assessment and inventory survey for *Sclerocactus wetlandicus* (Uintah Basin Hookless cactus) and *Sclerocactus brevispinus* (Pariette cactus) on and/or along the proposed WR #16G-32-10-17 well pad and associated pipeline and road ROW.

## Uintah Basin Hookless Cactus

### Methodology

Western Biota, Inc. conducted a field based habitat assessment to identify potential and suitable cactus habitat along the proposed disturbance impacting SITLA lands. Areas with potential/suitable habitat were then given a thorough survey according to the suggested *Sclerocactus wetlandicus/Sclerocactus brevispinus* protocol. Pedestrian transects within potential/suitable habitat were completed to cover 100% of the visual ground surface out to a minimum of 300ft. from edge of the proposed ROW at 2 meter spacing between biologists.

### Results

No suitable or potential *Sclerocactus wetlandicus* or *Sclerocactus brevispinus* habitat was identified within the proposed WR #16G-32-10-17 disturbance on SITLA managed land. No individuals or populations were identified within the proposed disturbance area and up to a 300ft. buffer outside of the stated. Currently, as staked, the proposed action shows the **absence** of both *Sclerocactus wetlandicus* and *Sclerocactus brevispinus* and would not jeopardize any individuals. See **Map B** for survey results.

## Nesting Raptor

### Methods

Nesting Raptor surveys require a buffer distance of a half-mile minimum on each side of the proposed well pad disturbance, access roads and associated right-of-way in accordance with raptor nest site stipulations. In addition to the known site already mapped by the Bureau of Land Management (BLM), all possible nesting sites were investigated within a half-mile on either side of the proposed pipeline corridor to search for any new nests. Garmin GPS units were utilized to mark all nest sites.

## **Results**

There is one known raptor nest site within the half-mile protective buffer of the proposed disturbance.

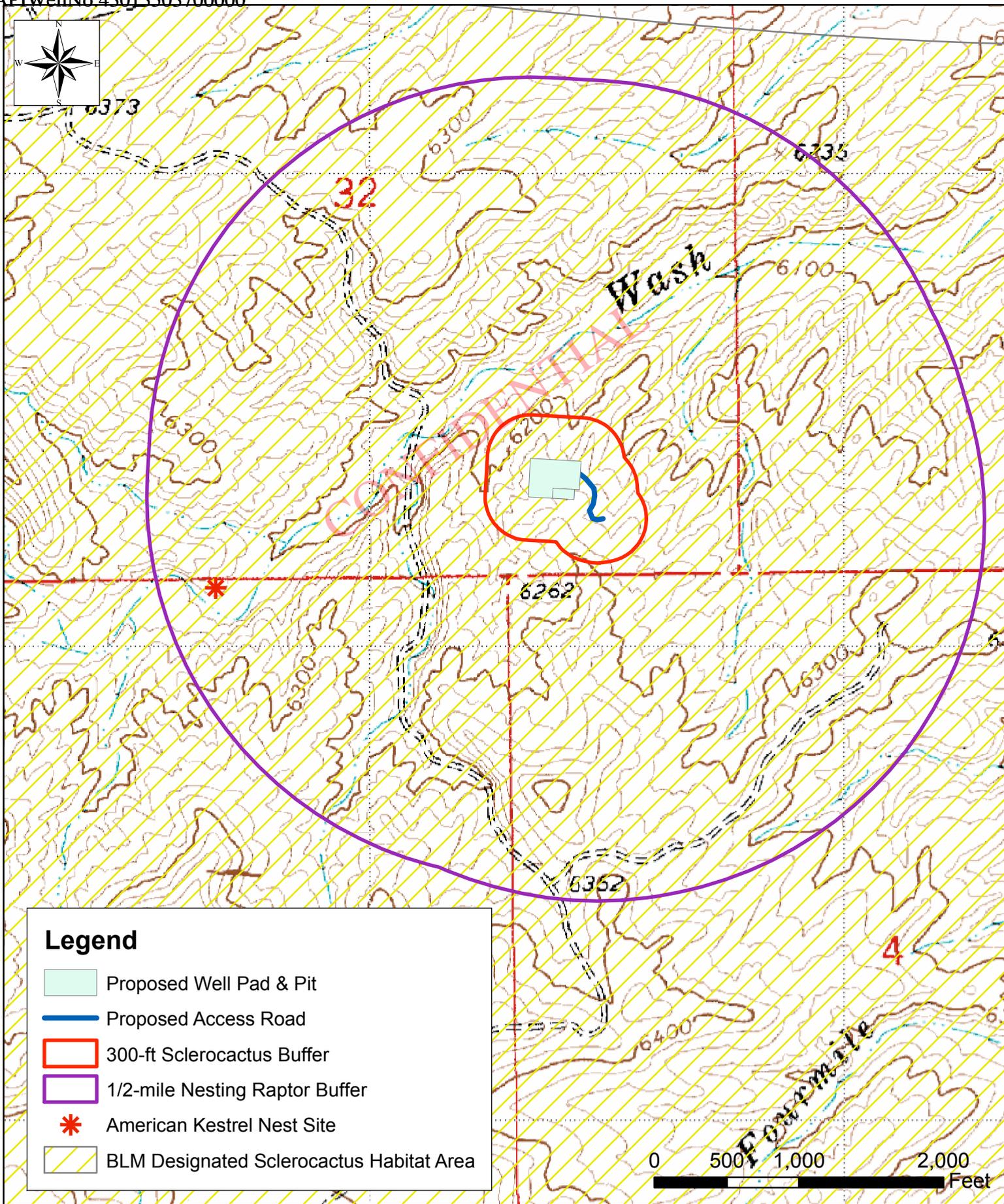
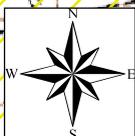
Nest A (see **Map A**) is a known American kestrel nest. Guidance from the Best Management Practices for Raptors and Their Associated Habitats In Utah; August, 2006 states that due to the high population densities and ability to adapt to human activity, a spatial buffer is not currently considered necessary for the American Kestrel. No new nest sites were located during our search in other suitable habitat areas.

## **Conclusion**

Construction planned for the 2010 season should not interfere with the nesting season of any nesting raptors. Should construction carry over into 2011, new site visits would be conducted to determine any new nesting activities. If active nests are then discovered, raptor nest timing stipulations will likely come into effect on all adjacent surface disturbing activities within the protective buffer.

## **Appendices**

- **Map A** – Project Area with ½ mile protective buffer for raptors species
- **Map B** – Project Area with 300ft protective buffer for *Sclerocactus wetlandicus* and *Sclerocactus brevispinus*



**Legend**

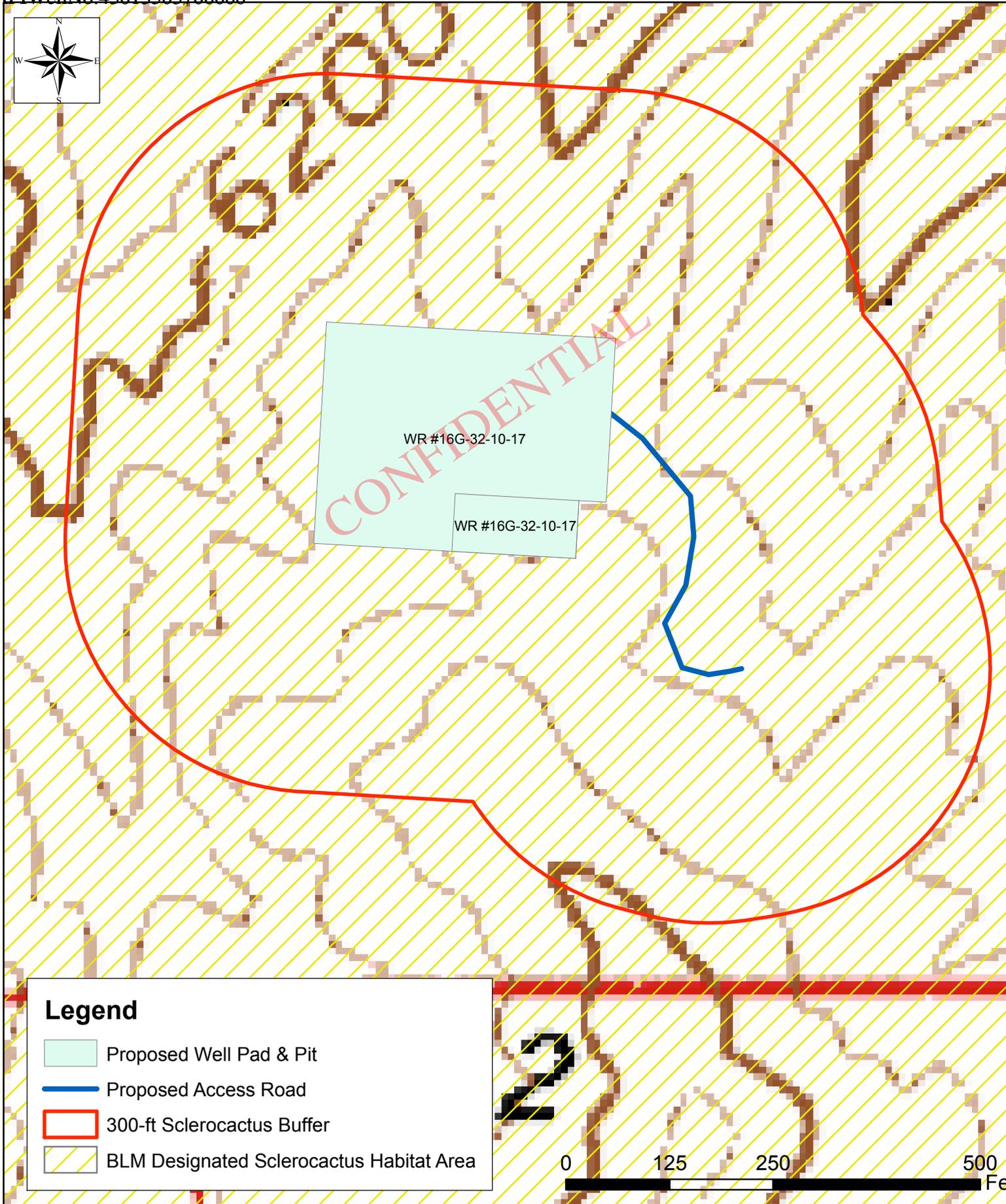
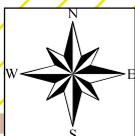
-  Proposed Well Pad & Pit
-  Proposed Access Road
-  300-ft Sclerocactus Buffer
-  1/2-mile Nesting Raptor Buffer
-  American Kestrel Nest Site
-  BLM Designated Sclerocactus Habitat Area



Questar Exploration & Production

**MAP A: Proposed Well WR #16G-32-10-17**

Sec 32 T10S R17E



**Legend**

-  Proposed Well Pad & Pit
-  Proposed Access Road
-  300-ft Sclerocactus Buffer
-  BLM Designated Sclerocactus Habitat Area



Photo: View North from WR #16G-32-10-17 center stake



Photo: View East from WR #16G-32-10-17 center stake.

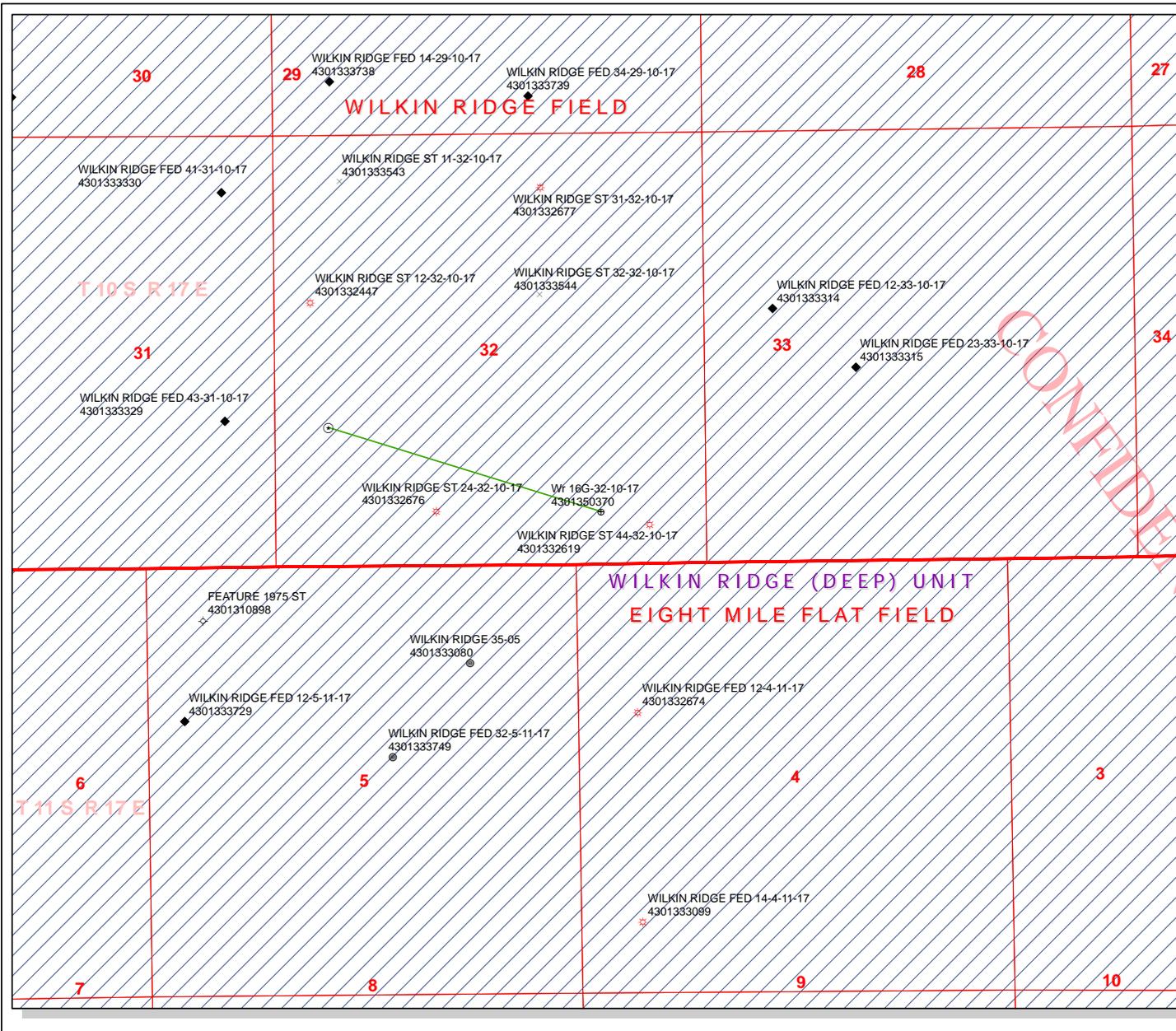


Photo: View South from WR #16G-32-10-17 center stake



Photo: View West from WR #16G-32-10-17 center stake

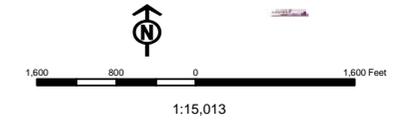




**API Number: 4301350370**  
**Well Name: Wr 16G-32-10-17**  
**Township 10.0 S Range 17.0 E Section 32**  
**Meridian: SLBM**  
**Operator: QUESTAR EXPLORATION & PRODUCTION CO**

Map Prepared:  
 Map Produced by Diana Mason

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



Well Name	QUESTAR EXPLORATION & PRODUCTION CO Wf 16G-32-10-17 430135			
String	Surf	I1	L1	
Casing Size(")	9.625	7.000	4.500	
Setting Depth (TVD)	480	4899	8115	
Previous Shoe Setting Depth (TVD)	0	480	4899	
Max Mud Weight (ppg)	8.3	9.0	10.0	
BOPE Proposed (psi)	500	3000	3000	
Casing Internal Yield (psi)	3520	7240	7780	
Operators Max Anticipated Pressure (psi)	3500		8.3	

Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	208	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	150	YES air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	102	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	102	NO OK
Required Casing/BOPE Test Pressure=		480	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

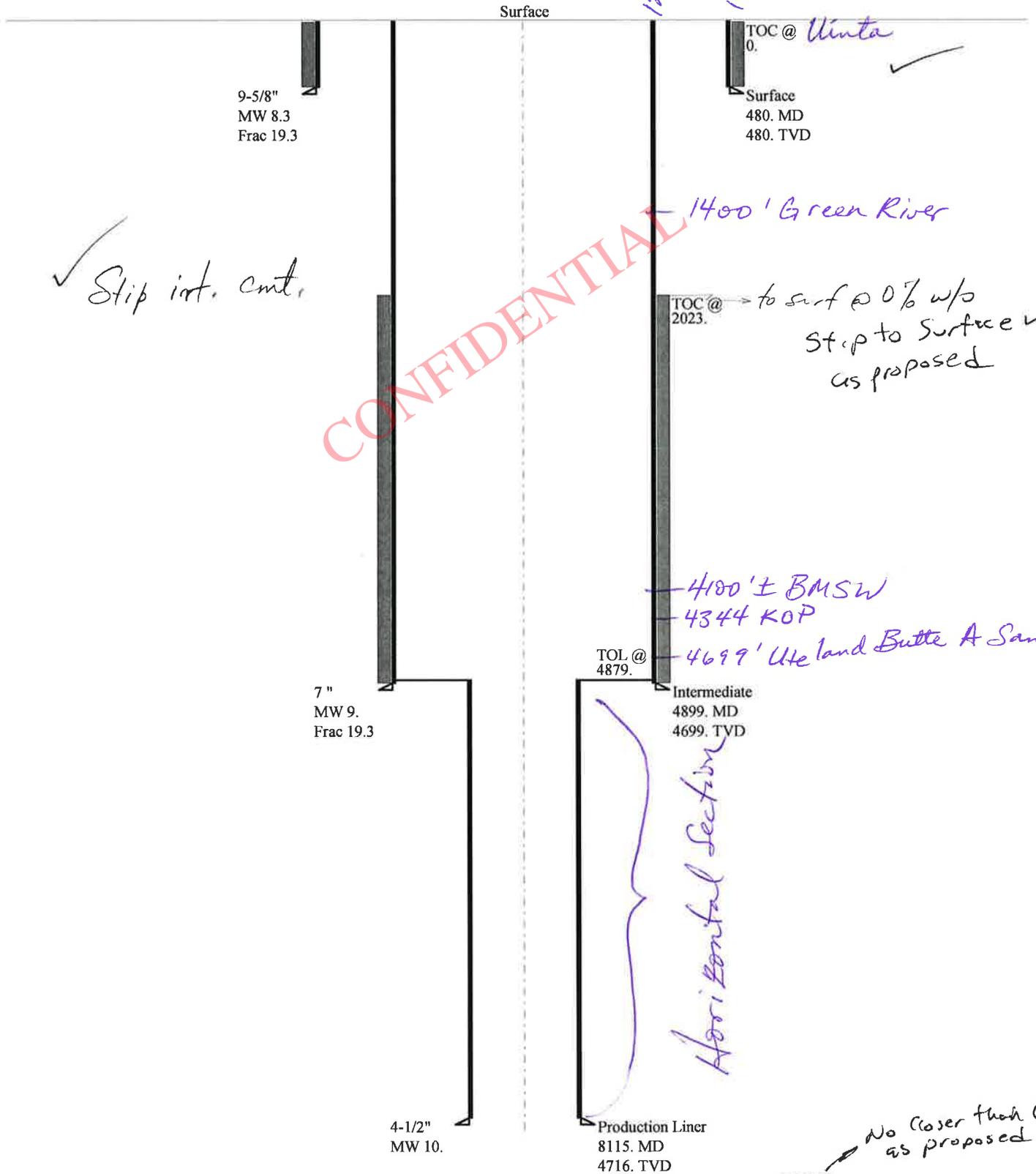
Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	2293	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1705	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1215	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1321	NO Reasonable
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		480	psi *Assumes 1psi/ft frac gradient

Calculations	L1 String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	4220	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3246	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2435	YES OK
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3512	YES OK
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		4899	psi *Assumes 1psi/ft frac gradient

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

# 43013503700000 Wr 16G-32-10-17

## Casing Schematic



CONFIDENTIAL

BitL

657' FWL 1793 FSL  
 Proposed 660' FWL, 1700 FSL

Well name:	<b>43013503700000 Wr 16G-32-10-17</b>		
Operator:	<b>QUESTAR EXPLORATION &amp; PRODUCTION CO</b>		
String type:	Surface	Project ID:	43-013-50370
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 8.330 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

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

Cement top: Surface

**Burst**

Max anticipated surface pressure: 422 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 480 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 421 ft

**Directional Info - Build & Hold**

Kick-off point 4345 ft  
 Departure at shoe: 9 ft  
 Maximum dogleg: 0 °/100ft  
 Inclination at shoe: 1.12 °

**Re subsequent strings:**

Next setting depth: 4,899 ft  
 Next mud weight: 9.000 ppg  
 Next setting BHP: 2,290 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 480 ft  
 Injection pressure: 480 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	480	9.625	36.00	J-55	ST&C	480	480	8.796	4172
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	208	2020	9.727	480	3520	7.33	17.3	394	22.81 J

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

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

Date: June 22, 2010  
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 480 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>43013503700000 Wr 16G-32-10-17</b>		
Operator:	<b>QUESTAR EXPLORATION &amp; PRODUCTION CO</b>		
String type:	Intermediate	Project ID:	43-013-50370
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

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

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 140 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 2,023 ft

**Burst**

Max anticipated surface pressure: 2,430 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 3,464 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 4,062 ft

**Directional Info - Build & Hold**

Kick-off point 4345 ft  
 Departure at shoe: 331 ft  
 Maximum dogleg: 16.26 °/100ft  
 Inclination at shoe: 89.65 °

**Re subsequent strings:**

Next setting depth: 8,115 ft  
 Next mud weight: 10.000 ppg  
 Next setting BHP: 4,216 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 4,899 ft  
 Injection pressure: 4,899 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	4899	7	26.00	N-80	LT&C	4699	4899	6.151	43550
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	2197	4725	2.151	3464	7240	2.09	122.2	519	4.25 J

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

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

Date: June 22, 2010  
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 4699 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>43013503700000 Wr 16G-32-10-17</b>		
Operator:	<b>QUESTAR EXPLORATION &amp; PRODUCTION CO</b>		
String type:	Production Liner	Project ID:	43-013-50370
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 10.000 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 140 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,000 ft

**Burst**

Max anticipated surface pressure: 1,412 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 2,450 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 7,634 ft

Liner top: 4,879 ft

**Directional Info - Build & Hold**

Kick-off point 4345 ft  
 Departure at shoe: 3537 ft  
 Maximum dogleg: 0 °/100ft  
 Inclination at shoe: 89.7 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	3215	4.5	11.60	N-80	LT&C	4716	8115	3.875	13241
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	2450	6350	2.592	2450	7780	3.18	.2	223	99.99 J

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

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

Date: June 22, 2010  
 Salt Lake City, Utah

**Remarks:**

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 4716 ft, a mud weight of 10 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

**From:** Jim Davis  
**To:** Bonner, Ed; Hill, Brad; Mason, Diana  
**Date:** 7/12/2010 8:32 AM  
**Subject:** Questar APD approval

The WR 16G-32-10-17 (4301350370) APD has been approved by SITLA. Spot paleo monitoring is a condition of this approval. No arch stipulations. Thanks.

-Jim

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov  
Phone: (801) 538-5156

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# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** QEP ENERGY COMPANY  
**Well Name** WR 16G-32-10-17  
**API Number** 43013503700000      **APD No** 2671      **Field/Unit** EIGHT MILE FLAT  
**Location: 1/4,1/4** SESE      **Sec** 32      **Tw** 10.0S      **Rng** 17.0E      635 FSL 1282 FEL  
**GPS Coord (UTM)** 583334 4416308      **Surface Owner**

**Participants**

Floyd Bartlett (DOGM), Brandon Bowthorpe (UELS), Jan Nelson, Guy Betts and Bob Haygood (QEP). Jim Davis (SITLA).

**Regional/Local Setting & Topography**

The location is approximately 33 miles straight-line distance southwest of Roosevelt, UT. and 26.7 road miles south of Myton, UT.. Access to the site is by State of Utah, Duchesne County and existing or planned oilfield development roads. Approximately 0.1 miles of additional construction will be required. The general area is within the Bad Lands area of southern Duchesne County near the head of Desert Springs Wash. This is an ephemeral drainage which runs northeasterly toward the Green River which is several miles from the site. No know springs or seeps are in the immediate area.

The Wr 16G-32-10-17 is a proposed horizontal gas well to be drilled approximately 4,716 feet vertically and extended horizontally to 8,115 feet. The specific site is on a lateral drainage of Desert Spring Wash on the west slope of a significant ridge which runs in a north to south direction. Two swales leave the ridgetop and run to the west. On one of these swales at Pit Corner C and Location Corner 6, a diversion may be needed after the pit is closed. It would be re-routed to the south and west around the fill. An outcrop of rock borders the pit on the east. Little disturbance will occur here. To the north of the location a swale is against the fill. A diversion is not needed, as the spoils above will keep any minor runoff off the location. A significant drainage which joins Desert Springs Wash is to the west of the site. Although significant earth work will be required, the selected site appears to be a suitable location for constructing a pad, drilling and operating a well and is the best site in the immediate area. A wire livestock control fence intersects the site. It will be routed to the south around the location.

The pre-drill investigation of the surface was performed on May 27, 2010. Both the surface and the minerals are owned by S.I.T.L.A.

**Surface Use Plan**

**Current Surface Use**

- Grazing
- Recreational
- Wildlife Habitat

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0.1	<b>Width</b> 278 <b>Length</b> 350	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**

**Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Cattle elk, deer, small mammals and birds.

Vegetation includes big sagebrush, stipa, curly mesquite, Indian ricegrass, sego lily, penstemon, loco weed, hordium jubatum, buckwheat, poa, Indian paintbrush and spring annuals.

**Soil Type and Characteristics**

Surface soils vary from shallow to moderately deep sandy loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required?** Y

Two swales leave the ridgetop and run to the west. On one of these swales at Pit Corner C and Location Corner 6, a diversion may be needed after the pit is closed. It would be re-routed to the south and west around the fill.

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

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

**Reserve Pit**

**Site-Specific Factors**

**Site Ranking**

<b>Distance to Groundwater (feet)</b>	>200	0	
<b>Distance to Surface Water (feet)</b>	>1000	0	
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0	
<b>Distance to Other Wells (feet)</b>	>1320	0	
<b>Native Soil Type</b>	Mod permeability	10	
<b>Fluid Type</b>	Fresh Water	5	
<b>Drill Cuttings</b>	Normal Rock	0	
<b>Annual Precipitation (inches)</b>	10 to 20	5	
<b>Affected Populations</b>			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	<b>Final Score</b>	20	1 Sensitivity Level

**Characteristics / Requirements**

The planned reserve pit is 70' x 150' located within a cut area on the on the southeast side of the location. It is 12 feet deep with a 10-foot wide outer bench. Stability should not be a problem. A minimum of a 16-mil liner is required.

**Closed Loop Mud Required?** N    **Liner Required?** Y    **Liner Thickness** 16    **Pit Underlayment Required?** Y

**Other Observations / Comments**

Floyd Bartlett  
**Evaluator**

5/27/2010  
**Date / Time**

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# Application for Permit to Drill Statement of Basis

7/13/2010

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

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<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
2671	43013503700000	SITLA	OW	S	No
<b>Operator</b>	QEP ENERGY COMPANY		<b>Surface Owner-APD</b>		
<b>Well Name</b>	WR 16G-32-10-17		<b>Unit</b>		
<b>Field</b>	EIGHT MILE FLAT		<b>Type of Work</b>		DRILL
<b>Location</b>	SESE 32 10S 17E S 635 FSL 1282 FEL GPS Coord (UTM) 583385E 4416344N				

**Geologic Statement of Basis**

Questar has proposed 480' of surface casing at the proposed location. The base of the moderately saline water is estimated to at approximately 4,100'. A search of Division of Water Rights records shows no water wells within a 10,000' 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 which are not expected to be prolific aquifers. Intermediate casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters uphole.

Brad Hill  
**APD Evaluator**

6/3/2010  
**Date / Time**

**Surface Statement of Basis**

The location is approximately 33 miles straight-line distance southwest of Roosevelt, UT. and 26.7 road miles south of Myton, UT.. Access to the site is by State of Utah, Duchesne County and existing or planned oilfield development roads. Approximately 0.1 miles of additional construction will be required. The general area is within the Bad Lands area of southern Duchesne County near the head of Desert Springs Wash. This is an ephemeral drainage which runs northeasterly toward the Green River which is several miles from the site. No know springs or seeps are in the immediate area.

The Wr 16G-32-10-17 is a proposed horizontal gas well to be drilled approximately 4,716 feet vertically and extended horizontally to 8,115 feet. The specific site is on a lateral drainage of Desert Spring Wash on the west slope of a significant ridge which runs in a north to south direction. Two swales leave the ridgetop and run to the west. On one of these swales at Pit Corner C and Location Corner 6, a diversion may be needed after the pit is closed. It would be re-routed to the south and west around the fill. An outcrop of rock borders the pit on the east. Little disturbance will occur here. To the north of the location a swale is against the fill. A diversion is not needed, as the spoils above will keep any minor runoff off the location. A significant drainage which joins Desert Springs Wash is to the west of the site. Although significant earth work will be required, the selected site appears to be a suitable location for constructing a pad, drilling and operating a well and is the best site in the immediate area. A wire livestock control fence intersects the site. It will be routed to the south around the location.

The pre-drill investigation of the surface was performed on May 27, 2010. Both the surface and the minerals are owned by S.I.T.L.A. Jim Davis of S.I.T.L.A attended the visit. He had no concerns and furnished Jan Nelson of QEP a seed mix to be used in reclamation of the site. Ben Williams and Alex Hansen of the UDWR were invited to the pre-site but were unable to attend because of previous commitments.

Floyd Bartlett  
**Onsite Evaluator**

5/27/2010  
**Date / Time**

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

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

7/13/2010

Utah Division of Oil, Gas and Mining

Page 2

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Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

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**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

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**APD RECEIVED:** 5/18/2010

**API NO. ASSIGNED:** 43013503700000

**WELL NAME:** Wr 16G-32-10-17

**OPERATOR:** QEP ENERGY COMPANY (N3700)

**PHONE NUMBER:** 435 781-4331

**CONTACT:** Jan Nelson

**PROPOSED LOCATION:** SESE 32 100S 170E

**Permit Tech Review:**

**SURFACE:** 0635 FSL 1282 FEL

**Engineering Review:**

**BOTTOM:** 0635 FSL 1282 FEL

**Geology Review:**

**COUNTY:** DUCHESNE

**LATITUDE:** 39.89495

**LONGITUDE:** -110.02466

**UTM SURF EASTINGS:** 583385.00

**NORTHINGS:** 4416344.00

**FIELD NAME:** EIGHT MILE FLAT

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** ML-47056

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

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

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**RECEIVED AND/OR REVIEWED:**

- PLAT**
- Bond:** STATE/FEE - 965003033
- Potash**
- Oil Shale 190-5**
- Oil Shale 190-3**
- Oil Shale 190-13**
- Water Permit:** A36125 - 49-2153
- RDCC Review:**
- Fee Surface Agreement**
- Intent to Commingle**

**Commingle Approved**

**LOCATION AND SITING:**

- R649-2-3.**
  - Unit:**
  - R649-3-2. General**
  - R649-3-3. Exception**
  - Drilling Unit**
  - Board Cause No:** R649-3-2.6
  - Effective Date:**
  - Siting:**
  - R649-3-11. Directional Drill**
- 

**Comments:** Presite Completed  
WILKIN RIDGE AREA NON UNIT WELL: TEMP 640 ACRE SPACING: OP FR N5085:

**Stipulations:**  
5 - Statement of Basis - bhill  
9 - Cement casing to Surface - hmacdonald  
15 - Directional - bhill  
23 - Spacing - dmason  
26 - Temporary Spacing - bhill

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET** (for state use only)

ROUTING  
 CDW

Change of Operator (Well Sold)

**X - Operator Name Change**

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

**6/14/2010**

<b>FROM:</b> (Old Operator): N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 308-3048	<b>TO:</b> ( New Operator): N3700-QEP Energy Company 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 308-3048
--	---

CA No.

Unit:

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED								

**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: 6/28/2010
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/28/2010
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/24/2010
- 4a. Is the new operator registered in the State of Utah: Business Number: 764611-0143
- 5a. (R649-9-2)Waste Management Plan has been received on: Requested
- 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 8/16/2010 BIA not yet
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 8/16/2010
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
- Underground Injection Control ("UIC")** 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: 6/29/2010

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 6/30/2010
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 6/30/2010
- Bond information entered in RBDMS on: 6/30/2010
- Fee/State wells attached to bond in RBDMS on: 6/30/2010
- Injection Projects to new operator in RBDMS on: 6/30/2010
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: ESB000024
- Indian well(s) covered by Bond Number: 965010693
- 3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965010695
- 3b. The **FORMER** operator has requested a release of liability from their bond on: n/a

**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: n/a

**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.

<b>1 TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> See attached
<b>2 NAME OF OPERATOR:</b> Questar Exploration and Production Company <i>N5085</i>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> See attached
<b>3. ADDRESS OF OPERATOR:</b> 1050 17th Street, Suite 500 <small>CITY</small> Denver <small>STATE</small> CO <small>ZIP</small> 80265		<b>7. UNIT or CA AGREEMENT NAME:</b> See attached
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: See attached		<b>8. WELL NAME and NUMBER:</b> See attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		<b>9. API NUMBER:</b> Attached
COUNTY: Attached		<b>10. FIELD AND POOL, OR WILDCAT:</b> See attached
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: <u>6/14/2010</u>	<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>Operator Name Change</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.

Effective June 14, 2010 Questar Exploration and Production Company changed its name to QEP Energy Company. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:  
 Federal Bond Number: 965002976 (BLM Reference No. ESB000024) *N3700*  
 Utah State Bond Number: ~~965003033~~ } *965010695*  
 Fee Land Bond Number: ~~965003033~~ } *965010695*  
 BIA Bond Number: ~~799446~~ } *965010693*

The attached document is an all inclusive list of the wells operated by Questar Exploration and Production Company. As of June 14, 2010 QEP Energy Company assumes all rights, duties and obligations as operator of the properties as described on the list

NAME (PLEASE PRINT) <u>Morgan Anderson</u>	TITLE <u>Regulatory Affairs Analyst</u>
SIGNATURE <i>Morgan Anderson</i>	DATE <u>6/23/2010</u>

(This space for State use only)

**RECEIVED**  
**JUN 28 2010**

DIV. OF OIL, GAS & MINING

**APPROVED** 6/30/2009  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)  
effective June 14, 2010

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
Wr 16G-32-10-17	32	100S	170E	4301350370		State	OW	NEW	C
STATE 1	36	070S	240E	4304715128	5878	State	GW	P	
KAYE STATE 1-16	16	100S	230E	4304730609	5395	State	GW	P	
TOLL STATION ST 8-36-8-21	36	080S	210E	4304732724	12361	State	GW	S	
GB 8A-36-8-21	36	080S	210E	4304733037	12377	State	GW	P	
GB 6-36-8-21	36	080S	210E	4304733038	12378	State	GW	P	
GB 2-36-8-21	36	080S	210E	4304733252	12527	State	GW	P	
GH 1W-32-8-21	32	080S	210E	4304733570	12797	State	GW	P	
GH 3W-32-8-21	32	080S	210E	4304733571	12796	State	GW	P	
GH 5W-32-8-21	32	080S	210E	4304733572	12828	State	GW	P	
GH 7W-32-8-21	32	080S	210E	4304733573	12872	State	GW	P	
GH 2W-32-8-21	32	080S	210E	4304733744	13029	State	GW	P	
GH 4W-32-8-21	32	080S	210E	4304733745	13035	State	GW	P	
GH 8W-32-8-21	32	080S	210E	4304733746	13030	State	GW	P	
OU GB 3W-16-8-22	16	080S	220E	4304733751	13577	State	GW	P	
OU GB 5W-16-8-22	16	080S	220E	4304733752	13570	State	GW	P	
GH 6W-32-8-21	32	080S	210E	4304733753	13036	State	GW	P	
OU GB 11W-16-8-22	16	080S	220E	4304733754	13582	State	GW	P	
GH 5G-32-8-21	32	080S	210E	4304733866	13037	State	OW	P	
GB 1W-36-8-21	36	080S	210E	4304733944	13439	State	GW	P	
WV 2W-2-8-21	02	080S	210E	4304734034	13678	State	GW	P	
GB 6W-25-8-21	25	080S	210E	4304734121	13440	Fee	GW	P	
GB 7W-25-8-21	25	080S	210E	4304734122	13436	Fee	GW	P	
WV 9W-16-7-21	16	070S	210E	4304734324		State	GW	LA	
OU GB 11W-30-8-22	30	080S	220E	4304734392	13433	Fee	GW	P	
OU GB 4W-16-8-22	16	080S	220E	4304734598	13579	State	GW	P	
OU GB 10W-16-8-22	16	080S	220E	4304734616		State	GW	LA	
OU GB 12W-16-8-22	16	080S	220E	4304734617	13697	State	GW	P	
OU GB 13W-16-8-22	16	080S	220E	4304734618	13611	State	GW	P	
GB 14MU-16-8-22	16	080S	220E	4304734619	14196	State	GW	P	
OU GB 15W-16-8-22	16	080S	220E	4304734622	13595	State	GW	P	
OU GB 16W-16-8-22	16	080S	220E	4304734655	13815	State	GW	P	
OU GB 2W-16-8-22	16	080S	220E	4304734657	13721	State	GW	P	
OU GB 6W-16-8-22	16	080S	220E	4304734658	13592	State	GW	P	
OU GB 8W-16-8-22	16	080S	220E	4304734660	13769	State	GW	TA	
OU GB 9W-16-8-22	16	080S	220E	4304734692		State	GW	LA	
OU GB 15G-16-8-22	16	080S	220E	4304734829	13777	State	OW	S	
GB 7MU-36-8-21	36	080S	210E	4304734893	14591	State	GW	P	
GB 3W-36-8-21	36	080S	210E	4304734894	13791	State	GW	P	
NC 8M-32-8-22	32	080S	220E	4304734897		State	GW	LA	
NC 3M-32-8-22	32	080S	220E	4304734899		State	GW	LA	
GB 5W-36-8-21	36	080S	210E	4304734925	13808	State	GW	P	
GB 4MU-36-8-21	36	080S	210E	4304734926	14589	State	GW	P	
NC 11M-32-8-22	32	080S	220E	4304735040		State	GW	LA	
GB 5SG-36-8-21	36	080S	210E	4304735155	14015	State	GW	P	
SC 13ML-16-10-23	16	100S	230E	4304735281	14036	State	GW	P	
SC 3ML-16-10-23	16	100S	230E	4304735282	14014	State	GW	P	
SC 11ML-16-10-23	16	100S	230E	4304735311	14035	State	GW	P	
WH 13G-2-7-24	02	070S	240E	4304735484	14176	State	D	PA	
FR 9P-36-14-19	31	140S	200E	4304735880	14310	State	GW	P	
CB 13G-36-6-20	36	060S	200E	4304735969		State	OW	LA	

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

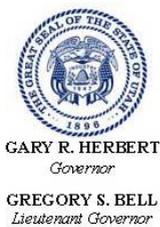
Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)  
effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
WH 2G-2-7-24	02	070S	240E	4304736259		State	GW	LA	
WH 4G-2-7-24	02	070S	240E	4304736261		State	GW	LA	
FR 1P-36-14-19	31	140S	200E	4304736300	14859	State	GW	P	
WK 3ML-2-9-24	02	090S	240E	4304736723		State	GW	LA	
WK 7ML-2-9-24	02	090S	240E	4304736724		State	GW	LA	
SC 5ML-16-10-23	16	100S	230E	4304736877	15125	State	GW	P	
SC 12ML-16-10-23	16	100S	230E	4304736878	15053	State	GW	P	
SC 14ML-16-10-23	16	100S	230E	4304736908	15070	State	GW	P	
SC 4ML-16-10-23	16	100S	230E	4304736912	15208	State	GW	P	
FR 3P-36-14-19	36	140S	190E	4304737376	15736	State	GW	P	
BZ 12ML-16-8-24	16	080S	240E	4304737670		State	GW	LA	
BZ 10D-16-8-24	16	080S	240E	4304737671	15979	State	GW	S	
BZ 14ML-16-8-24	16	080S	240E	4304737672		State	GW	LA	
BBE 9W-16-7-21	16	070S	210E	4304737745		State	GW	LA	
GB 10ML-16-8-22	16	080S	220E	4304737943		State	GW	LA	
GB 9ML-16-8-22	16	080S	220E	4304737944	15851	State	GW	P	
HR 2MU-2-12-23	02	120S	230E	4304738052		State	GW	LA	
HR 3MU-2-12-23	02	120S	230E	4304738053		State	GW	LA	
HR 6MU-2-12-23	02	120S	230E	4304738054		State	GW	LA	
HR 10MU-2-12-23	02	120S	230E	4304738055	15737	State	GW	S	
HR 12MU-2-12-23	02	120S	230E	4304738056		State	GW	LA	
HR 14MU-2-12-23	02	120S	230E	4304738057		State	GW	LA	
HR 16MU-2-12-23	02	120S	230E	4304738058		State	GW	LA	
FR 11P-36-14-19	36	140S	190E	4304738349	15899	State	GW	P	
GB 4SG-36-8-21	36	080S	210E	4304738764	16142	State	GW	P	
GB 7SG-36-8-21	36	080S	210E	4304738765	16144	State	GW	P	
WF 3D-32-15-19	32	150S	190E	4304738877		State	GW	APD	C
SCS 5C-32-14-19	32	140S	190E	4304738963	16759	State	GW	P	
FR 7P-36-14-19	31	140S	200E	4304738992	15955	State	GW	P	
SCS 10C-16-15-19	16	150S	190E	4304739683	16633	State	GW	P	
FR 6P-16-14-19	16	140S	190E	4304740350		State	GW	APD	C

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** WR 16G-32-10-17  
**API Well Number:** 43013503700000  
**Lease Number:** ML-47056  
**Surface Owner:** STATE  
**Approval Date:** 7/13/2010

**Issued to:**

QEP ENERGY COMPANY, 11002 East 17500 South, Vernal, Ut 84078

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-2.6. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

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

A temporary 640 acre spacing unit is hereby established in Section 32, Township 10S, Range 17E for the drilling of this well (R649-3-2.6). No other horizontal wells may be drilled in this section unless approved by the Board of Oil, Gas and Mining.

The cement volumes for the 7" intermediate casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the

surface.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

**Additional Approvals:**

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

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

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

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

**Contact Information:**

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

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

**Reporting Requirements:**

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

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

Approved By:

Approved By:

A handwritten signature in black ink, appearing to read "B. D. ...", written in a cursive style.

Acting Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-47056
	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
	<b>7. UNIT or CA AGREEMENT NAME:</b> NAUTILUS (GR)
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> WR 16G-32-10-17
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>9. API NUMBER:</b> 43013503700000
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078	<b>PHONE NUMBER:</b> 303 308-3068 Ext
<b>9. FIELD and POOL or WILDCAT:</b> EIGHT MILE FLAT	<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0635 FSL 1282 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 32 Township: 10.0S Range: 17.0E Meridian: S
	<b>COUNTY:</b> DUCHESNE
	<b>STATE:</b> UTAH

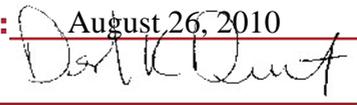
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/30/2010	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input checked="" type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

This well was originally permitted as a single lateral horizontal oil well. QEP Energy Company proposes to drill an additional second lateral to a total depth of 8,810' MD in Section 33, T10S, R17E, Federal Lease UTU-75086, within the Uteland Butte member of the Green River formation. The bottom hole footages for lateral 2 are: 2500 FLS, 2500' FEL, NESW, Section 33, T10S, R17E. Please refer to attached revised: 8-Point Drilling Plan Directional Drilling Plan Legal Plat. This well is in the Nautilus Unit and all other conditions of the original APD will be adhered to.

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

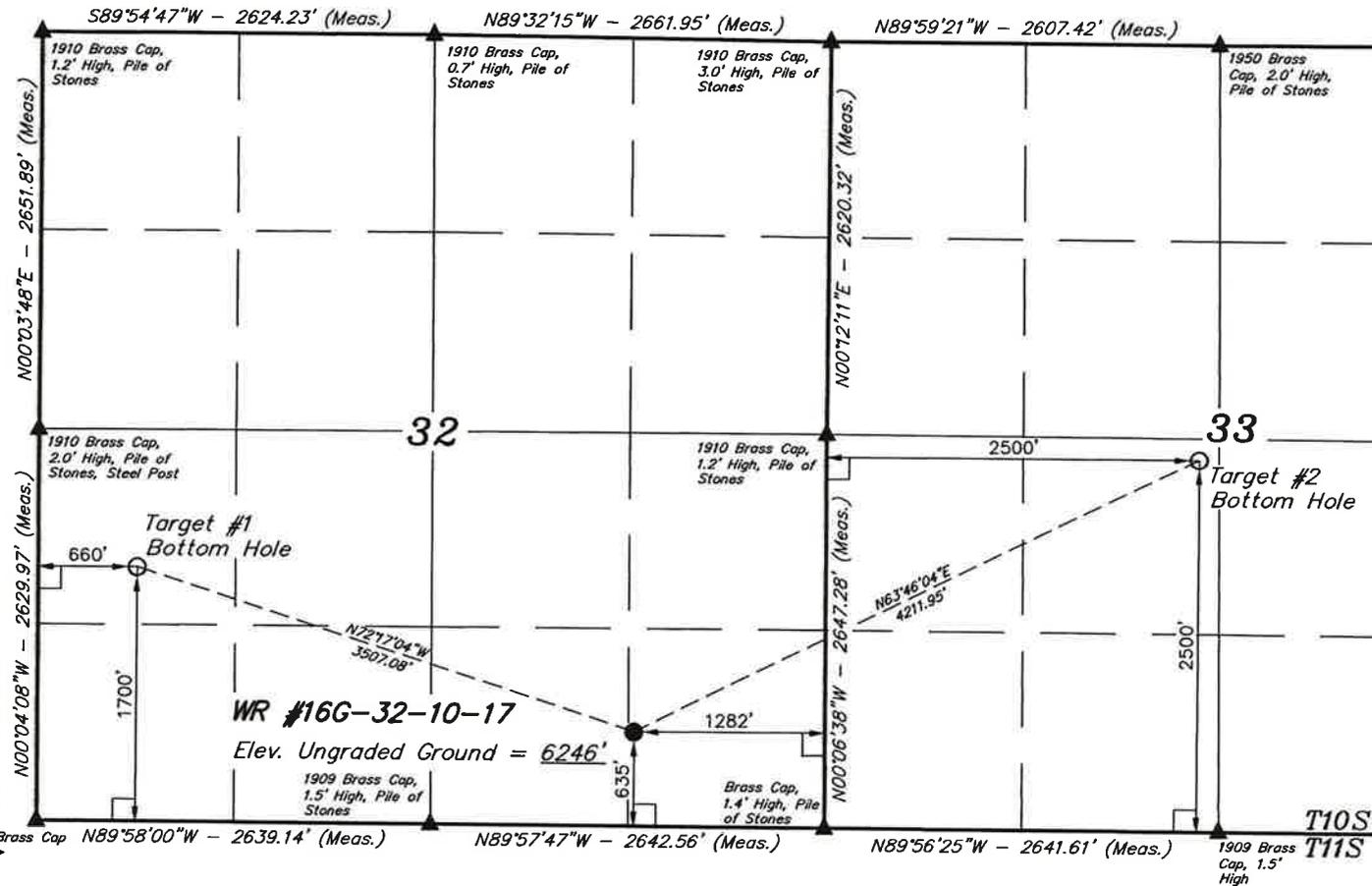
Date: August 26, 2010  
By: 

<b>NAME (PLEASE PRINT)</b> Jan Nelson	<b>PHONE NUMBER</b> 435 781-4331	<b>TITLE</b> Permit Agent
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/9/2010	

# T10S, R17E, S.L.B.&M.

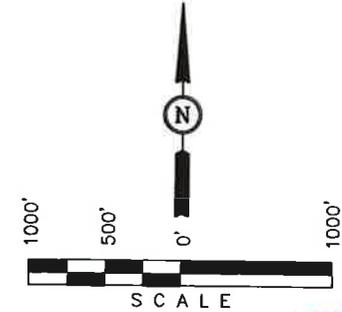
## QUESTAR EXPLR. & PROD.

Well location, WR #16G-32-10-17, located as shown in the SE 1/4 SE 1/4 of Section 32, T10S, R17E, S.L.B.&M., Duchesne County, Utah.



### BASIS OF ELEVATION

SPOT ELEVATION AT THE NORTHWEST CORNER OF SECTION 14, T10S, R18E, S.L.B.&M. TAKEN FROM THE MOON BOTTOM QUADRANGLE, UTAH, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5129 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.

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

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

SCALE 1" = 1000'	DATE SURVEYED: 02-26-10	DATE DRAWN: 03-01-10
PARTY D.R. K.A. K.G.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE QUESTAR EXPLR. & PROD.	

### BASIS OF BEARINGS

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

NAD 83 (TARGET #2 BOTTOM HOLE)	NAD 83 (TARGET #1 BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°54'00.27" (39.900075)	LATITUDE = 39°53'52.30" (39.897861)	LATITUDE = 39°53'41.81" (39.894947)
LONGITUDE = 110°00'42.53" (110.011814)	LONGITUDE = 110°02'13.83" (110.037175)	LONGITUDE = 110°01'30.96" (110.025267)
NAD 27 (TARGET #2 BOTTOM HOLE)	NAD 27 (TARGET #1 BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 39°54'00.40" (39.900111)	LATITUDE = 39°53'52.43" (39.897897)	LATITUDE = 39°53'41.94" (39.894983)
LONGITUDE = 110°00'39.99" (110.011108)	LONGITUDE = 110°02'11.29" (110.036469)	LONGITUDE = 110°01'28.42" (110.024581)

RECEIVED

August 09, 2010

### LEGEND:

- = 90° SYMBOL
- = PROPOSED WELL HEAD.
- = SECTION CORNERS LOCATED.

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1  
Approval of Operations on Onshore  
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. **Formation Tops**

The estimated top of important geologic markers are as follows:

WNW Lateral #1:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,400'	1,400'
Kick Off Point	4,344'	4,345'
Uteland Butte A Sand	4,699'	4,899'
TD	4,716'	8,115'

ENE Lateral #2:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,400'	1,400'
Kick Off Point	4,354'	4,355'
Uteland Butte A Sand	4,707'	4,897'
TD	4,823'	8,810'

2. **Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

WNW Lateral #1:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	Uteland Butte A Sand	4,699' – 4,716'	4,899' – 8,115'

ENE Lateral #2:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	Uteland Butte A Sand	4,707' – 4,823'	4,897' – 8,810'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

**3. Operator's Specification for Pressure Control Equipment**

- A. 3,000 psi double gate, 3,000 psi annular (schematic attached)
- B. Function test daily.
- C. All casing strings shall be pressure tested (0.22 psi/ft or 1,500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield of the casing.
- D. Ram type preventers and associated equipment shall be tested to rated working pressure if isolated by a test plug or to 50% of the internal yield pressure of casing, whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil & Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 3M system and individual components shall be operable as designed.

**4. Casing Program**

Hole Size	Casing Size	Top, MD	Bottom, MD	Weight, lb/ft	Grade	Thread	Condition	MW
17 1/2"	14"	sfc	40'	Steel	Cond.	None	Used	Air
12 1/4"	9 5/8"	sfc	480'	36.0	J-55	STC	New	Air
8 3/4"	7"	sfc	4,899'	26.0	N-80	LTC	New	8-9 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
9 5/8"	36.0 lb.	J-55	STC	2,020 psi	3,520 psi	394,000 lb.
7"	26.0 lb.	N-80	LTC	5,410 psi	7,240 psi	519,000 lb.

The Lateral's will be lined with casing.

**WNW Lateral #1:**

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,879'	8,115'	11.6	N-80	8 – 10 ppg

**ENE Lateral #2:**

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,360'	8,810'	11.6	N-80	8 – 10 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
4 1/2"	11.6 lb.	N-80	LTC	6,350 psi	7,780 psi	223,000 lb.

Please refer to the attached wellbore diagram and re-entry procedure for further details.

**5. Cementing Program**

**20" Conductor:**

Cement to surface with construction cement.

**9-5/8" Surface Casing: sfc – 480' (MD)**

**Lead/Tail Slurry:** 0' – 480'. 170 sks (310 cu ft) Rockies LT cement + 0.25 lb/sk Kwik Seal + 0.125 lb/sk Poly-E-Flake. Slurry wt: 13.5 ppg, Slurry yield: 1.81 ft<sup>3</sup>/sk, Slurry volume: 12-1/4" hole + 100% excess.

**7" Intermediate Casing: sfc – 4,899' (MD)**

**Lead/Tail Slurry:** sfc – 4,899'. 595 sks (736 cu ft) 50/50 Poz Premium + 0.6% Halad (R)-322 fluid loss + 2.0% Microbond M expander + 5% salt + 0.125 lb/sk Poly-E-Flake. Slurry wt: 14.35 ppg, Slurry yield: 1.24 ft<sup>3</sup>/sk, Slurry volume: 8-3/4" hole + 40% excess.

**WNW Lateral #1: 4,879' – 8,115'**

No cement, liner hung in open hole.

**ENE Lateral #2: 4,360' – 8,810'**

No cement, liner hung in open hole.

**6. Auxilliary Equipment**

- a. Kelly Cock – Yes

- b. Float at the bit – No
- c. Monitoring equipment on the mud system – visually and/or PVT or Flow Show
- d. Fully opening safety valve on the rig floor – Yes
- e. Rotating Head – Yes

Drilling the surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III requirements, subsection E Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is less than 500 feet and high pressures are not expected.

- f. **Properly lubricated and maintained rotating head.** A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
- g. **Blooiie line discharge 100' from well bore and securely anchored.** The blooiie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.
- h. **Automatic ignitor or continuous pilot light on the blooiie line.** A diffuser will be used rather than an automatic pilot/ignitor. Water is injected into the compressed air and eliminates the need for the pilot light and the need for dust suppression equipment.
- i. **Compressors located in the opposite direction from the blooiie line a minimum of 100 feet from the well bore.** Compressors located 50 feet on the opposite side of the well bore from the blooiie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valve on the compressor, 3) spark arrestors on the motors.

Drilling of the laterals will be done with fresh water NaCl based mud systems consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash, polymers, and NaCl. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used the concentration will be less than 4% by volume. Maximum anticipated mud weight is 10.0 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow show will be used upon exit of surface casing to TD.

Gas detector will be used upon exit of surface casing to TD.

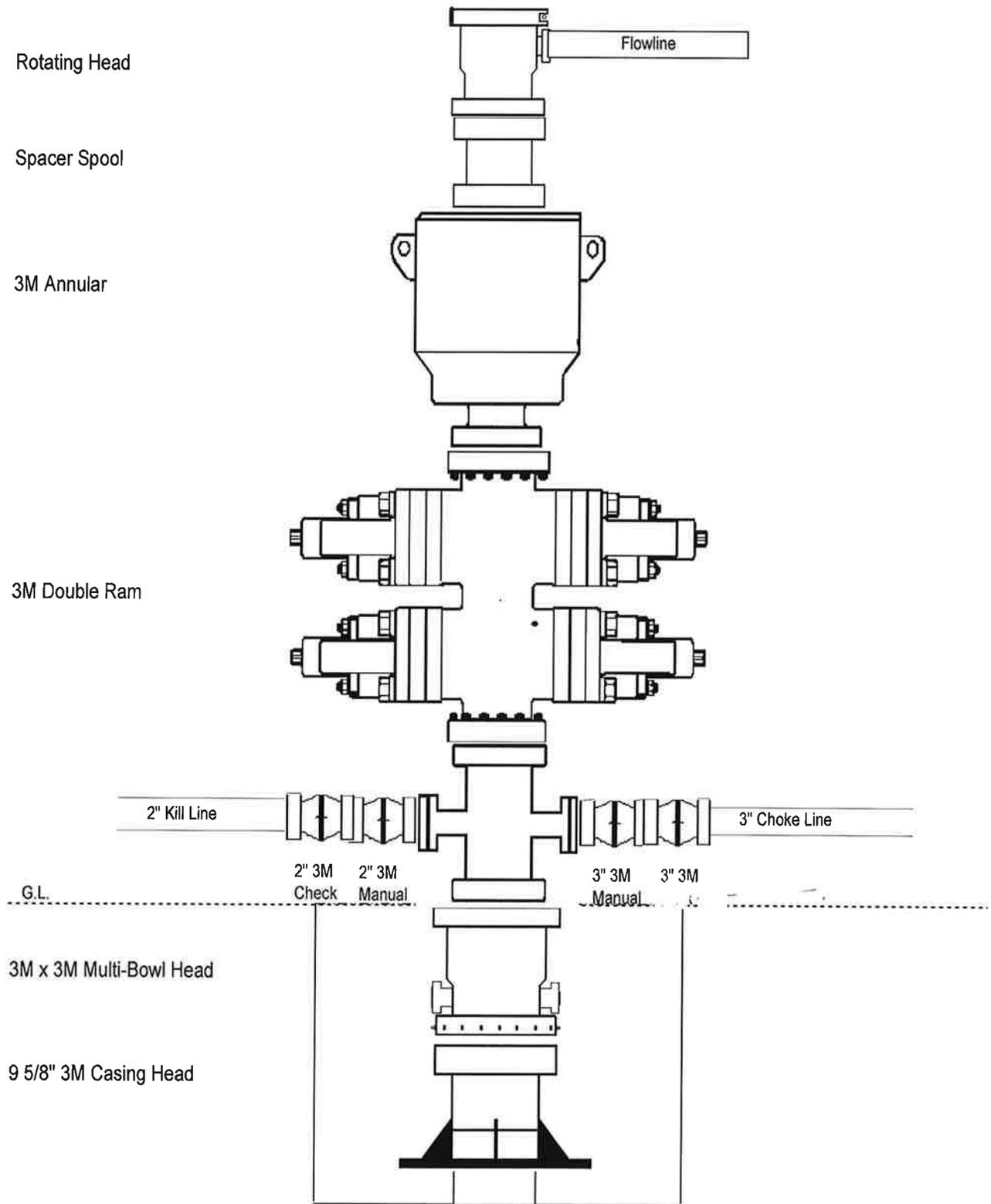
7. **Testing, Logging, and Coring Program**

- a. Cores – None Anticipated
- b. DST – None Anticipated
- c. Logging:
  - i. Mud logging from casing exit to TD
  - ii. MWD-GR will be utilized during drilling operations to aid in landing the curve and maintaining the laterals within the desired zone.
- d. Formation and completion interval: G1 Lime interval, final determination of completion will be made by analysis of mud logging data. Stimulation: stimulation will be designed for the particular area of interest encountered.

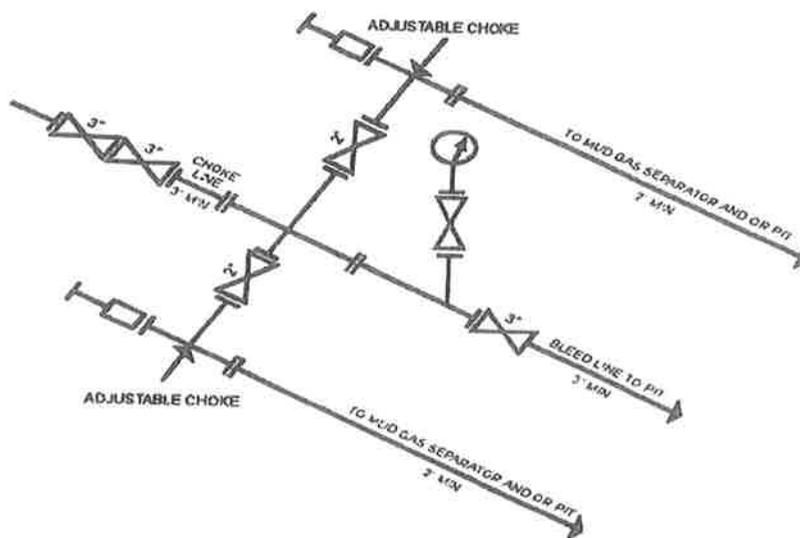
8. **Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or is known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom-hole pressure equals approximately 3,500 psi. Maximum anticipated bottom hole temperature is approximately 150°F.

ONSHORE OIL & GAS ORDER NO. 1  
QEP ENERGY COMPANY  
BOP Schematic, 3M  
3M BOP STACK

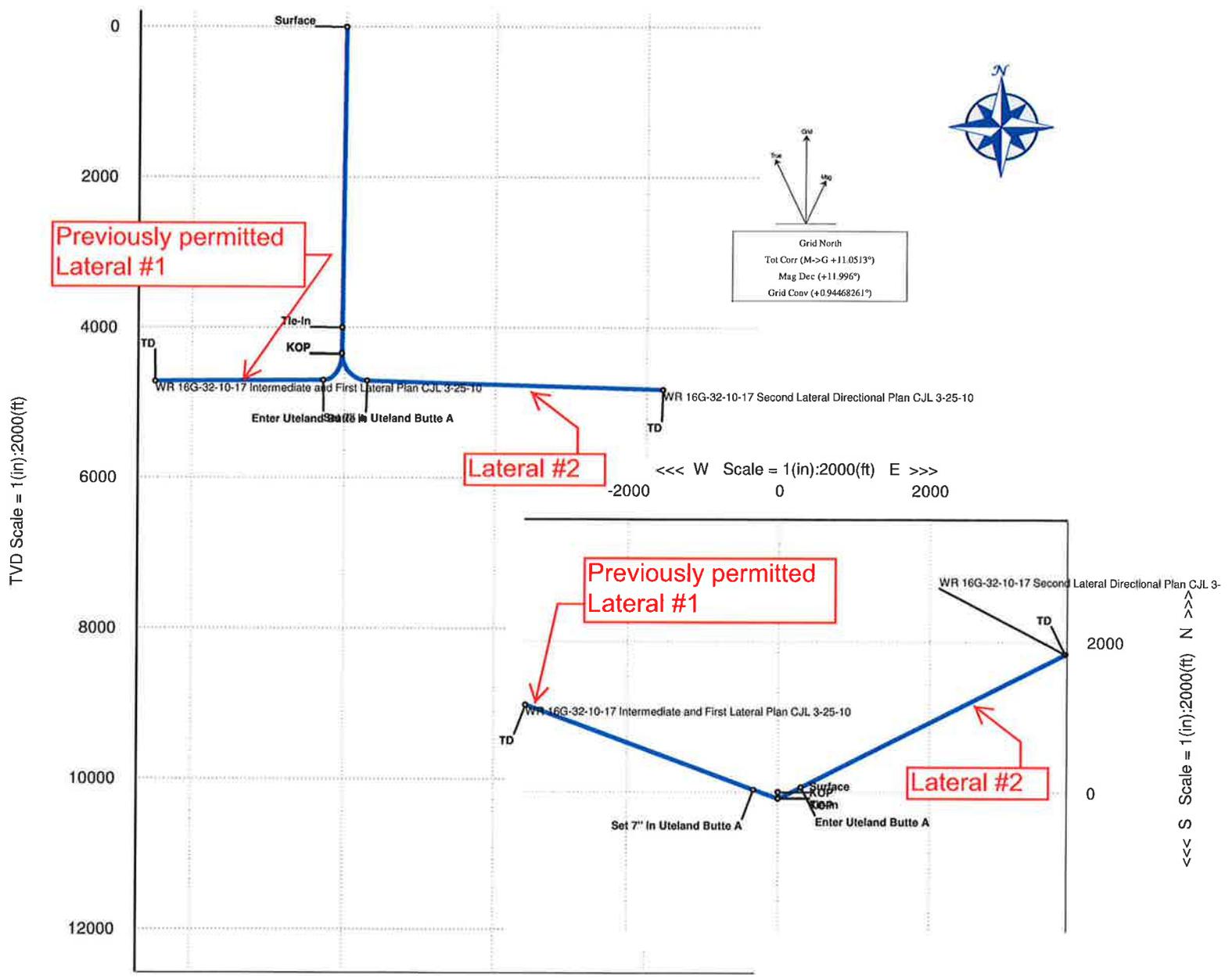


ONSHORE OIL & GAS ORDER NO. 1  
QEP ENERGY COMPANY  
BOP Schematic, 3M



**3M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY**  
(54 FR 39528, Sept. 27, 1989)

WELL <b>WR 16G-32-10-17</b>		FIELD <b>Uinta</b>		STRUCTURE <b>Wilkin Ridge</b>	
Magnetic Parameters Model: IGRF 2005 Dip: 65.824° Mag Dec: +11.996°		Surface Location Lat: N39 53 41.810 Lon: W110 1 30.960		NAD83 Utah State Plane, Central Zone, US Foot Northing: 7133869.43 RUS Easting: 2054154.47 IUS Grid Conv: +0.94468261° Scale Fact: 0.999893605	
				Miscellaneous Slot: WR 16G-32-10-17 Plan: WR 16G-32-10-17 Second Lateral Directional Plan CJL 3-25-10 TVD Ref: KB (8260.00 ft above MSL) Dial: 20525-10	



Vertical Section (ft) Azim = 63.77°, Scale = 1 (in):2000 (ft) Origin = 0 N/-S, 0 E/-W  
Surface Location  
Northing: 7133869.43 R Easting: 2054154.47 R

Target Name	Shape	Major Axis	N(+)/S(-)	Grid Coord E(+)/W(-)	TVD	YSec	Local Coord N(+)/S(-)	E(+)/W(-)
Tie-In	MD	4000.00	1.12	180.00	3999.24	-34.56	-78.19	-0.00
KOP	MD	4355.00	1.12	180.00	4354.17	-37.62	-85.12	-0.00
Fater Uteland Butte A	MD	4897.39	88.30	63.00	4707.00	301.96	63.70	305.24
TD	MD	8810.00	88.30	63.00	4823.07	4212.49	1839.21	3789.86

Critical Label	MD	INCL	AZIM	Critical Point TYD	YSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In	4000.00	1.12	180.00	3999.24	-34.56	-78.19	-0.00	
KOP	4355.00	1.12	180.00	4354.17	-37.62	-85.12	-0.00	0.00
Fater Uteland Butte A	4897.39	88.30	63.00	4707.00	301.96	63.70	305.24	16.37
TD	8810.00	88.30	63.00	4823.07	4212.49	1839.21	3789.86	0.00

**Legend**

- WR 16G-32-10-17 Second Lateral Dire
- WR 16G-32-10-17 Intermediate and Fi

Quality Control  
Date Drawn: Thu 01:39 PM March 25, 2010  
Drawn by: Current User  
Checked by:  
Client OK:

**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company: QEP ENERGY COMPANY

Well Name: WR 16G-32-10-17

Api No: 43-013-50370 Lease Type STATE

Section 32 Township 10S Range 17E County DUCHESNE

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

**SPUDDED:**

Date 08/25/2010

Time \_\_\_\_\_

How DRY

**Drilling will Commence:** PRESSURE TEST 10/9/2010

Reported by TODD

Telephone # (435) 828-0559

Date 10/11/2010 Signed CHD

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-47056
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<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NAUTILUS (GR)
--	---

<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> WR 16G-32-10-17
------------------------------------	--

<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>9. API NUMBER:</b> 43013503700000
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<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078	<b>PHONE NUMBER:</b> 303 308-3068 Ext	<b>9. FIELD and POOL or WILDCAT:</b> EIGHT MILE FLAT
--	--	---

<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0635 FSL 1282 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 32 Township: 10.0S Range: 17.0E Meridian: S	<b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 9/30/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> <b>ALTER CASING</b> <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

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

QEP Energy Company requests permission to change the 7" casing setting depth from 4,899' to 4,200'. Cement volumes have been adjusted to accommodate the new depth. Please refer to attached drilling plan.

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

**Date:** September 28, 2010

**By:** *Derek Duff*

<b>NAME (PLEASE PRINT)</b> Jan Nelson	<b>PHONE NUMBER</b> 435 781-4331	<b>TITLE</b> Permit Agent
<b>SIGNATURE</b> N/A		<b>DATE</b> 9/20/2010

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1  
 Approval of Operations on Onshore  
 Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

**1. Formation Tops**

The estimated top of important geologic markers are as follows:

WNW Lateral #1:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,400'	1,400'
Kick Off Point	4,344'	4,345'
Uteland Butte A Sand	4,699'	4,899'
TD	4,716'	8,115'

ENE Lateral #2:

<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Green River	1,400'	1,400'
Kick Off Point	4,354'	4,355'
Uteland Butte A Sand	4,707'	4,897'
TD	4,823'	8,810'

**2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

WNW Lateral #1:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	Uteland Butte A Sand	4,699' – 4,716'	4,899' – 8,115'

ENE Lateral #2:

<u>Substance</u>	<u>Formation</u>	<u>Depth, TVD</u>	<u>Depth, MD</u>
Oil/Gas	Uteland Butte A Sand	4,707' – 4,823'	4,897' – 8,810'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

**3. Operator's Specification for Pressure Control Equipment**

- A. 3,000 psi double gate, 3,000 psi annular (schematic attached)
- B. Function test daily.
- C. All casing strings shall be pressure tested (0.22 psi/ft or 1,500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield of the casing.
- D. Ram type preventers and associated equipment shall be tested to rated working pressure if isolated by a test plug or to 50% of the internal yield pressure of casing, whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil & Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 3M system and individual components shall be operable as designed.

**4. Casing Program**

Hole Size	Casing Size	Top, MD	Bottom, MD	Weight, lb/ft	Grade	Thread	Condition	MW
17 1/2"	14"	sfc	40'	Steel	Cond.	None	Used	Air
12 1/4"	9 5/8"	sfc	480'	36.0	J-55	STC	New	Air
8 3/4"	7"	sfc	4,200'	26.0	N-80	LTC	New	8-9 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
9 5/8"	36.0 lb.	J-55	STC	2,020 psi	3,520 psi	394,000 lb.
7"	26.0 lb.	N-80	LTC	5,410 psi	7,240 psi	519,000 lb.

The Lateral's will be lined with casing.

WNW Lateral #1:

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,100'	8,115'	11.6	N-80	8 – 10 ppg

ENE Lateral #2:

Hole Size	Casing Size	Top,MD	Bottom, MD	Weight	Grade	MW
6 1/8"	4 1/2"	4,000'	8,810'	11.6	N-80	8 – 10 ppg

Casing Strengths:				Collapse	Burst	Tensile (minimum)
4 1/2"	11.6 lb.	N-80	LTC	6,350 psi	7,780 psi	223,000 lb.

Please refer to the attached wellbore diagram and re-entry procedure for further details.

**5. Cementing Program**

**20" Conductor:**

Cement to surface with construction cement.

**9-5/8" Surface Casing: sfc – 480' (MD)**

**Lead/Tail Slurry:** 0' – 480'. 170 sks (310 cu ft) Rockies LT cement + 0.25 lb/sk Kwik Seal + 0.125 lb/sk Poly-E-Flake. Slurry wt: 13.5 ppg, Slurry yield: 1.81 ft<sup>3</sup>/sk, Slurry volume: 12-1/4" hole + 100% excess.

**7" Intermediate Casing: sfc – 4,200' (MD)**

**Lead/Tail Slurry:** sfc – 4,200'. 715 sks (884 cu ft) 50/50 Poz Premium + 0.6% Halad (R)-322 fluid loss + 2.0% Microbond M expander + 5% salt + 0.125 lb/sk Poly-E-Flake. Slurry wt: 14.35 ppg, Slurry yield: 1.24 ft<sup>3</sup>/sk, Slurry volume: 8-3/4" hole + 40% excess.

**WNW Lateral #1: 4,100' – 8,115'**

No cement, liner hung in 7" with packers and stimulation sleeves.

**ENE Lateral #2: 4,000' – 8,810'**

No cement, liner hung in open hole with packers and stimulation sleeves.

**6. Auxilliary Equipment**

- a. Kelly Cock – Yes

- b. Float at the bit – No
- c. Monitoring equipment on the mud system – visually and/or PVT or Flow Show
- d. Fully opening safety valve on the rig floor – Yes
- e. Rotating Head – Yes

Drilling the surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III requirements, subsection E Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is less than 500 feet and high pressures are not expected.

- f. **Properly lubricated and maintained rotating head.** A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
- g. **Blooie line discharge 100' from well bore and securely anchored.** The blooie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.
- h. **Automatic ignitor or continuous pilot light on the blooie line.** A diffuser will be used rather than an automatic pilot/ignitor. Water is injected into the compressed air and eliminates the need for the pilot light and the need for dust suppression equipment.
- i. **Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore.** Compressors located 50 feet on the opposite side of the well bore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valve on the compressor, 3) spark arrestors on the motors.

Drilling of the laterals will be done with fresh water NaCl based mud systems consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash, polymers, and NaCl. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used the concentration will be less than 4% by volume. Maximum anticipated mud weight is 10.0 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow show will be used upon exit of surface casing to TD.

Gas detector will be used upon exit of surface casing to TD.

**7. Testing, Logging, and Coring Program**

- a. Cores – None Anticipated
- b. DST – None Anticipated
- c. Logging:
  - i. Mud logging from casing exit to TD
  - ii. MWD-GR will be utilized during drilling operations to aid in landing the curve and maintaining the laterals within the desired zone.
- d. Formation and completion interval: G1 Lime interval, final determination of completion will be made by analysis of mud logging data. Stimulation: stimulation will be designed for the particular area of interest encountered.

**8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or is known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom-hole pressure equals approximately 3,500 psi. Maximum anticipated bottom hole temperature is approximately 150°F.

OPERATOR: QEP ENERGY COMPANY  
ADDRESS: 11002 East 17500 South  
Vernal, Utah 84078 (435)781-4342

OPERATOR ACCT. No. N-3700

ENTITY ACTION FORM - FORM 6

Action Code	Current Entity No.	New Entity No.	API Number	Well Name	QQ	SC	TP	RG	County	Spud Date	Effective Date
B	99999	17720	43-013-50370	WR 16G 32-10-17	SESE	32	10S	17E	Uintah	8/25/2010	10/19/10
WELL 1 COMMENTS: GRRV BHL = Sec 33 NWSW <b>CONFIDENTIAL</b>											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

ACTION CODES (See instructions on back of form)

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

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OCT 19 2010

DIV. OF OIL, GAS & MINING

  
Signature

Office Administrator 10/10/2010  
Title Date

Phone No. (435)781-4342

NOTE: Use COMMENT section to explain why each Action Code was selected

**CONFIDENTIAL**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

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

5a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. NAUTILUS, UTU-87716X	
5b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. WR 16G-32-10-17	
2. Name of Operator QEP ENERGY COMPANY		9. API Well No. 43-013-50370	
3a. Address 11002 EAST 17500 SOUTH VERNAL UT 84078		3b. Phone No. (include area code) 435-781-4331	
10. Field and Pool, or Exploratory EIGHT MILE FLAT		11. Sec., T. R. M. or Blk. and Survey or Area SECTION, 32, T10S, R17E, SLB&M	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 635' FSL, 1282' FEL, SESE, SECTION 32, T10S, R17E At proposed prod. zone SEE ATTACHED		12. County or Parish DUCHESNE	
14. Distance in miles and direction from nearest town or post office* 26 MILES SOUTH OF MYTON, UT		13. State UT	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 635'		16. No. of acres in lease 800	
17. Spacing Unit dedicated to this well 40		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 0	
19. Proposed Depth LATERAL 2- 8810' MD		20. BLM/BIA Bond No. on file ESB000024	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6245.5 GR		22. Approximate date work will start* 09/19/2010	
23. Estimated duration 14 DAYS		24. Attachments	

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

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

25. Signature <i>Jan Nelson</i>	Name (Printed/Typed) JAN NELSON	Date 08/23/2010
Title PERMIT AGENT		
Approved by (Signature) <i>Naomi Hatch</i>	Name (Printed/Typed) Naomi Hatch	Date 10/19/2010
Title Acting Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED**

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

(Continued on page 2)

\*(Instructions on page 2)

2010 AUG 23 AM 10 37

**NOTICE OF APPROVAL**

VERNAL FIELD OFFICE  
GREEN RIVER DISTRICT

**NOS** <sup>and</sup> posted 8/23/2010

**CONFIDENTIAL RECEIVED AFMSS#10RRH0448A**

OCT 27 2010





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

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: QEP Energy Company  
Well No: WR 16G-32-10-17  
API No: 43-013-50370

Location: SESE, Sec. 32, T10S, R17E  
Lease No: UTU-75086  
Agreement: Nautilus (GR) Unit

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- A synthetic liner with a minimum thickness of 16 mls with a felt subliner shall be properly installed and maintained in the reserve pit.
- Drainages adjacent to the proposed pad shall be diverted around the location.
- The reserve pit shall be fenced upon completion of drilling operations.

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

**SITE SPECIFIC DOWNHOLE COAs:**

- In regards to the production casing (casing 7 inch) cementing program, additional cement needs to be pumped in order to reach the operators stated excess factor.
- Production casing (casing 7 inch) cement shall be brought up and into the surface.
- For each of the lateral wellbores, a copy of the as drilled directional survey shall be submitted to the BLM Vernal Field Office.

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

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

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

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

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-47056
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NAUTILUS (GR)
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> WR 16G-32-10-17
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>9. API NUMBER:</b> 43013503700000
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078	<b>PHONE NUMBER:</b> 303 308-3068 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0635 FSL 1282 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 32 Township: 10.0S Range: 17.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> EIGHT MILE FLAT  <b>COUNTY:</b> DUCHESNE  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 1/10/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>

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

QEP Energy Company requests authorization to flare gas beyond the 30 day limit for the above mentioned well. Please see attached document for details regarding this request.

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

**Date:** 01/20/2011

**By:** *Derek Duff*

<b>NAME (PLEASE PRINT)</b> Jan Nelson	<b>PHONE NUMBER</b> 435 781-4331	<b>TITLE</b> Permit Agent
<b>SIGNATURE</b> N/A		<b>DATE</b> 1/10/2011



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

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43013503700000**

**Rule R649-3-20 allows flaring up to 3000 MCF of gas the first month of production and 1800 MCF of gas per month thereafter for oil wells. It appears from the production rates given that the flared amount falls within these specifications. Flaring in excess of 1800 MCF/month will require Board approval.**

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

**Date:** 01/20/2011  
**By:** *David K. Quist*

WR 16G-32-10-17  
SESE, SEC. 32, T10S, R17E  
API Number: 43-013-50370  
Lease Number: ML-47056

QEP Energy Company requests authorization to flare gas beyond the 30 day limit established in NTL-4a. The well is located approximately 398' from the nearest gas gathering system, a Monarch Natural Gas, LLC pipeline, and 0.75 miles from the Three Rivers Pipeline, however, that line is operated at 1200 psi and given the pipe used for construction it would be very expensive and difficult to tap into it for one well at 50 mcf/d. The well started producing December 10, 2010 with an initial production for the well was approximately 125 BBLs of oil, 60 BBLs of water, and 90 mcf/d of gas (estimated) per day. The well is currently making approximately 100 BBLs of oil, 100 BBLs of water, and 50 mcf/d of gas (metered) per day. Currently there are two additional wells planned to be drilled in that area in the next couple of months and more in the future. QEP has been working with Monarch Natural Gas, LLC and Three Rivers in order to establish a gas transportation agreement that will grant us access into Monarch's line, or start the construction of a gathering line to move the gas to three rivers pipeline. It is unknown at this time when we will reach an agreement with Monarch Natural Gas, LLC, or receive the permit to construct the pipeline to Three Rivers, and therefore QEP requests approval to flare gas on this well for a minimum of six months with a review of the agreement as well as permitting and/or construction in the event that a ROW and pipeline are needed, in the later part of 2011.

For technical questions please contact Ryan Angus at (435) 781-4319.

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

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AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

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

2. NAME OF OPERATOR: QEP Energy Company

3. ADDRESS OF OPERATOR: 11002 E 17500 S CITY Vernal STATE UT ZIP 84078 PHONE NUMBER: (435) 781-4342

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: 635' FSL, 1282' FEL  
AT TOP PRODUCING INTERVAL REPORTED BELOW:  
AT TOTAL DEPTH: 1753 224  
1803' FSL, 157' FWL (Lower Lateral) *Per HSM*

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 32 10S 17E S  
12. COUNTY: Duchesne 13. STATE: UTAH

14. DATE SPUDDED: 8/25/2010 15. DATE T.D. REACHED: 10/27/2010 16. DATE COMPLETED: 1/20/2011 ABANDONED  READY TO PRODUCE  17. ELEVATIONS (DF, RKB, RT, GL): 6259' KB

18. TOTAL DEPTH: MD 7,635 8421 TVD 4,823 2173 19. PLUG BACK T.D.: MD 7,381 TVD φ 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* \_\_\_\_\_ 21. DEPTH BRIDGE MD PLUG SET: \_\_\_\_\_ TVD \_\_\_\_\_

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
CBL

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

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

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
12.25	9.625 J-55	36#		540		225		surf	
8.75	7.0 N80	26#		4,013		400		surf	
6.125	4.5 N80	11.6#		7,381					
6.125	4.5 N80	11.6#		8,884					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.875	3,884							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) See Attach One					<u>5072-8250</u>			Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) <u>GRV</u>								Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
See Attachment One	See Attachment One

RECEIVED  
FEB 24 2011

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

29. ENCLOSED ATTACHMENTS:  
 ELECTRICAL/MECHANICAL LOGS  
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  
 GEOLOGIC REPORT  
 CORE ANALYSIS  
 DST REPORT  
 OTHER: \_\_\_\_\_  
 DIRECTIONAL SURVEY

30. WELL STATUS:  
**Producing**

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31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 12/10/2010		TEST DATE: 12/13/2010		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 253	GAS – MCF: 0	WATER – BBL: 58	PROD. METHOD: Pumping
CHOKE SIZE:	TBG. PRESS. 0	CSG. PRESS. 100	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS: Open

INTERVAL B (As shown in item #26)

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

INTERVAL C (As shown in item #26)

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

INTERVAL D (As shown in item #26)

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

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

Flared

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

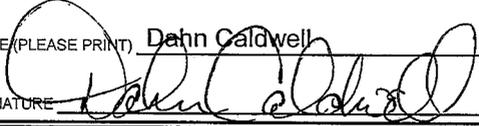
34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Uinta	0
				Green River	1,662

35. ADDITIONAL REMARKS (Include plugging procedure)

See Attachment One - QEP Energy Requests this well to be 'CONFIDENTIAL'

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

NAME (PLEASE PRINT) Dahn Caldwell TITLE Office Administrator  
 SIGNATURE  DATE 2/22/2011

This report must be submitted within 30 days of

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

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

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

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

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

**WR 16G 32-10-17 – DUAL LATERAL WELL**

**API: 43-013-50370**

**ATTACHMENT PAGE ONE**

**#4 - Location of Well:**

**Upper Lateral 1 – 7635' MD, 4823' TVD, PBSD: 7381' MD**

**SESE – SEC 32-T10S-R17E - 635' FSL, 1282' FEL**

**Lower Lateral 2 – 8884' MD, 4732' TVD, PBSD: 8397' MD**

**NESW – Sec 33-T10-R17E – 1803' FSL, 157' FWL**

**#27 – Perforation Record:**

**Upper Lateral 1 - 4.5", 11.6#, N-80, LT&C w/ shoe @ 7,381' w/ Packers Plus –  
pkrs & sleeves – Pkrs @ 7253', 7197', 6781', 6374', 5906', 5514', 5072' - Sleeves  
@ 7312', 6970', 6543', 6152', 5712', 5317'. Liner Hanger @ 3,888'.**

**Lower Lateral 2 - 4.5", 11.6#, N-80, LT&C w/ shoe @ 8,397' w/ Packers Plus –  
pkrs & sleeves – Pkrs @ 8256', 8194', 7955', 7713', 7472', 7263', 7013', 6770',  
6561', 6318', 6071', 5824', 5572', 5366', 5115', 3975' – Sleeves @ 8318', 8095',  
7862', 7614', 7367', 7121', 6914', 6667', 6422', 6176', 5928', 5724', 5469', 5221'.  
Liner Hanger @ 3,972'.**

**CONFIDENTIAL**

DIV. OF OIL, GAS & MINING

## WR 16G-32-10-17 Lat1 Field Survey Survey Report

<p>Report Date: December 14, 2010                  Client: QEP ENERGY                  Field: Uinta                  Structure / Slot: Wilkin Ridge / WR 16G-32-10-17                  Well: WR 16G-32-10-17                  Borehole: Original Hole - Lat 1                  UWI/API#: _____                  Survey Name / Date: WR 16G-32-10-17 Lat1 Field Survey / October 11, 2010                  Tort / AHD / DDI / ERD ratio: 308.184° / 3999.56 ft / 6.340 / 0.843                  Grid Coordinate System: NAD83 Utah State Planes, Central Zone, US Feet                  Location Lat/Long: N 39 53 41.810, W 110 1 30.960                  Location Grid N/E Y/X: N 7133869.430 ftUS, E 2054154.467 ftUS                  Grid Convergence Angle: +0.94468261°                  Grid Scale Factor: 0.99989937</p>	<p>Survey / DLS Computation Method: Minimum Curvature / Lubinski                  Vertical Section Azimuth: 286.470°                  Vertical Section Origin: N 0.000 ft, E 0.000 ft                  TVD Reference Datum: KB                  TVD Reference Elevation: 6255.5 ft relative to MSL                  Sea Bed / Ground Level Elevation: 5604.000 ft relative to MSL                  Magnetic Declination: 11.360°                  Total Field Strength: 52254.831 nT                  Magnetic Dip: 65.696°                  Declination Date: October 11, 2010                  Magnetic Declination Model: IGRF 2005                  North Reference: True North                  Total Corr Mag North -&gt; True North: +11.360°                  Local Coordinates Referenced To: Well Head</p>
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-119.22M
Assumed vertical	567.00	0.00	240.78	567.00	0.00	0.00	0.00	0.00	0.00	0.00	-151.35M
	629.00	0.19	208.65	629.00	0.02	-0.09	-0.05	0.10	208.65	0.31	168.78M
	690.00	0.19	168.78	690.00	0.00	-0.28	-0.08	0.29	195.68	0.21	153.90M
	751.00	0.19	153.90	751.00	-0.12	-0.47	-0.01	0.47	181.70	0.08	153.03M
	813.00	0.19	153.03	813.00	-0.26	-0.65	0.08	0.66	173.19	0.00	143.53M
	873.00	0.25	143.53	873.00	-0.43	-0.85	0.20	0.87	166.65	0.12	156.40M
	935.00	1.00	156.40	934.99	-0.89	-1.45	0.50	1.53	161.06	1.22	79.40M
	1027.00	0.94	79.40	1026.98	-2.08	-2.05	1.56	2.57	142.68	1.31	83.03M
	1058.00	1.06	83.03	1057.98	-2.57	-1.97	2.10	2.87	133.17	0.44	124.03M
	1120.00	0.50	124.03	1119.97	-3.35	-2.05	2.89	3.54	125.33	1.22	-162.35M
	1182.00	0.63	197.65	1181.97	-3.60	-2.52	3.01	3.93	129.98	1.10	-169.10M
	1245.00	0.63	190.90	1244.97	-3.63	-3.19	2.84	4.27	138.36	0.12	-160.35M
	1306.00	0.63	199.65	1305.96	-3.64	-3.84	2.66	4.67	145.25	0.16	-94.85M
	1367.00	1.00	265.15	1366.96	-3.13	-4.20	2.02	4.66	154.31	1.53	-142.85M
	1429.00	0.38	217.15	1428.95	-2.55	-4.41	1.36	4.61	162.90	1.29	-166.97M
	1522.00	0.56	193.03	1521.95	-2.47	-5.10	1.07	5.21	168.17	0.28	-178.97M
	1585.00	0.69	181.03	1584.95	-2.59	-5.78	0.99	5.86	170.26	0.29	177.90M
	1648.00	0.25	177.90	1647.95	-2.73	-6.29	0.99	6.37	171.06	0.70	-9.47M
	1709.00	0.13	350.53	1708.95	-2.75	-6.36	0.98	6.43	171.21	0.62	-22.48M
	1774.00	0.19	337.52	1773.95	-2.65	-6.19	0.93	6.26	171.45	0.11	-24.72M
	1838.00	0.31	335.28	1837.94	-2.47	-5.93	0.82	5.99	172.15	0.19	-66.10M
	1900.00	0.13	293.90	1899.94	-2.29	-5.75	0.68	5.79	173.23	0.37	-86.35M
	1963.00	0.13	273.65	1962.94	-2.14	-5.72	0.55	5.74	174.54	0.07	-146.85M
	2026.00	0.25	213.15	2025.94	-2.04	-5.83	0.40	5.84	176.08	0.35	-136.85M
	2089.00	0.38	223.15	2088.94	-1.90	-6.09	0.18	6.10	178.29	0.22	-154.85M
	2151.00	0.50	205.15	2150.94	-1.77	-6.49	-0.07	6.49	180.65	0.29	-161.85M
	2216.00	0.63	198.15	2215.94	-1.72	-7.09	-0.31	7.09	182.47	0.23	-161.10M
	2278.00	0.62	198.90	2277.93	-1.69	-7.73	-0.52	7.74	183.85	0.02	132.40M
	2341.00	0.56	132.40	2340.93	-1.95	-8.26	-0.40	8.27	182.80	1.03	100.03M
	2404.00	0.94	100.03	2403.93	-2.74	-8.55	0.33	8.56	177.77	0.88	105.15M
	2468.00	1.05	105.15	2467.92	-3.85	-8.80	1.42	8.91	170.86	0.22	107.28M
	2531.00	0.69	107.28	2530.91	-4.81	-9.06	2.33	9.36	165.55	0.57	109.65M
	2594.00	0.56	109.65	2593.91	-5.50	-9.28	2.99	9.75	162.16	0.21	105.90M
	2657.00	0.63	105.90	2656.90	-6.15	-9.48	3.61	10.14	159.15	0.13	119.65M
	2721.00	0.50	119.65	2720.90	-6.77	-9.71	4.19	10.58	156.66	0.29	138.78M
	2784.00	0.44	138.78	2783.90	-7.24	-10.03	4.59	11.03	155.41	0.27	165.03M
	2848.00	0.50	165.03	2847.89	-7.60	-10.48	4.82	11.54	155.30	0.35	165.03M

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	2912.00	0.56	165.03	2911.89	-7.91	-11.06	4.98	12.13	155.77	0.09	-121.97M
	2974.00	0.06	238.03	2973.89	-8.04	-11.37	5.03	12.43	156.14	0.88	-17.60M
	3037.00	0.63	342.40	3036.89	-7.83	-11.05	4.89	12.09	156.12	1.03	-21.00M
	3100.00	0.50	339.00	3099.89	-7.47	-10.47	4.69	11.47	155.86	0.21	-15.10M
	3162.00	0.50	344.90	3161.88	-7.16	-9.95	4.52	10.93	155.56	0.08	-32.22M
	3225.00	0.44	327.78	3224.88	-6.83	-9.48	4.32	10.42	155.49	0.24	-48.10M
	3287.00	0.38	311.90	3286.88	-6.47	-9.14	4.04	10.00	156.15	0.21	-59.35M
	3352.00	0.38	300.65	3351.88	-6.07	-8.89	3.70	9.63	157.42	0.11	-101.23M
	3414.00	0.25	258.77	3413.88	-5.75	-8.81	3.39	9.44	158.97	0.41	-150.22M
	3476.00	0.25	209.78	3475.88	-5.60	-8.96	3.19	9.51	160.41	0.33	-143.97M
	3539.00	0.44	216.03	3538.88	-5.48	-9.27	2.98	9.74	162.20	0.31	-151.72M
	3602.00	0.50	208.28	3601.87	-5.35	-9.71	2.70	10.08	164.43	0.14	-159.60M
	3665.00	0.69	200.40	3664.87	-5.26	-10.31	2.44	10.59	166.67	0.33	-167.47M
	3728.00	0.88	192.53	3727.87	-5.27	-11.13	2.21	11.35	168.80	0.35	-163.35M
	3791.00	0.75	196.65	3790.86	-5.30	-12.00	1.98	12.16	170.62	0.23	-164.35M
	3853.00	0.75	195.65	3852.85	-5.31	-12.78	1.76	12.90	172.18	0.02	-159.22M
	3916.00	0.75	200.78	3915.85	-5.28	-13.56	1.50	13.65	173.69	0.11	-159.72M
	3945.00	0.69	200.28	3944.85	-5.26	-13.90	1.37	13.97	174.37	0.21	-158.47M
	4020.00	0.88	201.53	4019.84	-5.18	-14.86	1.00	14.90	176.14	0.25	-154.35M
	4053.00	0.81	205.65	4052.84	-5.12	-15.31	0.81	15.33	176.97	0.28	-157.60M
	4083.00	0.81	202.40	4082.83	-5.06	-15.70	0.64	15.71	177.68	0.15	-118.60M
	4110.00	1.25	241.40	4109.83	-4.83	-16.01	0.31	16.02	178.91	2.97	-89.85M
	4144.00	5.56	270.15	4143.76	-2.99	-16.19	-1.67	16.27	185.88	13.25	5.04G
	4174.00	10.44	272.52	4173.46	1.05	-16.06	-5.84	17.09	199.98	16.30	0.48G
	4205.00	14.25	272.65	4203.74	7.48	-15.76	-12.46	20.09	218.32	12.29	-17.82G
	4236.00	17.00	269.65	4233.59	15.52	-15.62	-20.80	26.01	233.11	9.24	28.51G
	4269.00	20.56	275.03	4264.83	25.82	-15.14	-31.40	34.86	244.27	11.99	15.42G
	4300.00	22.88	276.67	4293.63	37.10	-13.96	-42.81	45.03	251.94	7.74	5.08G
	4331.00	26.61	277.41	4321.78	49.90	-12.36	-55.69	57.05	257.48	12.07	38.70G
	4367.00	28.75	280.90	4353.66	66.48	-9.69	-72.19	72.84	262.36	7.46	48.19G
	4398.00	30.38	284.40	4380.62	81.74	-6.33	-87.10	87.33	265.85	7.66	-27.02G
	4430.00	30.63	284.15	4408.19	97.97	-2.32	-102.85	102.87	268.71	0.88	-64.38G
	4462.00	30.88	283.15	4435.69	114.31	1.54	-118.75	118.76	270.74	1.78	35.69G
	4494.00	32.19	284.90	4462.97	131.03	5.60	-134.98	135.10	272.38	4.99	14.89G
	4526.00	35.19	286.28	4489.59	148.78	10.38	-152.07	152.43	273.90	9.67	6.16G
	4558.00	39.63	287.03	4515.00	168.21	15.95	-170.69	171.44	275.34	13.95	29.84G
	4586.00	42.13	289.15	4536.17	186.53	21.65	-188.11	189.35	276.57	10.21	44.24G
	4619.00	44.13	291.90	4560.26	209.02	29.57	-209.23	211.30	278.04	8.32	19.35G
	4651.00	46.19	292.90	4582.82	231.59	38.22	-230.20	233.35	279.43	6.81	7.65G
	4683.00	49.00	293.40	4604.40	255.06	47.51	-251.92	256.36	280.68	8.86	3.36G
	4714.00	52.38	293.65	4624.03	278.86	57.08	-273.91	279.80	281.77	10.92	2.13G
	4747.00	55.25	293.78	4643.51	305.28	67.79	-298.30	305.90	282.80	8.70	3.89G
	4779.00	58.38	294.03	4661.03	331.83	78.65	-322.78	332.22	283.69	9.80	6.50G
	4811.00	63.25	294.65	4676.63	359.49	90.16	-348.22	359.70	284.52	15.31	11.75G
	4843.00	68.31	295.78	4689.75	388.33	102.59	-374.61	388.41	285.32	16.14	0.96G
	4875.00	72.31	295.85	4700.53	418.05	115.71	-401.73	418.06	286.07	12.50	-3.92G
	4907.00	75.13	295.65	4709.50	448.36	129.05	-429.39	448.37	286.73	8.83	15.75G
	4938.00	77.31	296.28	4716.88	478.06	142.24	-456.46	478.11	287.31	7.30	-9.91G
	4973.00	80.13	295.78	4723.73	511.90	157.30	-487.30	512.06	287.89	8.18	-6.67G
	5001.00	82.25	295.53	4728.02	539.21	169.27	-512.24	539.48	288.29	7.62	6.42G
	5034.00	83.31	295.65	4732.16	571.54	183.42	-541.77	571.97	288.70	3.23	33.55G
	5067.00	83.88	296.03	4735.85	603.89	197.71	-571.28	604.52	289.09	2.07	10.81G
	5097.00	87.81	296.78	4738.02	633.36	211.01	-598.07	634.21	289.43	13.34	2.50G
	5128.00	90.56	296.90	4738.46	663.85	225.01	-625.73	664.95	289.78	8.88	-146.31G

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	5163.00	89.06	295.90	4738.58	698.32	240.57	-657.08	699.73	290.11	5.15	-158.84G
	5194.00	88.75	295.78	4739.17	728.90	254.08	-684.97	730.58	290.35	1.07	-127.25G
	5226.00	88.56	295.53	4739.92	760.48	267.93	-713.81	762.44	290.57	0.98	30.09G
	5259.00	89.63	296.15	4740.44	793.04	282.31	-743.51	795.30	290.79	3.75	-161.57G
	5288.00	88.88	295.90	4740.82	821.63	295.03	-769.56	824.18	290.98	2.73	-28.97G
	5321.00	90.00	295.28	4741.14	854.21	309.28	-799.32	857.07	291.15	3.88	-79.73G
	5353.00	90.25	293.90	4741.07	885.89	322.60	-828.42	889.02	291.28	4.38	-60.02G
	5385.00	91.19	292.27	4740.67	917.67	335.15	-857.86	921.00	291.34	5.88	-82.14G
	5417.00	91.31	291.40	4739.97	949.53	347.04	-887.55	952.99	291.36	2.74	-135.00G
	5450.00	90.56	290.65	4739.43	982.42	358.88	-918.35	985.98	291.35	3.21	-105.86G
	5479.00	90.31	289.77	4739.21	1011.35	368.90	-945.56	1014.98	291.31	3.15	-101.40G
	5512.00	90.06	288.53	4739.10	1044.32	379.73	-976.74	1047.95	291.24	3.83	-158.04G
	5545.00	89.44	288.28	4739.25	1077.30	390.14	-1008.05	1080.91	291.16	2.03	-111.04G
	5578.00	89.39	288.15	4739.59	1110.28	400.46	-1039.39	1113.87	291.07	0.42	-125.10G
	5612.00	89.13	287.78	4740.02	1144.27	410.95	-1071.73	1147.82	290.98	1.33	-38.88G
	5643.00	89.44	287.53	4740.41	1175.26	420.35	-1101.27	1178.77	290.89	1.28	0.00G
	5676.00	90.56	287.53	4740.41	1208.25	430.29	-1132.74	1211.71	290.80	3.39	-9.83G
	5703.00	91.31	287.40	4739.97	1235.24	438.39	-1158.49	1238.66	290.73	2.82	128.65G
	5735.00	90.31	288.65	4739.52	1267.23	448.29	-1188.91	1270.62	290.66	5.00	-100.80G
	5767.00	89.81	286.03	4739.48	1299.22	457.83	-1219.46	1302.57	290.58	8.34	0.00G
	5799.00	90.06	286.03	4739.52	1331.22	466.66	-1250.21	1334.47	290.47	0.78	10.72G
	5832.00	91.38	286.28	4739.11	1364.22	475.84	-1281.91	1367.37	290.36	4.07	0.00G
	5861.00	91.94	286.28	4738.27	1393.20	483.97	-1309.73	1396.29	290.28	1.93	-123.35G
	5894.00	91.69	285.90	4737.22	1426.19	493.11	-1341.42	1429.19	290.18	1.38	-124.05G
	5926.00	91.44	285.53	4736.35	1458.17	501.77	-1372.22	1461.08	290.09	1.40	-90.00G
	5957.00	91.44	285.28	4735.57	1489.16	510.01	-1402.09	1491.97	289.99	0.81	-22.74G
	5992.00	91.75	285.15	4734.59	1524.13	519.19	-1435.85	1526.84	289.88	0.96	-141.12G
	6022.00	91.44	284.90	4733.76	1554.11	526.96	-1464.82	1556.72	289.79	1.33	155.94G
	6054.00	90.88	285.15	4733.11	1586.10	535.26	-1495.72	1588.60	289.69	1.92	155.46G
	6085.00	88.69	286.15	4733.23	1617.09	543.62	-1525.56	1619.53	289.61	7.77	163.84G
	6115.00	87.38	286.53	4734.26	1647.07	552.05	-1554.33	1649.46	289.55	4.55	0.00G
	6148.00	88.31	286.53	4735.50	1680.05	561.44	-1585.95	1682.39	289.49	2.82	0.00G
	6179.00	90.38	286.53	4735.85	1711.04	570.25	-1615.66	1713.35	289.44	6.68	-41.46G
	6212.00	90.81	286.15	4735.51	1744.04	579.54	-1647.33	1746.30	289.38	1.74	-107.97G
	6243.00	90.69	285.78	4735.10	1775.04	588.06	-1677.13	1777.24	289.32	1.25	-148.90G
	6275.00	90.06	285.40	4734.89	1807.03	596.66	-1707.95	1809.17	289.26	2.30	-155.95G
	6309.00	88.94	284.90	4735.19	1841.02	605.55	-1740.77	1843.09	289.18	3.61	-160.09G
	6340.00	88.25	284.65	4735.95	1872.00	613.45	-1770.73	1873.99	289.11	2.37	-103.51G
	6373.00	88.19	284.40	4736.98	1904.96	621.72	-1802.66	1906.87	289.03	0.78	114.79G
	6407.00	88.13	284.53	4738.07	1938.93	630.21	-1835.57	1940.74	288.95	0.42	-118.32G
	6455.00	88.06	284.40	4739.66	1986.87	642.20	-1882.02	1988.57	288.84	0.31	33.33G
	6488.00	88.44	284.65	4740.67	2019.84	650.47	-1913.95	2021.47	288.77	1.38	11.87G
	6518.00	89.63	284.90	4741.18	2049.82	658.12	-1942.96	2051.39	288.71	4.05	22.96G
	6548.00	90.81	285.40	4741.06	2079.81	665.96	-1971.91	2081.33	288.66	4.27	22.00G
	6583.00	91.75	285.78	4740.28	2114.80	675.36	-2005.62	2116.27	288.61	2.90	-151.16G
	6614.00	91.06	285.40	4739.52	2145.78	683.69	-2035.47	2147.22	288.57	2.54	154.36G
	6648.00	90.81	285.52	4738.96	2179.77	692.75	-2068.23	2181.17	288.52	0.82	-90.00G
	6678.00	90.81	285.40	4738.54	2209.77	700.75	-2097.14	2211.12	288.48	0.40	-152.53G
	6713.00	90.56	285.27	4738.12	2244.76	710.00	-2130.89	2246.07	288.43	0.81	-103.49G
	6741.00	90.50	285.02	4737.86	2272.75	717.32	-2157.92	2274.02	288.39	0.92	-169.05G
	6772.00	89.88	284.90	4737.76	2303.74	725.32	-2187.87	2304.97	288.34	2.04	180.00G
	6806.00	89.69	284.90	4737.89	2337.72	734.06	-2220.73	2338.90	288.29	0.56	0.00G
	6837.00	89.75	284.90	4738.04	2368.71	742.04	-2250.68	2369.85	288.25	0.19	0.00G
	6870.00	90.06	284.90	4738.09	2401.70	750.52	-2282.57	2402.80	288.20	0.94	0.00G

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	6899.00	90.31	284.90	4738.00	2430.69	757.98	-2310.60	2431.75	288.16	0.86	0.00G
	6932.00	90.50	284.90	4737.77	2463.67	766.46	-2342.49	2464.69	288.12	0.58	-162.00G
	6963.00	90.10	284.77	4737.60	2494.66	774.40	-2372.45	2495.64	288.08	1.36	-167.47G
	6995.00	89.56	284.65	4737.70	2526.65	782.53	-2403.41	2527.59	288.03	1.73	180.00G
	7028.00	89.50	284.65	4737.97	2559.63	790.87	-2435.33	2560.53	287.99	0.18	-21.16G
	7057.00	89.81	284.53	4738.14	2588.61	798.18	-2463.40	2589.48	287.95	1.15	0.00G
	7089.00	90.00	284.53	4738.20	2620.59	806.20	-2494.37	2621.42	287.91	0.59	-90.00G
	7123.00	90.00	284.28	4738.20	2654.57	814.66	-2527.30	2655.36	287.87	0.74	-157.25G
	7154.00	89.69	284.15	4738.28	2685.55	822.28	-2557.35	2686.30	287.82	1.08	-166.51G
	7185.00	89.19	284.03	4738.58	2716.52	829.82	-2587.42	2717.23	287.78	1.66	45.00G
	7216.00	89.31	284.15	4738.99	2747.49	837.37	-2617.48	2748.16	287.74	0.55	-32.27G
	7249.00	89.50	284.03	4739.33	2780.46	845.40	-2649.49	2781.10	287.70	0.68	-62.53G
	7281.00	89.63	283.78	4739.58	2812.43	853.09	-2680.55	2813.03	287.65	0.88	-65.22G
	7314.00	89.69	283.65	4739.77	2845.39	860.92	-2712.61	2845.95	287.61	0.43	180.00G
	7342.00	89.38	283.65	4740.00	2873.35	867.52	-2739.82	2873.88	287.57	1.11	-154.36G
	7376.00	89.13	283.53	4740.44	2907.31	875.51	-2772.86	2907.80	287.52	0.82	-118.30G
	7410.00	89.06	283.40	4740.98	2941.26	883.43	-2805.92	2941.71	287.48	0.43	0.00G
	7437.00	89.19	283.40	4741.39	2968.21	889.68	-2832.19	2968.64	287.44	0.48	180.00G
	7470.00	88.75	283.40	4741.98	3001.16	897.33	-2864.28	3001.55	287.39	1.33	31.69G
	7500.00	89.56	283.90	4742.43	3031.12	904.41	-2893.43	3031.49	287.36	3.17	0.00G
	7534.00	90.13	283.90	4742.52	3065.09	912.58	-2926.44	3065.42	287.32	1.68	27.18G
	7562.00	92.31	285.02	4741.92	3093.06	919.57	-2953.54	3093.38	287.29	8.75	0.34G
	7595.00	94.00	285.03	4740.11	3126.00	928.11	-2985.36	3126.30	287.27	5.12	-162.20G
	7627.00	92.88	284.67	4738.19	3157.93	936.29	-3016.24	3158.22	287.25	3.68	164.48G
	7660.00	90.25	285.40	4737.28	3190.90	944.85	-3048.09	3191.18	287.22	8.27	135.00G
	7691.00	90.00	285.65	4737.22	3221.90	953.15	-3077.96	3222.16	287.21	1.14	-173.16G
	7722.00	89.25	285.56	4737.42	3252.89	961.49	-3107.82	3253.15	287.19	2.44	130.82G
	7755.00	89.06	285.78	4737.91	3285.89	970.40	-3139.59	3286.14	287.18	0.88	-2.83G
	7787.00	91.69	285.65	4737.70	3317.88	979.07	-3170.39	3318.12	287.16	8.23	-22.76G
	7819.00	92.88	285.15	4736.42	3349.85	987.56	-3201.22	3350.08	287.14	4.03	150.42G
	7849.00	92.44	285.40	4735.03	3379.81	995.45	-3230.12	3380.03	287.13	1.69	163.55G
	7880.00	92.00	285.53	4733.83	3410.78	1003.71	-3259.98	3411.00	287.11	1.48	159.95G
	7912.00	90.63	286.03	4733.09	3442.77	1012.41	-3290.76	3442.98	287.10	4.56	164.75G
	7945.00	90.19	286.15	4732.86	3475.77	1021.56	-3322.47	3475.97	287.09	1.38	-143.50G
	7978.00	89.69	285.78	4732.89	3508.77	1030.63	-3354.20	3508.97	287.08	1.88	180.00G
	8009.00	89.38	285.78	4733.14	3539.76	1039.06	-3384.03	3539.96	287.07	1.00	14.51G
	8039.00	90.81	286.15	4733.09	3569.76	1047.31	-3412.87	3569.95	287.06	4.92	5.19G
	8071.00	92.13	286.27	4732.27	3601.75	1056.24	-3443.59	3601.94	287.05	4.14	20.20G
	8104.00	93.08	286.62	4730.77	3634.72	1065.58	-3475.20	3634.90	287.05	3.07	168.61G
	8136.00	91.69	286.90	4729.44	3666.69	1074.80	-3505.82	3666.87	287.04	4.43	180.00G
	8169.00	89.06	286.90	4729.23	3699.68	1084.39	-3537.39	3699.87	287.04	7.97	-71.57G
	8199.00	89.31	286.15	4729.65	3729.68	1092.92	-3566.15	3729.86	287.04	2.63	-55.95G
	8230.00	89.56	285.78	4729.96	3760.68	1101.45	-3595.95	3760.86	287.03	1.44	-153.44G
	8263.00	89.06	285.53	4730.36	3793.67	1110.35	-3627.72	3793.84	287.02	1.69	13.50G
	8293.00	89.56	285.65	4730.72	3823.66	1118.41	-3656.62	3823.83	287.01	1.71	-90.46G
	8326.00	89.38	225.40	4731.05	3850.68	1110.54	-3687.12	3850.73	286.76	182.57	90.58G
	8359.00	89.19	285.15	4731.51	3877.64	1102.53	-3717.60	3877.65	286.52	181.05	-23.04G
	8389.00	90.06	284.78	4731.70	3907.63	1110.27	-3746.58	3907.63	286.51	3.15	11.89G
Last Survey	8421.00	90.63	284.90	4731.51	3939.62	1118.47	-3777.52	3939.62	286.49	1.82	0.00G

**Survey Type:** Non-Def Survey

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
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**Survey Error Model:** SLB ISCWSA version 22 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

MD From (ft)

0.00

651.50

MD To (ft)

651.50

8421.00

EOU Freq

Act-Stns

Act-Stns

Survey Tool Type

SLB\_MWD-STD-Depth Only

SLB\_MWD-STD

Borehole -> Survey

Original Hole - Lat 1 -> WR 16G-32-10-17 Lat1 Field Survey

Original Hole - Lat 1 -> WR 16G-32-10-17 Lat1 Field Survey

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 DIV. OF OIL, GAS & MINING

## Lateral 2 field Surveys Survey Report

<p>Report Date: December 14, 2010          Client: QEP ENERGY          Field: Uinta          Structure / Slot: Wilkin Ridge / WR 16G-32-10-17          Well: WR 16G-32-10-17          Borehole: Lateral 2          UWI/API#: _____          Survey Name / Date: Lateral 2 field Surveys / October 31, 2010          Tort / AHD / DDI / ERD ratio: 176.990° / 3178.25 ft / 5.949 / 0.659          Grid Coordinate System: NAD83 Utah State Planes, Central Zone, US Feet          Location Lat/Long: N 39 53 41.810, W 110 1 30.960          Location Grid N/E Y/X: N 7133869.430 ftUS, E 2054154.467 ftUS          Grid Convergence Angle: +0.94468261°          Grid Scale Factor: 0.99989937</p>	<p>Survey / DLS Computation Method: Minimum Curvature / Lubinski          Vertical Section Azimuth: 69.120°          Vertical Section Origin: N 0.000 ft, E 0.000 ft          TVD Reference Datum: KB          TVD Reference Elevation: 6255.5 ft relative to MSL          Sea Bed / Ground Level Elevation: 5604.000 ft relative to MSL          Magnetic Declination: 11.918°          Total Field Strength: 52710.121 nT          Magnetic Dip: 65.810°          Declination Date: October 31, 2010          Magnetic Declination Model: IGRF 2005          North Reference: True North          Total Corr Mag North -&gt; True North: +11.918°          Local Coordinates Referenced To: Well Head</p>
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-119.22M
Assumed vertical	567.00	0.00	240.78	567.00	0.00	0.00	0.00	0.00	0.00	0.00	-151.35M
	629.00	0.19	208.65	629.00	-0.08	-0.09	-0.05	0.10	208.65	0.31	168.78M
	690.00	0.19	168.78	690.00	-0.17	-0.28	-0.08	0.29	195.68	0.21	153.90M
	751.00	0.19	153.90	751.00	-0.18	-0.47	-0.01	0.47	181.70	0.08	153.03M
	813.00	0.19	153.03	813.00	-0.16	-0.65	0.08	0.66	173.19	0.00	143.53M
	873.00	0.25	143.53	873.00	-0.11	-0.85	0.20	0.87	166.65	0.12	156.40M
	935.00	1.00	156.40	934.99	-0.05	-1.45	0.50	1.53	161.06	1.22	79.40M
	1027.00	0.94	79.40	1026.98	0.73	-2.05	1.56	2.57	142.68	1.31	83.03M
	1058.00	1.06	83.03	1057.98	1.26	-1.97	2.10	2.87	133.17	0.44	124.03M
	1120.00	0.50	124.03	1119.97	1.97	-2.05	2.89	3.54	125.33	1.22	-162.35M
	1182.00	0.63	197.65	1181.97	1.91	-2.52	3.01	3.93	129.98	1.10	-169.10M
	1245.00	0.63	190.90	1244.97	1.51	-3.19	2.84	4.27	138.36	0.12	-160.35M
	1306.00	0.63	199.65	1305.96	1.12	-3.84	2.66	4.67	145.25	0.16	-94.85M
	1367.00	1.00	265.15	1366.96	0.39	-4.20	2.02	4.66	154.31	1.53	-142.85M
	1429.00	0.38	217.15	1428.95	-0.30	-4.41	1.36	4.61	162.90	1.29	-166.97M
	1522.00	0.56	193.03	1521.95	-0.82	-5.10	1.07	5.21	168.17	0.28	-178.97M
	1585.00	0.69	181.03	1584.95	-1.13	-5.78	0.99	5.86	170.26	0.29	177.90M
	1648.00	0.25	177.90	1647.95	-1.32	-6.29	0.99	6.37	171.06	0.70	-9.47M
	1709.00	0.13	350.53	1708.95	-1.35	-6.36	0.98	6.43	171.21	0.62	-22.48M
	1774.00	0.19	337.52	1773.95	-1.34	-6.19	0.93	6.26	171.45	0.11	-24.72M
	1838.00	0.31	335.28	1837.94	-1.35	-5.93	0.82	5.99	172.15	0.19	-66.10M
	1900.00	0.13	293.90	1899.94	-1.41	-5.75	0.68	5.79	173.23	0.37	-86.35M
	1963.00	0.13	273.65	1962.94	-1.53	-5.72	0.55	5.74	174.54	0.07	-146.85M
	2026.00	0.25	213.15	2025.94	-1.70	-5.83	0.40	5.84	176.08	0.35	-136.85M
	2089.00	0.38	223.15	2088.94	-2.00	-6.09	0.18	6.10	178.29	0.22	-154.85M
	2151.00	0.50	205.15	2150.94	-2.38	-6.49	-0.07	6.49	180.65	0.29	-161.85M
	2216.00	0.63	198.15	2215.94	-2.81	-7.09	-0.31	7.09	182.47	0.23	-161.10M
	2278.00	0.62	198.90	2277.93	-3.24	-7.73	-0.52	7.74	183.85	0.02	132.40M
	2341.00	0.56	132.40	2340.93	-3.32	-8.26	-0.40	8.27	182.80	1.03	100.03M
	2404.00	0.94	100.03	2403.93	-2.74	-8.55	0.33	8.56	177.77	0.88	105.15M
	2468.00	1.05	105.15	2467.92	-1.81	-8.80	1.42	8.91	170.86	0.22	107.28M
	2531.00	0.69	107.28	2530.91	-1.05	-9.06	2.33	9.36	165.55	0.57	109.65M
	2594.00	0.56	109.65	2593.91	-0.52	-9.28	2.99	9.75	162.16	0.21	105.90M
	2657.00	0.63	105.90	2656.90	-0.01	-9.48	3.61	10.14	159.15	0.13	119.65M
	2721.00	0.50	119.65	2720.90	0.45	-9.71	4.19	10.58	156.66	0.29	138.78M
	2784.00	0.44	138.78	2783.90	0.71	-10.03	4.59	11.03	155.41	0.27	165.03M
	2848.00	0.50	165.03	2847.89	0.77	-10.48	4.82	11.54	155.30	0.35	165.03M

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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	6770.00	88.00	71.28	4796.40	2293.01	839.05	2134.12	2293.13	68.54	0.72	-52.75G
	6802.00	88.19	71.03	4797.46	2324.98	849.38	2164.39	2325.08	68.57	0.98	50.04G
	6833.00	88.50	71.40	4798.35	2355.94	859.36	2193.72	2356.04	68.61	1.56	22.75G
	6865.00	88.81	71.53	4799.11	2387.91	869.53	2224.05	2387.99	68.65	1.05	36.50G
	6896.00	89.31	71.90	4799.61	2418.87	879.25	2253.48	2418.94	68.69	2.01	169.18G
	6928.00	88.63	72.03	4800.19	2450.83	889.16	2283.91	2450.88	68.73	2.16	90.00G
	6960.00	88.63	72.15	4800.95	2482.77	898.99	2314.35	2482.82	68.77	0.37	11.84G
	6992.00	89.25	72.28	4801.55	2514.72	908.77	2344.81	2514.76	68.82	1.98	135.01G
	7023.00	88.75	72.78	4802.09	2545.66	918.07	2374.38	2545.69	68.86	2.28	180.00G
	7054.00	88.19	72.78	4802.92	2576.59	927.24	2403.98	2576.61	68.91	1.81	-169.21G
	7087.00	86.88	72.53	4804.33	2609.49	937.07	2435.45	2609.50	68.96	4.04	-106.82G
	7111.00	86.69	71.90	4805.68	2633.42	944.39	2458.27	2633.43	68.98	2.74	-44.96G
	7142.00	86.81	71.78	4807.44	2664.34	954.04	2487.67	2664.34	69.02	0.55	-71.56G
	7174.00	87.06	71.03	4809.15	2696.26	964.23	2517.96	2696.27	69.05	2.47	-71.56G
	7207.00	87.31	70.28	4810.77	2729.21	975.15	2549.06	2729.21	69.07	2.39	38.42G
	7239.00	87.94	70.78	4812.10	2761.18	985.80	2579.20	2761.18	69.08	2.51	-31.68G
	7270.00	88.75	70.28	4812.99	2792.15	996.13	2608.42	2792.15	69.10	3.07	-22.75G
	7302.00	89.06	70.15	4813.60	2824.14	1006.96	2638.52	2824.14	69.11	1.05	63.44G
	7334.00	89.31	70.65	4814.06	2856.13	1017.69	2668.67	2856.13	69.13	1.75	152.53G
	7366.00	89.06	70.78	4814.51	2888.11	1028.26	2698.87	2888.11	69.14	0.88	-45.00G
	7397.00	89.19	70.65	4814.99	2919.10	1038.50	2728.12	2919.10	69.16	0.59	-64.36G
	7429.00	89.31	70.40	4815.41	2951.09	1049.17	2758.29	2951.09	69.17	0.87	-97.86G
	7460.00	89.19	69.53	4815.81	2982.08	1059.79	2787.41	2982.08	69.18	2.83	-98.98G
	7492.00	89.13	69.15	4816.28	3014.08	1071.08	2817.35	3014.08	69.18	1.20	-175.03G
	7524.00	87.75	69.03	4817.15	3046.06	1082.49	2847.23	3046.07	69.18	4.33	-134.27G
	7556.00	87.38	68.65	4818.51	3078.03	1094.03	2877.05	3078.04	69.18	1.66	-171.61G
	7588.00	85.69	68.40	4820.45	3109.97	1105.73	2906.77	3109.97	69.17	5.34	-110.88G
Last Survey	7619.00	85.50	67.90	4822.83	3140.88	1117.23	2935.46	3140.88	69.16	1.72	0.00G

**Survey Type:** Non-Def Survey

**Survey Error Model:** SLB ISCWSA version 22 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Prog:**

**MD From (ft)**

**MD To (ft)**

**EOU Freq**

**Survey Tool Type**

**Borehole -> Survey**

0.00

651.50

Act-Stns SLB\_MWD-STD-Depth Only

Original Hole - Lat 1 -> WR 16G-32-10-17 Lat1 Field Survey

651.50

3853.00

Act-Stns SLB\_MWD-STD

Original Hole - Lat 1 -> WR 16G-32-10-17 Lat1 Field Survey

3853.00

3993.00

Act-Stns SLB\_NSG+MSHOT

Lateral 2 -> Lateral 2 field Surveys

3993.00

7619.00

Act-Stns SLB\_MWD-STD

Lateral 2 -> Lateral 2 field Surveys

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FEB 28 2011

Page 1 of 10

Operations Summary Report **DRILLING**  
DIV OF OIL, GAS & MINING

Well Name: WR 16G-32-10-17  
Location: 32- 10-S 17-E 26  
Rig Name: AZTEC

Spud Date: 8/24/2010  
Rig Release: 11/9/2010  
Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/25/2010	06:00 - 08:00	2.00	LOC	4	RIG UP
	08:00 - 14:00	6.00	DRL	8	DRILL CONDUCTOR TO 40 FT
	14:00 - 16:00	2.00	CSG	2	SET AND CEMENT CONDUCTOR
	16:00 - 18:00	2.00	LOC	4	RIG DOWN AND MOVE OFF LOCATION
8/29/2010	06:00 - 17:00	11.00	DRL	1	DRILLING, 40-540 FT
	17:00 - 19:00	2.00	CSG	2	HELD PREJOB SAFETY MEETING AND RUN 9 5/8 CASING
	19:00 - 21:30	2.50	CMT	2	PJSM AND CEMENT 9 5/8 CASING
10/5/2010	21:30 - 23:30	2.00	LOC	4	RIG DOWN AND MOVE OFF LOC
	06:00 - 21:00	15.00	LOC	3	MOVE RIG 85 MILES FROM THE SSU 2G-3-8-21 TO THE WR 16G-32-10-17, SET IN AND RIG UP CAMPS, SET AND RIG SET
10/6/2010	21:00 - 06:00	9.00	LOC	4	WAIT ON DAYLIGHT
	06:00 - 06:00	24.00	LOC	4	RIG UP, SET IN WATER TANK, DOG HOUSE, MUD TANKS, LIGHT PLANTS, FUEL TANK, PIPE TUBS, STAIRS, WORK ON PUMP SHED WINTERIZING, HOOK UP WATER SYSTEM, SANDBLAST AND INSPECT CROWN. (FOUND CRACK AND DAMAGED IRON) 100% MOVED, 50 % RIGGED UP. NOTIFIED DENNIS INGRAM WITH STATE OF UTAH OF POSSIBLE BOP TEST ON FRIDAY 10/09/2010.
10/7/2010	06:00 - 06:00	24.00	LOC	4	WELD NEW GUSSETTS IN DERRICK CROWN. WELD LOWER FRAMEWORK ONTO MUD PUMP SKIDS FOR SKINNING. WELD FRAMEWORK FOR STEAM LINES. HEAVY RAIN FROM 16:00 TO 18:00 SHUT DOWN WELDING OPERATIONS. PLUMB STEAM HEATERS, HANG WIND WALLS AROUND SUB. 100% MOVED, 50% RIGGED UP.
10/8/2010	06:00 - 06:00	24.00	LOC	4	WELD & INSPECT CROWN. FABRICATE PUMP SHEDS. RUN STEAM LINES. 6 WELDERS WORKING. RAISE DERRICK @ 14:30. RIG UP & WINTERIZE. CHANGE BRAKE PADS. DONNA KENNEY WITH BLM VERNAL CONFIRMED VERBALLY THAT BLM DOES NOT NEED TO WITNESS ANY PRESSURE TESTS, CEMENT JOBS, OR CASING JOBS ON THIS WELL. LEFT VOICE MAIL WITH DAN JARVIS AND VERBALLY NOTIFIED DENNIS INGRAM - STATE OF UTAH - OF OUR INTENT TO PRESSURE TEST ON 10/09/2010. VERBALLY NOTIFIED CAROL DANIELS - STATE OF UTAH OF OUR INTENT TO DRILL OUT ON 10/09/2010.
10/9/2010	06:00 - 06:00	24.00	LOC	4	FABRICATE PUMP SHEDS (1 - COMPLETED, 1- 30% COMPLETE). PLUMB GAS BUSTER AND CHOKE MANIFOLD. WIRE STEAM HEATERS. 5 - WELDERS AND 3- ELECTRICIANS WORKING ON PROJECT TODAY. RIG UP, HANG TOP DRIVE TRACK, WINTERIZE RIG. RIG IS 100% ON LOCATION AND 85% RIGGED UP.
10/10/2010	06:00 - 20:00	14.00	LOC	4	FABRICATE PUMP SHED, RUN FLARE LINES, WIRE HEATERS, RIG UP. SET PUMPS AND BACK YARD.
	20:00 - 00:30	4.50	BOP	2	BEGIN DAY WORK @ 20:00 ON 10/09/2010. TEST PIPE AND BLIND RAMS, FLOOR VALVES, IBOP, ALL MANIFOLD AND KILL LINE VALVES TO 3000 PSI FOR 10 MINS EACH, TEST ANNULAR TO 1500 PSI FOR 10 MINS.
	00:30 - 01:00	0.50	EQT	1	TEST CASING TO 1500 PSI FOR 30 MINS
	01:00 - 01:30	0.50	OTH		INSTALL WEAR BUSHING
10/11/2010	01:30 - 04:30	3.00	TRP	1	MAKE UP BIT, MOTOR AND DIRECTIONAL TOOLS, ORIENT SAME
	04:30 - 06:00	1.50	TRP	2	MAKE UP 2 DC'S, 8 JOINTS HWDP AND STAND BACK IN DERRICK.
	06:00 - 07:00	1.00	TRP	2	TRIP OUT TO EMMWD.
	07:00 - 10:30	3.50	RIG	2	INSTALL MUFFLER EXTENSIONS ON #1 & #2 PUMPS, ADJUST TD TRACK
	10:30 - 13:00	2.50	TRP	2	INSTALL WEATHERFORD EMMWD ELECTRONICS. TRIP IN HOLE TO 435'
	13:00 - 16:00	3.00	DRL	4	TAG CEMENT @ 435' - DRILL CEMENT AND SHOE TRACK. TAG PLUG @ FC @ 495' TAG SHOE @ 533'.
	16:00 - 17:00	1.00	EQT	2	PERFORM FIT TO 10 PPG EQUIVALENT @ 545' . HOLD 45 PSI FOR 30 MINUTES ( FLUID IN HOLE WAS WATER)
17:00 - 18:00	1.00	RIG	1	RIG SERVICE, CHANGE SHAKER SCREENS FROM 140 TO 84	

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Printed: 2/23/2011 9:44:40 AM

## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/11/2010	18:00 - 05:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 554' TO 1729', 106 FPH 18-20K WOB, 50 ROTARY, 126 MOTOR RPM, 1700 PSI AT 120 STROKES, #1 AND #2 PUMP, 525 GPM, MUD WT 8.8, VIS 34
	05:00 - 06:00	1.00	SUR	1	SURVEYS
10/12/2010	06:00 - 08:30	2.50	DRL	2	DIRECTIONAL DRILL FROM 1780' TO 1955' @ 70FPH. 12 - 20K WOB, 525 GPM, 1800 PSI SPP, 50 RPM. 8.9 MW 35 FV
	08:30 - 09:00	0.50	RIG	1	RIG SERVICE
	09:00 - 17:00	8.00	DRL	2	DIRECTIONAL DRILL FROM 1955' TO 2605' @ 81 FPH. 12 - 16K WOB, 525 GPM, 1800 PSI SPP, 50 RPM, 200 - 250 MOTOR DIFFERENTIAL. 9.0 MW 36 FV. SLIDE 22' TO MAINTAIN VERTICAL. TORQUE AND BIT BOUNCE ABOVE 250 MOTOR DIFFERENTIAL IN THIS SECTION.
	17:00 - 18:00	1.00	SUR	1	DIRECTIONAL SURVEYS.
	18:00 - 19:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 2605' TO 2656' @ 51 FPH. 12 - 16K WOB, 525 GPM, 1800 PSI SPP, 50 RPM, 200 - 250 MOTOR DIFFERENTIAL. 9.1 MW 36 FV.
	19:00 - 20:00	1.00	OTH		CHANGE OUT 2, 5" SWABS, #1 PUMP, MIDDLE, OFF MOTOR SIDE, CIRCULATE WITH #2 PUMP
	20:00 - 21:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 2656' TO 2751' @ 95 FPH. 14 - 18K WOB, 525 GPM, 1900 PSI SPP, 50 RPM, 200 - 250 MOTOR DIFFERENTIAL. 9.1+ MW 36 FV.
	21:00 - 21:30	0.50	OTH		CHANGE OUT 5" SWAB, MOTOR SIDE, #1 PUMP, CIRCULATE WITH #2 PUMP
	21:30 - 04:30	7.00	DRL	2	DIRECTIONAL DRILL FROM 2751' TO 3330' @ 82 FPH. 14 - 18K WOB, 525 GPM, 2000 PSI SPP, 50 RPM, 200 - 250 MOTOR DIFFERENTIAL. 9.1+ MW 36 FV.
10/13/2010	04:30 - 06:00	1.50	SUR	1	SURVEYS
	06:00 - 09:00	3.00	DRL	4	DIRECTIONAL DRILL FROM 3330' TO 3597' @ 89 FPH. 18 - 20K WOB, 50 RPM, 525 GPM, 300 MOTOR DIFF, 9.1 MW
	09:00 - 09:30	0.50	RIG	1	RIG SERVICE
	09:30 - 14:30	5.00	DRL	2	DIRECTIONAL DRILL FROM 3597' TO 4014' @ 83 FPH. 18 - 20K WOB, 50 RPM, 525 GPM, 300 MOTOR DIFF, 9.2 MW.
	14:30 - 15:30	1.00	SUR	1	SURVEYS
	15:30 - 16:00	0.50	CIRC	1	PUMP HIGH VIS SWEEP, CIRCULATE SHAKER CLEAN
	16:00 - 21:00	5.00	TRP	2	BEGIN 20 STAND SHORT TRIP FOR LOGS, TIGHT HOLE WAS ENCOUNTERED BEGINING @ 3850'. TRIP OUT TO BIT.
	21:00 - 21:30	0.50	TRP	2	LAY DOWN MWD TOOL, CLEAN BIT, CENTER BOP
	21:30 - 22:30	1.00	TRP	14	TRIP IN TO 320'
	22:30 - 23:30	1.00	RIG	2	WORK ON DRAWWORKS MOTORS
	23:30 - 02:30	3.00	TRP	14	TRIP IN, BREAK CIRCULATION AT 2500', NO FILL
	02:30 - 03:30	1.00	CIRC	1	PUMP HIGH VIS GEL SAWDUST SWEEP AROUND. PUMP DRY PILL.
	03:30 - 06:00	2.50	TRP	2	TRIP OUT, SLM
10/14/2010	06:00 - 07:00	1.00	TRP	2	TRIP OUT FOR LOGS. STRAP OUT = 4012.5' BOARD = 4014', NO CORRECTION MADE
	07:00 - 08:30	1.50	TRP	1	LAY DOWN NON-MAG MWD TOOLS, DRAIN & LAY DOWN MOTOR.
	08:30 - 10:30	2.00	OTH		ATTEMPT TO PULL WEAR BUSHING. PULLED UP TO 60K AND COULD NOT PULL BUSHING.
	10:30 - 13:30	3.00	LOG	1	HSM, RIG UP HALLIBURTON LOGGING. TROUBLE SHOOT SURFACE COMPUTER SYSTEMS IN LOGGING TRUCK
	13:30 - 17:00	3.50	LOG	1	HES SURFACE SYSTEMS REPAIRED. LOG WELL, RUN TRIPLE COMBO FROM LOGGER'S TD @ 4012' TO SURFACE CASING SHOE @ 534'.
	17:00 - 18:00	1.00	OTH		ATTEMPT TO PULL WEAR BUSHING WITH CAMERON FIELD SERVICE PERSONNEL PRESENT. PULLED 66K ON BUSHING. COULD NOT PULL BUSHING.
	18:00 - 23:00	5.00	TRP	2	TRIP IN (NEW HANDS), BROKE CIRC AT 2500'
	23:00 - 00:30	1.50	CIRC	1	CIRCULATE, PJSM WITH LAYDOWN CREW, RIG UP SAME, PUMP SLUG

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**Operations Summary Report**

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/14/2010	00:30 - 05:30	5.00	TRP	3	LAY DOWN PIPE
	05:30 - 06:00	0.50	OTH		ATTEMPT TO PULL WEAR BUSHING.
10/15/2010	06:00 - 07:30	1.50	CSG	1	HSM, RIG UP WEATHERFORD CASING CREW
	07:30 - 09:30	2.00	CSG	2	MAKE UP FLOAT EQUIPMENT, RUN 4 JOINTS CASING.
	09:30 - 10:30	1.00	OTH		ADJUST TOP DRIVE TRACK IN SO THAT CASING WILL STAB STRAIGHT.
	10:30 - 14:30	4.00	CSG	2	RUN 87 JOINTS 7" 26# N-80 LT&C CASING LANDED @ 3999'. RUN ORDER AS FOLLOWS: FLOAT SHOE TOP - 3997.4, 1 - JOINT CASING TOP - 3950.72, FLOAT COLLAR TOP - 3949.47' - 86 JOINTS CASING TO SURFACE. CASING TORQUED TO 5200 FT. LB.
	14:30 - 17:00	2.50	CIRC	1	CIRCULATE HOLE @ 305 GPM - NO LOSSES. RIG UP HES
	17:00 - 19:00	2.00	CMT	2	HSM, SWAP TO HALLIBURTON. PUMP 10BBL WATER, 20BBL SUPER FLUSH, 10BBL WATER. PUMP 147BBL (260 SKS) EXTENDACEM LEAD CEMENT. MIXED AT 11 LB/GAL. ADDITIVES ARE 3 LBM/SK SILICALITE, 1% ECONOLITE, 0.25 LBM/SK POLY-E-FLAKE, 1 LBM/SK GRANULITE TR 1/4. YIELD IS 3.19FT3/SK WITH 19.52 GAL/SK WATER. PUMP 37 BBL (140 SKS) BONDCEM TAIL CEMENT. MIXED AT 13.5 LB/GAL. ADDITIVES ARE 0.11% FE-2, 0.3% HALAD 344, 0.2% VERSASET, 0.2% SUPER CBL. 0.125 LBM/SK POLY-E-FLAKE, 1 LBM/SK GRANULITE TR 1/4. YIELD IS 1.40 FT3/SK WITH 6.62 GAL/SK WATER. DISPLACE WITH 150 BBL WATER (151 CALCULATED), FULL RETURNS THROUGHOUT JOB WITH 75BBL CEMENT CIRCULATED TO PITS. FCP = 950 PSI ( 700 PSI CALCULATED LIFT) BPP = 1700PSI. FLOATS HELD WITH 1 BBL RETURNED.
	19:00 - 19:30	0.50	EQT	1	TEST CASING TO 1680 PSI WITH HALLIBURTON
	19:30 - 21:00	1.50	BOP	1	NIPPLE DOWN BOP
	21:00 - 23:00	2.00	CSG	7	SET CASING SLIPS WITH 85K(ALL), CUT AND DRESS CASING, REMOVE WEAR BUSHING FROM TIE DOWN FLANGE(POWER WASH BETWEEN BUSHING AND TIE DOWN FLANGE AND BEAT OUT WITH SLEDGE HAMMERS).
	23:00 - 04:00	5.00	BOP	1	NIPPLE UP BOP, CHANGE PIPE RAMS TO 3.5"
10/16/2010	04:00 - 06:00	2.00	BOP	2	TEST BOP
	06:00 - 12:30	6.50	BOP	1	STACK WOULD NOT TEST WITH RING GASKETS SUPPLIED BY CAMERON (R-53). NIPPLE DOWN BOP AND REPLACE RING GASKET ON WELL HEAD AND ON LOCK DOWN FLANGE WITH CORRECT SIZE RING GASKETS (R-54), NIPPLE UP BOP.
	12:30 - 13:00	0.50	BOP	2	TEST BOP WITH SINGLE JACK TESTERS. TEST CHOKE LINE, PIPE RAMS, FOSV, WELLHEAD AND LOCKDOWN FLANGE TO 3,000 PSI FOR 15 MINUTES
	13:00 - 15:00	2.00	OTH		TIGHTEN DERRICK LINES. CHANGE BAILS, INSTALL BIT GUIDE/WEAR BUSHING.
	15:00 - 16:00	1.00	TRP	1	HSM, RIG UP WEATHERFORD LAY DOWN TRUCK TO PICK UP 3 1/2" DRILL PIPE.
	16:00 - 17:00	1.00	TRP	1	PICK UP WEATHERFORD 7/8 3.8 STG. 0.51 RPG 3' BTB MOTOR, AND SCRIBE TO WEATHERFORD EMMWD/GAMMA/CONTINUOUS INCLINATION TOOL.
	17:00 - 17:30	0.50	OTH		CHANGE AND INSTALL ROTATING HEAD RUBBER.
	17:30 - 20:00	2.50	TRP	2	TRIP IN HOLE, PICK UP 3 1/2" DRILL STRING
	20:00 - 21:00	1.00	OTH		LAY OUT, STRAP AND CLEAN THREADS ON 3.5" DP
	21:00 - 22:00	1.00	TRP	2	PICK UP 3.5" PIPE, TAG CEMENT AT 3941'
	22:00 - 22:30	0.50	OTH		FILL PIPE, BREAK CIRCULATION, RIG DOWN PICK UP MACHINE
	22:30 - 23:30	1.00	DRL	4	DRILL FLOAT, SHOE AND CEMENT FROM 3941' TO 3999' WITH WATER, CEMENT VERY SOFT
	23:30 - 00:00	0.50	DRL	1	DRILL FROM 3014' TO 4024', DISPLACE HOLE WITH MUD
	00:00 - 00:30	0.50	EQT	2	PERFORM FIT TO 10.2 PPG, 9.2 MUD WT IN HOLE
	00:30 - 06:00	5.50	DRL	2	DRILL FROM 4024' TO 4160' AT 28' FPH, 15-18K WOB, 20 ROTARY, 132 MOTOR RPM, 260 GPM, MUD WT 9 PPG, VIS 36

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/17/2010	06:00 - 16:30	10.50	DRL	2	DIRECTIONAL DRILL FROM 4160' TO 4430 @ 25.7 FPH. 20K WOB, 25 RPM, 260 GPM, 8.9 MW 39 FV, 50 - 150 MOTOR DIFFERENTIAL.
	16:30 - 17:00	0.50	RIG	1	RIG SERVICE
	17:00 - 18:00	1.00	SUR	1	SURVEYS
	18:00 - 05:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 4430' TO 4620' @ 17 FPH. 20-23K WOB, 25 RPM, 260 GPM, 8.9 MW 39 FV, 50 - 150 MOTOR DIFFERENTIAL.
10/18/2010	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 16:30	10.50	DRL	2	DIRECTIONAL DRILL FROM 4620' TO 4809' @ 18 FPH. 22-24K WOB, 25 RPM, 260 GPM, 9.0 MW 38 FV, 50 - 200 PSI MOTOR DIFFERENTIAL 2200 PSI OFF BOTTOM.
	16:30 - 17:00	0.50	RIG	1	RIG SERVICE
	17:00 - 18:00	1.00	SUR	1	SURVEYS
10/19/2010	18:00 - 05:30	11.50	DRL	2	DIRECTIONAL DRILL FROM 4809' TO 4970' @ 14 FPH. 22-24K WOB, 25 RPM, 260 GPM, 8.9 MW 38 FV, 50 - 200 PSI MOTOR DIFFERENTIAL 2200 PSI OFF BOTTOM.
	05:30 - 06:00	0.50	SUR	1	SURVEYS
	06:00 - 07:30	1.50	DRL	2	DIRECTIONAL DRILL FROM 4970' TO 4984' @ 9.3 FPH - ALL SLIDE.
	07:30 - 08:00	0.50	CIRC	1	CIRCULATE, PUMP HIGH VIS. SWEEP AROUND
	08:00 - 11:30	3.50	TRP	10	TRIP OUT TO CHANGE BIT AND MOTOR. NO TIGHT HOLE.
	11:30 - 13:00	1.50	TRP	1	DRAIN & LAY DOWN WEATHERFORD MOTOR. PICK UP HUNTING 7/8 4.5 STG 0.46 RPG. SLICK ADJUSTABLE MOTOR SET AT 1.5 DEGREES. SCRIBE TO WEATHERFORD EMMWD/CONSTANT INC./GAMMA TOOL.
	13:00 - 14:00	1.00	TRP	2	TRIP IN HOLE TO 3280'. FILL PIPE AND BREAK CIRCULATION.
	14:00 - 15:00	1.00	RIG	6	SLIP & CUT DRILLING LINE.
	15:00 - 16:00	1.00	TRP	2	TRIP IN HOLE, WASH 45' TO BOTTOM. NO TIGHT HOLE
	16:00 - 19:30	3.50	DRL	2	DIRECTIONAL DRILL FROM 4984' TO 5065' @ 23 FPH. 22-24K WOB, 40 RPM, 266 GPM, 8.9 MW 38 FV, 50 - 200 PSI MOTOR DIFFERENTIAL 2300 PSI OFF BOTTOM.
	19:30 - 20:00	0.50	CIRC	1	CIRCULATE UP SAMPLES FOR LOGGER
	20:00 - 06:00	10.00	DRL	2	DIRECTIONAL DRILL FROM 5065' TO 5363' @ 30 FPH. 22-24K WOB, 40 RPM, 266 GPM, 8.9 MW 38 FV, 50 - 200 PSI MOTOR DIFFERENTIAL 2300 PSI OFF BOTTOM.
10/20/2010	06:00 - 14:30	8.50	DRL	2	DRILL FROM 5363' TO 5513' @ 17.7 FPH. 22 - 24K WOB, 300 GPM, 40 RPM, 2950 PSI OFF BOTTOM, 100 - 200 MOTOR DIFFERENTIAL. VERY DIFFICULT SLIDING FROM 5360 - 5400. ADDED 3% BIO-LUBE TO MUD SYSTEM. PUMP POLYMER SWEEPS
	14:30 - 15:00	0.50	CIRC	1	PUMP HIGH VIS SWEEP, CIRCULATE AROUND. RIG SERVICE
	15:00 - 15:30	0.50	TRP	14	SHORT TRIP 9 STANDS FROM 5512' TO 4940'. NO TIGHT HOLE.
	15:30 - 17:30	2.00			DRILL FROM 5513' TO 5642' @ 64 FPH. 22 - 25K WOB, 300 GPM, 40 RPM, 2950 PSI OFF BOTTOM, 100 - 200 MOTOR DIFFERENTIAL.
	17:30 - 18:00	0.50	SUR	1	SURVEYS
	18:00 - 03:30	9.50	DRL	2	DRILL FROM 5642' TO 6024' @ FPH. 22 - 25K WOB, 300 GPM, 40 RPM, 2950 PSI OFF BOTTOM, 100 - 200 MOTOR DIFFERENTIAL.
	03:30 - 04:30	1.00	TRP	14	SHORT TRIP FROM 6024' TO 5451', 9 STANDS
	04:30 - 05:30	1.00	TRP	14	DRILL FROM 6024' TO 6065' @ 27 FPH. 22 - 25K WOB, 300 GPM, 40 RPM, 2950 PSI OFF BOTTOM, 100 - 200 MOTOR DIFFERENTIAL.
	05:30 - 06:00	0.50	SUR	1	SURVEYS
	06:00 - 13:30	7.50	DRL	2	DIRECTIONAL DRILL FROM 6065' TO 6274' 209' ROP - 27.8'/HR WOB - 25 GPM - 290 RPM - 178
10/21/2010	13:30 - 14:00	0.50	SUR	1	SURVEYS
	14:00 - 14:30	0.50	RIG	1	RIG SERVICE
	14:30 - 20:30	6.00	DRL	2	DIRECTIONAL DRILL FROM 6274' TO 6498' 224' ROP 37.3' HR - WOB - 25 GPM - 290 RPM 178

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/21/2010	20:30 - 21:00	0.50	SUR	1	SURVEYS
	21:00 - 21:30	0.50	CIRC	1	CIRC. F/ TRIP & PUMP SLUG
	21:30 - 01:00	3.50	TRP	10	TRIP OUT OF HOLE F/ BIT & BHA. FUNCTION ANN. PIPE & BLIND RAMS
	01:00 - 06:00	5.00	TRP	2	TRIP IN THE HOLE, MOVE ADDITIONAL 36 STDS. FOR PUSH PIPE, P/U AGITATOR & SHOCK SUB, TEST MWD & FILL PIPE.
10/22/2010	06:00 - 07:00	1.00	TRP	2	TRIP IN THE HOLE
	07:00 - 15:30	8.50	DRL	2	DIRECTIONAL DRILL FROM 6498' TO 6933' 435' ROP - 51.2'/HR WOB - 25 GPM - 262 RPM @ BIT - 165
	15:30 - 16:00	0.50	RIG	1	RIG SERVICE
	16:00 - 17:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 6933 TO 7026' 93' ROP - 93'/HR WOB - 25 GPM - 262 RPM @ BIT - 165
	17:00 - 18:00	1.00	SUR	1	SURVEYS AND CONNECTIONS
	18:00 - 18:30	0.50	CIRC	1	CIRC. F/ SHORT TRIP
	18:30 - 19:30	1.00	TRP	14	SHORT TRIP 10 STANDS TO 6400'
	19:30 - 05:00	9.50	DRL	2	DIRECTIONAL DRILL FROM 7026' TO 7500' 474' ROP - 49.8'/HR. WOB 25 GPM 262 RPM. @ BIT - 165
	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 10:30	4.50	DRL	2	DIRECTIONAL DRILL FROM 7500' TO 7534' 34' ROP 7.5 'HR. WOB 25 GPM 262 RPM 169
10/23/2010	10:30 - 11:30	1.00	TRP	14	SHORT TRIP 10 STNDS.
	11:30 - 15:00	3.50	DRL	2	DIRECTIONAL DRILL FROM 7534' TO 7565' 31' ROP 9.7'/HR. WOB 25 GPM 262 RPM 165
	15:00 - 15:30	0.50	RIG	1	SERVICE RIG, TOP-DRIVE
	15:30 - 17:30	2.00	DRL	2	DIRECTIONAL DRILL FROM 7565' TO 7591' 26' ROP 13'/HR. WOB 25 GPM 262 RPM 165
	17:30 - 18:00	0.50	SUR	1	SURVEYS
	18:00 - 19:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 7591' TO 7600' 9' ROP 9'/HR. WOB 25 GPM 262 RPM 165
	19:00 - 19:30	0.50	CIRC	1	CIRC. F/ TRIP
	19:30 - 23:30	4.00	TRP	12	PUMP SLUG & TRIP OUT OF HOLE F/ M.MTR. FUNCTION PIPE & BLIND RAMS
	23:30 - 00:30	1.00	TRP	1	X/O BIT L/D & P/U NEW M.MTR.
	00:30 - 01:00	0.50	DRL	3	SCRIBE EM,MWD
	01:00 - 05:30	4.50	TRP	2	TRIP IN THE HOLE, FILL PIPE.
	05:30 - 06:00	0.50	REAM	1	WASH 92' TO BOTTOM
	06:00 - 07:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 7600' TO 7618' 18' ROP - 18'/HR WOB - 25 GPM - 267 (SLIDING/ROTATING)
	07:00 - 07:30	0.50	CIRC	1	CIRCULATE SAMPLES, IN ZONE CONFIRMATION
07:30 - 10:00	2.50	DRL	2	DIRECTIONAL DRILL FROM 7618' TO 7690' 72' ROP - 28.8'/HR WOB - 25 GPM - 267	
10:00 - 10:30	0.50	CIRC	1	CIRCULATE UP SAMPLES, BOTTOM OF ZONE CONFIRMATION	
10:30 - 17:00	6.50	DRL	2	DIRECTIONAL DRILL FROM 7690' TO 7812' 122' ROP 18.7'/HR. WOB - 25 GPM - 267	
17:00 - 18:00	1.00	SUR	1	SURVEYS	
18:00 - 19:30	1.50	DRL	2	DIRECTIONAL DRILL FROM 7812' TO 7853' 41' ROP 41'/HR. WOB - 25 GPM - 267	
19:30 - 20:00	0.50	RIG	1	SERVICE RIG, TOP-DRIVE	
20:00 - 04:00	8.00	DRL	2	DIRECTIONAL DRILL FROM 7853' TO 8105' 252' ROP 31.5'/HR. WOB - 25 GPM - 267	
04:00 - 05:00	1.00	SUR	1	SURVEYS	
05:00 - 06:00	1.00	TRP	14	SHORT TRIP 10 STNDS. TO 7480'	
10/25/2010	06:00 - 08:30	2.50	DRL	2	DIRECTIONAL DRILL FROM 8105' TO 8134' 29' ROP - 11.5'/HR. WOB - 25 GPM - 269 SLIDING/ROTATING

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/25/2010	08:30 - 09:30	1.00	CIRC	1	CIRCULATE SAMPLES
	09:30 - 13:00	3.50	DRL	2	DIRECTIONAL DRILL FROM 8134' TO 8167' 33' ROP - 9.4'/HR WOB - 27 GPM - 267 SLIDING/ROTATING
	13:00 - 13:30	0.50	RIG	1	RIG SERVICE
	13:30 - 17:00	3.50	DRL	2	DIRECTIONAL DRILL FROM 8167' TO 8266' 99' ROP - 28.2'/HR. WOB - 27 GPM - 267
	17:00 - 18:00	1.00	SUR	1	SURVEYS
	18:00 - 05:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 8266' TO 8480' 214' ROP - 19.0'/HR. WOB 27 GPM - 267
10/26/2010	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 06:30	0.50	DRL	2	DIRECTIONAL DRILL FROM 8480' TO 8404' (TD)
	06:30 - 08:00	1.50	CIRC	1	PUMP FRESH WATER / VIS SWEEP AND CIRCULATE BOTTOMS UP
	08:00 - 14:00	6.00	TRP	2	TRIP OUT OF THE HOLE TO PICK UP REAMING ASSEMBLY (SLM) LAY DOWN ADJITAROR/SHOCK TOOL - SHOCK TOOL LEAKING FROM SEALS
	14:00 - 15:30	1.50	RIG	1	L/D DIR. TOOLS,
	15:30 - 16:30	1.00	TRP	1	SERVICE RIG, TOP-DRIVE
	16:30 - 17:00	0.50	OTH		BLOW DOWN TOP-DRIVE
	17:00 - 19:00	2.00	OTH		STRAP / CALIPER AND LINE UP REAMER ASSEMBLY AND 32 4.75 DRILL COLLARS
	19:00 - 21:30	2.50	TRP	15	TRIP IN HOLE. PICK UP 32 - 4 3/4" DRILL COLLARS.
	21:30 - 06:00	8.50	REAM	1	TAG UP @ 4403'. REAM FROM 4403 TO 6000'. 5-10K WOB. ( 2200 TO 3000 PSI TOP DRIVE TORQUE.) 55-60 RPM, 300 GPM
10/27/2010	06:00 - 19:00	13.00	REAM	1	REAM FROM 6000' TO 8484'
	19:00 - 21:30	2.50	CIRC	1	CIRC UP SWEEP, SPOT 76 BBL, 3#/BBL LUBRA BEAD SWEEP FROM 8484 TO' 5382', PUMP PILL
	21:30 - 22:30	1.00	RIG	1	SERVICE RIG, TOP - DRIVE
	22:30 - 03:00	4.50	TRP	2	TOOH TO RUN LINER, DROP RABBIT, SLM, TOOH TO 3400'
10/28/2010	03:00 - 04:30	1.50	CSG	1	PJSM. R/U CASING EQUIPMENT TO L.D.D.P.
	04:30 - 06:00	1.50	TRP	3	L/D 106 JNTS. OF 3.5" D.P.
	06:00 - 08:00	2.00	TRP	3	LAY DOWN DRILL PIPE AND REAMING ASSEMBLY
	08:00 - 09:30	1.50	CSG	1	HELD PJSM, RIG UP CASING CREW AND HALLIBURTON PUMP TRUCK
	09:30 - 14:00	4.50	CSG	4	PICK UP AND RUN LINER RAN 90 JTS 4.5", N-80, 11.6 WITH PACKERS AND FRAC SLEVES AS PER PACKERS PLUS
	14:00 - 14:30	0.50	CSG	1	RIG DOWN CASING CREW
	14:30 - 20:00	5.50	TRP	2	TRIP IN THE HOLE WITH LINER & FILL, SHOE @ 8397', TOP @ 3972'
	20:00 - 22:00	2.00	CIRC	4	DROP BALL TO CLOSE LINER, CHECK PRESSURES, OK. RELEASE F/ LINER
	22:00 - 23:00	1.00	TRP	2	TRIP OUT OF HOLE F/ R.B.P.
	23:00 - 23:30	0.50	CSG	1	R/D HALCO
	23:30 - 00:30	1.00	RIG	1	SERVICE RIG, TOP-DRIVE
	00:30 - 03:30	3.00	TRP	3	PJSM, R/U CASING CREW & L/D 32 D.C.'S & R/D.
	03:30 - 04:30	1.00	TRP	2	TRIP OUT OF HOLE F/ R.B.P.
	04:30 - 05:00	0.50	TRP	2	L/D PACKERS PLUS SETTING TOOL
05:00 - 06:00	1.00	LOG	4	RIG UP LONE WOLF WIRELINE TRUCK AND RUN 6" GAUGE RING, JUNK BASKET AND COLLAR LOCATOR, POOH FOR RBP	
10/29/2010	06:00 - 08:30	2.50	LOG	4	PUN IN THE HOLE WITH RBP AND SET @ 3892.5 (TOP OF RBP - WIRELINE NUMBERS) RIG DOWN WIRELINE TRUCK
	08:30 - 10:00	1.50	TRP	1	PICK UP AND ORIENT WHIPSTOCK / MILLING ASSEMBLY
	10:00 - 12:30	2.50	TRP	2	TRIP IN THE HOLE WITH WHIPSTOCK TO 3865'
	12:30 - 13:30	1.00	LOG	4	RIG UP WIRELINE TRUCK AND GYRO TOOL
	13:30 - 14:30	1.00	LOG	4	RUN IN THE HOLE WITH GYRO TOOL AND AQUIRE TOOL FACE SEATS
	14:30 - 15:00	0.50	DRL	3	ORIENT WHIPSTOCK AND SET AT 59° AZI

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/29/2010	14:30 - 15:00	0.50	DRL	3	TAGGED RBP @ 3890.5 TOP OF WHIPSTOCK @ 3871.96 BOTTOM OF WHIPSTOCK FACE @3879.71
	15:00 - 15:30	0.50	LOG	4	POOH WITH GYRO AND RIG DOWN WIRELINE TRUCK
	15:30 - 16:30	1.00	RIG	6	CUT DRLG LINE
	16:30 - 06:00	13.50	FISH	1	ADJUST TORQUES FOR MILLING WINDOW AND MILL WINDOW FROM 3872' TO 3880'
10/30/2010	06:00 - 07:30	1.50	TRP	2	PUMP SLUG AND TRIP OUT FOR MILL
	07:30 - 08:30	1.00	TRP	2	L/D WINDOW MILL, INSPECT FOLLOW MILL, P/U NEW WINDOW MILL
	08:30 - 10:00	1.50	TRP	2	TRIP IN THE HOLE
	10:00 - 14:00	4.00	FISH	1	MILL WINDOW FROM 3880' TO 3884'
	14:00 - 14:30	0.50	EQT	2	FIT TO 10.0 PPG EMW, OMW - 9.1, TEST DEPTH - 3884, SURFACE PSI - 191
	14:30 - 16:00	1.50	TRP	10	PUMP SLUG AND TRIP OUT OF THE HOLE FOR MUD MOTOR AND BIT
	16:00 - 17:00	1.00	TRP	1	L/D MILLING ASSEMBLY, PICK UP BIT, MOTOR, GYRO UBHO, SCRIBE AND ORIENT
	17:00 - 19:00	2.00	TRP	2	TRIP IN THE HOLE
	19:00 - 22:00	3.00	SUR	1	RIG UP LONE WOLF WIRELINE AND PUMP IN SUB. RIG UP SCIENTIFIC GYRO. TAG BOTTOM @ 3884'
	22:00 - 23:00	1.00	RIG	1	SERVICE RIG, TOP DRIVE
	23:00 - 23:30	0.50	DRL	3	ORIENT TOOLS TO 63° AZM.
	23:30 - 00:00	0.50	DRL	2	DIR. DRILL F/ 3884 TO 3901 17' ROP 17'/HR. WOB 25 GPM 254
	00:00 - 01:00	1.00	SUR	1	GYRO CONNECTION
	01:00 - 02:30	1.50	DRL	2	DIR. DRILL F/ 3901' TO 3940' 39' ROP 26' WOB 22 GPM 300
10/31/2010	02:30 - 03:30	1.00	SUR	1	GYRO CONNECTION
	03:30 - 04:00	0.50	DRL	2	DIR. DRILL F/ 3940' TO 3946' 6' ROP 12'/HR. WOB 25 GPM 254
	04:00 - 05:00	1.00	SUR	1	GYRO CONNECTION
	05:00 - 06:00	1.00	DRL	2	DIR. DRILL F/ 3946' TO 3974' 28' ROP 28'/HR. WOB 25 GPM 300
	06:00 - 06:30	0.50	SUR	1	POOH WITH GYRO
	06:30 - 07:00	0.50	DRL	1	DIRECTIONAL DRILL FROM 3974' TO 4002' 28' ROP - 56'/HR WOB - 22 GPM - 300 RPM - 183
	07:00 - 08:00	1.00	SUR	1	MAKE CONNECTION AND RUN GYRO SURVEY
	08:00 - 08:30	0.50	DRL	2	DIRECTIONAL DRILL FROM 4002' TO 4035' 33' ROP - 66'/HR WOB - 22 GPM - 300 RPM - 183
	08:30 - 09:30	1.00	SUR	1	RIH WITH GYRO, SURVEY, POOH
	09:30 - 10:30	1.00	LOG	4	RIG DOWN GYRO TOOL AND WIRELINE TRUCK
11/1/2010	10:30 - 11:00	0.50	RIG	1	RIG SERVICE
	11:00 - 12:30	1.50	TRP	2	PUMP SLUG AND TRIP OUT OF THE HOLE TO PICK UP MWD TOOLS
	12:30 - 14:00	1.50	TRP	1	CHANGE OUT MOTOR AND BIT, P/U MWD TOOLS, SCRIBE AND ORIENT
	14:00 - 16:00	2.00	TRP	2	TRIP IN THE HOLE
	16:00 - 03:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 4035' TO 4653' 618' ROP 56.1' WOB 3-11 GPM 300
	03:00 - 05:00	2.00	SUR	1	SURVEYS
	05:00 - 06:00	1.00	TRP	12	PUMP SLUG AND TRIP OUT OF THE HOLE
	06:00 - 08:00	2.00	TRP	12	TRIP OUT OF THE HOLE FOR MOTOR
	08:00 - 10:00	2.00	TRP	1	CHANGE OUT MOTORS, CHANGE OUT GAMMA SENSOR, SCRIBE AND ORIENT
	10:00 - 12:30	2.50	TRP	2	TRIP IN THE HOLE TO 4550
12:30 - 14:00	1.50	OTH		RE-LOG GAMMA FROM 4550' TO 4653'	

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**Operations Summary Report**

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
11/1/2010	14:00 - 17:30	3.50	DRL	2	DIRECTIONAL DRILL FROM 4653' TO 4737' 84' ROP 24'/HR. WOB 8-11 GPM - 290
	17:30 - 18:00	0.50	SUR	1	SURVEYS
	18:00 - 18:30	0.50	RIG	1	SERVICE RIG TOP-DRIVE
	18:30 - 05:00	10.50	DRL	2	DIRECTIONAL DRILL F/ 4737 TO 4930' 193' ROP 18.3'/HR. WOB 8-11 GPM - 290
11/2/2010	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 09:30	3.50	DRL	2	DIRECTIONAL DRILL FROM 4930' TO 4967' 37' (SLIDING-ROTATING) ROP - 10.6'/HR GPM - 290 WOB - 11 RPM - 148/188
	09:30 - 10:00	0.50	CIRC	1	CIRCULATE AND BUILD / PUMP TRIP SLUG
	10:00 - 12:00	2.00	TRP	2	TRIP OUT OF THE HOLE TO PICK UP 1.5" MOTOR AND INSERT BIT
	12:00 - 13:30	1.50	TRP	1	CHANGE OUT MOTOR AND BIT, PULL MWD TOOL AND CHANGED OUT BATTERIES AND ANTENA
	13:30 - 16:00	2.50	TRP	2	TRIP IN THE HOLE
11/3/2010	16:00 - 04:30	12.50	DRL	2	DIRECTIONAL DRILL FROM 4967' TO 5270' 303' (SLIDING-ROTATING) ROP 24.2'/HR. WOB - 25 GPM - 300, LANDED IN ZONE @ 5096' TVD. 4750'
	04:30 - 05:00	0.50	RIG	1	SERVICE RIG TOP-DRIVE
	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 12:30	6.50	DRL	2	DIRECTIONAL DRILL FROM 5270' TO 5529' 259' ROP - 39.8'/HR WOB - 24 GPM - 300 RPM - 153/193
	12:30 - 13:00	0.50	CIRC	1	PUMP AND CIRCULATE OUT VIS SWEEP
	13:00 - 14:00	1.00	TRP	2	TRIP OUT TO THE SHOE
	14:00 - 15:00	1.00	RIG	1	RIG SERVICE
	15:00 - 15:30	0.50	RIG	2	WORK ON TOP DRIVE ROTARY
	15:30 - 16:30	1.00	TRP	2	TRIP IN THE HOLE
	16:30 - 17:00	0.50	DRL	2	DIRECTIONAL DRILL FROM 5529' TO 5596' 67' ROP - 134'/ HR. WOB 22 GPM - 300 RPM 139 - 189
11/4/2010	17:00 - 18:00	1.00	SUR	1	SURVEYS
	18:00 - 05:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 5596' TO 5960' 364' ROP 33'/HR. WOB 22 GPM - 300 RPM 130 - 189
	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 08:30	2.50	DRL	2	DIRECTIONAL DRILL FROM 5960' TO 6098' @ 55.2 FPH.
	08:30 - 09:00	0.50	CIRC	1	CIRCULATE & PUMP DRY SLUG.
	09:00 - 10:30	1.50	TRP	14	SHORT TRIP 36 STANDS TO 3787' - NO TIGHT HOLE
	10:30 - 11:30	1.00	RIG	1	RIG SERVICE, CHANGE OIL IN TOP DRIVE
	11:30 - 12:30	1.00	TRP	14	TRIP IN HOLE, TAG UP @ 4720', PICK UP AND ROTATE STRING 90 DEGREES, STRING WENT THROUGH SPOT WITH NO PROBLEMS. TRIP TO BOTTOM WITH NO OTHER ISSUES.
	12:30 - 17:00	4.50	DRL	2	DIRECTIONAL DRILL FROM 6098' TO 6288' @ 42.2 FPH. 300 GPM, 50 TO 150 MOTOR DIFFERENTIAL, 3450 SPP, 9.1MW 42 FV, 40 RPM.
	17:00 - 18:00	1.00	SUR	1	SURVEYS
11/5/2010	18:00 - 05:00	11.00	DRL	2	DIRECTIONAL DRILL FROM 6288' TO 6600' @ 28.3 FPH. 300 GPM, 50 TO 150 MOTOR DIFFERENTIAL, 3450 SPP, 9.1MW 42 FV, 40 RPM.
	05:00 - 06:00	1.00	SUR	1	SURVEYS
	06:00 - 09:00	3.00	DRL	2	DIRECTIONAL DRILL FROM 6600' TO 6733' @ 44FPH. 24K WOB, 40 RPM, 300 GPM, 3600 PSI SPP, 9.2 MW 40 FV, 50 TO 150 MOTOR DIFFERENTIAL.
	09:00 - 09:30	0.50	CIRC	1	PUMP SWEEP, CIRCULATE BOTTOMS UP.
	09:30 - 13:30	4.00	TRP	10	TRIP OUT FOR BIT, AGITATOR, PUSH PIPE. OPERATE PIPE AND BLIND RAMS
	13:30 - 14:00	0.50	RIG	1	RIG SERVICE
	14:00 - 14:30	0.50	TRP	1	PICK UP HP 7/8 4.6 STG, 0.46 RPG, SLICK ADJUSTABLE MOTOR SET AT 1.5 DEGREES. MAKE UP BIT AND SCRIBE UP.
	14:30 - 18:00	3.50	TRP	2	TRIP IN HOLE, FILL PIPE AND BREAK CIRC. @ 3940'.
	18:00 - 18:30	0.50	REAM	1	SAFETY REAM 105' TO BOTTOM

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
11/5/2010	18:30 - 05:00	10.50	DRL	2	DIRECTIONAL DRILL FROM 6733' TO 7175' @ 42FPH. 20K WOB, 40 RPM, 290 GPM, 3700 PSI SPP, 9.2 MW 40 FV, 50 TO 150 MOTOR DIFFERENTIAL.
	05:00 - 06:00	1.00	SUR	1	SURVEYS
11/6/2010	06:00 - 07:00	1.00	DRL	2	DIRECTIONAL FROM 7175' TO 7230' @ 55 FPH.
	07:00 - 08:00	1.00	TRP	14	SHORT TRIP 9 STANDS TO 6663'. NO TIGHT HOLE.
	08:00 - 15:00	7.00	DRL	2	DIRECTIONAL DRILL FROM 7230' TO 7488' @ 36.8 FPH. 20 -24K WOB, 40 RPM, 290 GPM, 3700 SPP, 50 - 150 MOTOR DIFFERENTIAL, 9.2 MW 42 FV.
	15:00 - 15:30	0.50	RIG	1	RIG SERVICE
	15:30 - 16:30	1.00	DRL	2	DIRECTIONAL DRILL FROM 7488' TO 7525' @ 25' FPH. 20 -24K WOB, 40 RPM, 290 GPM, 3700 SPP, 50 - 150 MOTOR DIFFERENTIAL, 9.2 MW 42 FV.
	16:30 - 18:00	1.50	SUR	1	SURVEYS
	18:00 - 19:00	1.00	DRL	2	DIRECTIONAL DRILL FROM 7525' TO 7552' @ 27' FPH. 20 -25K WOB, 40 RPM, 286 GPM, 3700 SPP, 50 - 150 MOTOR DIFFERENTIAL, 9.1 MW 41 FV.
	19:00 - 19:30	0.50	CIRC	1	CIRCULATE UP SAMPLES
	19:30 - 04:00	8.50	DRL	2	DIRECTIONAL DRILL FROM 7552' TO 7675' @ 14.5' FPH. 20 -25K WOB, 40 RPM, 286 GPM, 3700 SPP, 50 - 150 MOTOR DIFFERENTIAL, 9.1 MW 41 FV.
	04:00 - 05:00	1.00	CIRC	1	CIRCULATE UP SAMPLE AND SWEEP, PUMP DRY JOB
11/7/2010	05:00 - 06:00	1.00	TRP	2	TRIP OUT
	06:00 - 09:30	3.50	TRP	2	TRIP OUT FOR REAMER ASSY. STRAP OUT, STRAP = 7684' BOARD = 7675' - 9' DIFFERENCE, NO CORRECTION
	09:30 - 11:30	2.00	TRP	1	LAY DOWN WEATHERFORD EMMWD, HUNTING MOTOR. PICK UP ECCENTRIC REAMING ASSY
	11:30 - 13:30	2.00	TRP	2	TRIP IN HOLE TO 3836'
	13:30 - 14:30	1.00	RIG	6	SLIP AND CUT 120' DRILLING LINE
	14:30 - 15:00	0.50	RIG	1	RIG SERVICE, RESET DAPTECH
	15:00 - 02:00	11.00	REAM	1	REAM FROM 3950' TO 5967'. 280 GPM 60 -70 RPM 5K WOB
11/8/2010	01:00 - 06:00	5.00	REAM	1	REAM FROM 5967" TO 7200'. 280 GPM 60 -70 RPM 5K WOB
	06:00 - 08:00	2.00	REAM	1	REAM FROM 7200' TO 7605' ( LINER WILL LAND @ 7381)
	08:00 - 09:00	1.00	CIRC	1	PUMP HIGH VIS WEIGHTED SWEEP AROUND. 11.2MW 90 FV. VERY LITTLE BROUGHT BACK WITH SWEEP
	09:00 - 11:30	2.50	TRP	14	SHORT TRIP TO 4320' NO TIGHT HOLE.
	11:30 - 13:00	1.50	CIRC	1	PUMP HIGH VIS WEIGHTED SWEEP AROUND 11.2 MW 90 FV. SPOT 55 BBL COPOLYMER BEAD PILL MIXED @ 3 PPB. DISPLACE BEADS TO ANNULUS WITH 51BBL DRY PILL.
	13:00 - 16:30	3.50	TRP	2	DROP 2" RABBIT WITH 100' TAIL DOWN DRILL PIPE. TRIP OUT FOR LINER. STRAP OUT. STAND BACK 44 STANDS DRILL PIPE AND 34 STANDS HWDP.
	16:30 - 19:30	3.00	TRP	4	HSM, RIG UP WEATHERFORD, LAY DOWN PUSH PIPE, LAY DOWN REAMING ASSY.
	19:30 - 20:30	1.00	CSG	1	HSM, RIG UP WEATHERFORD CASERS, RIG UP HALLIBURTON
	20:30 - 06:00	9.50	CSG	2	RUN 4 1/2" 11.60# N-80 LINER WITH PACKERS PLUS SYSTEM. 6 STAGE FRAC SYSTEM WITH 500' SPACING.
11/9/2010	06:00 - 08:00	2.00	CSG	4	RUN 72 JOINTS 4 1/2" N-80 LT&C LINER WITH PACKERS PLUS STAK RRAC SYSTEM. SYSTEM IS SET UP FOR 6 STAGES WITH 500' SPACING. LINER LANDED @ 7381'. PBR TOP @ 3887.54'.
	08:00 - 10:00	2.00	CSG	4	DISPLACE DRILLING MUD IN WELLBORE WITH 2% KCL WATER (PUMPED 170BBL). DROPPED 1 1/4" BALL. DISPLACE WITH 70 BBL 2% KCL WATER. LANDED BALL @ 2.5 BPM WITH 1350 PSI. PRESSURE UP TO 2500 PSI FOR 5 MINUTES, PRESSURE UP TO 3000PSI FOR 10 MINUTES. BLEED PRESSURE
	10:00 - 10:30	0.50	CSG	4	HANG LINER WITH PACKERS PLUS SERVICE HAND. PULLED 135,000 ON STRING, SET DOWN TO 95,000 AND ROTATE 1 TURN TO RIGHT. PICKED UP WITH NEW STRING WEIGHT OF 106,000.
	10:30 - 14:00	3.50	TRP	2	TRIP OUT TO LAY DOWN LINER HANGER.
	14:00 - 14:30	0.50	RIG	1	RIG SERVICE

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: AZTEC

Spud Date: 8/24/2010  
 Rig Release: 11/9/2010  
 Rig Number: 781

Date	From - To	Hours	Code	Sub Code	Description of Operations
11/9/2010	14:30 - 15:00	0.50	OTH		MAKE UP JARS AND WHIPSTOCK HOOK
	15:00 - 16:00	1.00	TRP	2	TRIP IN
	16:00 - 16:30	0.50	RIG	2	WORK ON TOP DRIVE
	16:30 - 18:30	2.00	TRP	2	TRIP IN
	18:30 - 19:00	0.50	OTH		HOOK INTO WHIPSTOCK AND PULL FREE, 30K OVER
	19:00 - 22:30	3.50	TRP	2	TRIP OUT
	22:30 - 00:00	1.50	OTH		BREAK DOWN FISHING TOOLS AND WHIPSTOCK AND LAYDOWN SAME, OPERATE PIPE AND BLIND RAMS
	00:00 - 02:30	2.50	TRP	2	TRIP IN TO 3500'
	02:30 - 03:00	0.50	OTH		RIG UP LAYDOWN MACHINE
	03:00 - 06:00	3.00			LAY DOWN PIPE
11/10/2010	06:00 - 09:30	3.50	TRP	3	LAY DOWN DRILL STRING
	09:30 - 11:30	2.00	LOG	4	SET BAKER 47B4 "WLSRBP" (H677-32) RETRIEVABLE BRIDGE PLUG. TOP OF PLUG SET @ 3179'. BOTTOM OF PLUG @ 3183.64'. PLUG SET WITH LONE WOLF WIRELINE. BAKER SERVICE TECH ON LOCATION TO SET PLUG.
	11:30 - 12:00	0.50	OTH		PULL WEAR BUSHING
	12:00 - 21:00	9.00	BOP	1	NIPPLE DOWN BOP. BREAK DOWN INTO INDIVIDUAL COMPONENTS. INSTALL CAMERON NIGHT CAP ON CASING HEAD. RELEASE RIG @ 21:00 ON 11/09/2010
11/11/2010	21:00 - 06:00	9.00	LOC	4	RIG DOWN
	06:00 - 18:00	12.00	LOC	4	RIG DOWN. LOAD OUT RENTAL HWDP, COLLARS, SUBS, ANNULAR, SPOOL, CENTRIFUGE. RIG DOWN TOP DRIVE TRACK LAY DERRICK OVER.
11/12/2010	18:00 - 06:00	12.00	LOC	4	WAIT ON DAYLIGHT
	06:00 - 18:00	12.00	LOC	4	RIG DOWN FOR TRUCKS. SHIP OUT FUEL TANK, BOILER, GAS BUSTER, TWO PIPE TUBS, 1 - LOAD DRILL PIPE. RIG IS 100% RIGGED DOWN - READY FOR TRUCKS.
11/13/2010	18:00 - 06:00	12.00	LOC	4	WAIT ON DAYLIGHT
	06:00 - 18:00	12.00	LOC	3	MOVE RIG OFF OF LOCATION TO STACK YARD. WESTROC TRUCKING STACKED RIG APX 16 MILES FROM LOCATION. RIG IS STACKED NORTH OF THE NEWFIELD OFFICE ON SAND WASH ROAD.
	18:00 - 06:00	12.00	LOC	3	WAIT ON DAYLIGHT.

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## Operations Summary Report -COMPLETION

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
11/16/2010	05:30 - 07:00	1.50	TRAV	1	11/16/10: TRAVEL TO RIG.
	07:00 - 07:15	0.25	LOC	3	FINISH ROADING RIG 1 1/2-MILES TO LOCATION.
	07:15 - 08:15	1.00	LOC	4	SPOT IN RIG AND EQUIPMENT.
	08:15 - 10:00	1.75	BOP	1	ASSIST CAMERAN IN NU 7 1/16" WELLHEAD. USED FORKLIFT AND NU BOP'S.
	10:00 - 11:00	1.00	OTH		RU PUMP AND LAY PUMP LINES. REMOVED THREAD PROTECTORS AND TALLY TOP ROW OF TBG.
11/17/2010	11:00 - 13:00	2.00	WOT	3	WAITING FOR WIND TO DIE DOWN. SDFD DUE TO HIGH WINDS.
	13:00 - 14:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	11/17/10: TRAVEL TO LOCATION.
	07:00 - 07:45	0.75	LOC	4	RU SERVICE RIG.
	07:45 - 10:30	2.75	LOG	2	RU J-W WIRELINE COMPANY. RUN CBL FROM RBP@ 3179' UPTO SURFACE. RD WL.
	10:30 - 12:00	1.50	TRP	5	TALLY, RABBIT AND RIH WITH 7" R.H. AND 100-JT'S 2 3/8" N-80 TBG.
	12:00 - 12:45	0.75	DEQ	1	RU PUMP AND GET CIRCULATE WITH HOLE FULL. CIRCULATE DOWN TO RBP SET@ 3179'. CIRCULATE CLEAN. RELEASED RBP.
	12:45 - 13:45	1.00	TRP	2	POOH WITH 101-JT'S TBG AND RBP.
	13:45 - 14:30	0.75	TRP	2	MU AND RIH WITH 7" R.H. AND 101-JT'S TBG.
	14:30 - 15:30	1.00	TRP	5	CONTINUED TO TALL, RABBIT AND RIH WITH 16-JT'S 2 3/8" N-80 TBG. EOT@ 3802'. SWIFN.
11/18/2010	15:30 - 17:00	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	11/18/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		SAFETY MEETING. CHECK PRESSURE: SICP= 0-PSI. SITP= 0-PSI. MU PUMP LINES.
	07:15 - 07:30	0.25	TRP	5	PU AND RIH WITH 3-JT'S 2 3/8" TBG.
	07:30 - 07:45	0.25	RIG	4	INSTALL STRIPPING RUBBER AND RU CIRCULATING EQUIPMENT.
	07:45 - 08:45	1.00	DEQ	1	GET CIRCULATION WITH HOLE FULL. CIRCULATE DOWN TO RBP SET@ 3893'. CIRCULATE CLEAN. LATCH ON AND RELEASED RBP@ 3893'.
	08:45 - 10:30	1.75	TRP	5	POOH LAYING DOWN 123-JT'S 2 3/8" TBG AND BAKER RBP. SWIFD.
11/19/2010	10:30 - 12:00	1.50	OTH		CHANGE RIG EQUIPMENT OVER FOR 4 1/2" CSG. INSTALL 4 1/2" PIPE RAMS. SPOT IN AND SET CATWALK AND PIPE RACKS.
	12:00 - 13:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	11/19/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= 0-PSI.
	07:15 - 09:00	1.75	OTH		OFF LOAD 92-JT'S 4 1/2" FRAC STRING AND REMOVE THREAD PROTECTORS.
	09:00 - 13:00	4.00	OTH		ASSIST HIGH PLAINS SERVICES IN CLEANING AND DRIFTING 4 1/2" FRAC STRING. READY TO PU AND 11/22/10.
11/22/2010	13:00 - 14:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	11/22/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= 0-PSI.
	07:15 - 08:45	1.50	WOT	4	WAITING ON CASING CREW.
	08:45 - 10:00	1.25	CSG	1	RU FRANKS WESTATES CSG SERVICE.
	10:00 - 10:15	0.25	RIG	7	PRE JOB SAFETY MEETING ON PU CSG.
	10:15 - 16:15	6.00	CSG	2	PU AND RIH WITH PACKER PLUS SEAL LATCH ASSEMBLY, 1-JT 4 1/2" CSG WITH 3-DEGREE BEND AND AN ADDITIONAL 87-JT'S 4 1/2" FRAC STRING. WORKED STINGER OUT OF WINDOW @ 3872'-3882'. STUNG INTO LINER@ 3888'. SPACED WELL OUT. LD 1-JT CSG. MU AND RIH WITH 2-10', 2-5' AND 2-3' CSG SUBS. LANDED IN 45,000# COMPRESSION. CWI.
	16:15 - 17:00	0.75	CSG	1	RD FRANKS WESTATES CSG EQUIPMENT.
11/23/2010	17:00 - 18:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	11/23/10: TRAVEL TO LOCATION.
	07:00 - 08:00	1.00	EQT	1	SICP= 0-PSI. RU PUMP AND LINES. WITH HOLE FULL. PRESSURE TEST

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
11/23/2010	07:00 - 08:00	1.00	EQT	1	FRAC STRING AND SEAL ASSEMBLY TO 500# PSI. HELD GOOD. NO CIRCULATION.
	08:00 - 10:00	2.00	BOP	1	RD EQUIPMENT. ND BOP'S. NU 10K FRAC ASSEMBLY. NU FLOW BACK MANIFOLD. SWI.
	10:00 - 11:00	1.00	OTH		DRAIN UP PUMP AND LINES. RACK OUT PUMP.
	11:00 - 12:30	1.50	LOC	4	RDMO. WELL IS SHUT IN. READY TO FRAC ON 12/1/10.
12/1/2010	12:30 - 14:00	1.50	SEQ	7	TRAVEL TO TOWN.
	09:00 - 10:30	1.50	LOC	3	12/01/10: CONTINUATION OF REPORT. ROAD RIG TO LOCATION.
	10:30 - 12:00	1.50	LOC	4	SPOT RIG EQUIPMENT. MIRU.
12/2/2010	12:00 - 15:00	3.00	STIM	2	SPOT IN AND RU HALLIBURTON FRAC SERVICES TO FRAC HEAD. SWIFN.
	15:00 - 16:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	12/2/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= 0-PSI.
12/3/2010	07:15 - 08:15	1.00	RIG	7	GET HALLIBURTON READY TO PUMP. HELD PRE JOB SAFETY MEETING.
	08:15 - 09:45	1.50	STIM	3	PRESSURE UP AND SLIDE SLEEVE @ 7312'. CONTINUED FRACING STAGE 1 AS PROCEDURE STATED. SCREENED OUT WITH 29,000# SAND IN FORMATION AND 4# AT SLEEVE.
	09:45 - 11:30	1.75	WCL	2	OPEN WELL UP ON 18/64 AND FLOW BACK WELL AND CLEANED UP SAND UP SAND.
	11:30 - 14:30	3.00	STIM	3	DROP 2.875 BALL AND PUMPED TO BOTTOM. SLID SLEEVE @ 6970' WITH 3450# PSI. ATTEMPT TO PUMP INTO FORMATION. PRESSURE UP TO 6000# PSI. SURGE AND FLOW BACK WELL TRYING TO PUMP INTO FORMATION. ONCE BALL SEATED WELL WOULD PRESSURE UP TO 6000# PSI. SWI.
	14:30 - 15:00	0.50	OTH		HOOK UP WELLHEAD HEATER. SDFD.
12/6/2010	15:00 - 16:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	12/3/10: TRAVEL TO LOCATION.
	07:00 - 11:00	4.00	STIM	3	DROP 3" BALL. WAIT 30-MIN. TRY TO SHIFT SLEEVE FOR STAGE# 3. PRESSURE UP TO 6100# PSI. TRY TO PUMP DOWN WITH NO SUCCESS. RD HALLIBURTON. SWIFD.
12/7/2010	11:00 - 12:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	12/6/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= VAC.
	07:15 - 08:15	1.00	BOP	1	ND FRAC HEAD. NU BOP'S.
	08:15 - 09:00	0.75	OTH		RU AND CHANGE TBG EQUIPMENT OVER FOR 2 3/8" TBG.
	09:00 - 12:00	3.00	TRP	5	TALLY, RABBIT AND RIH WITH 1-JT 2 3/8" HYDRIL TBG CUT WITH 45-DEGREE MULE SHOE, 115- JT'S 2 3/8" HYDRIL, X-OVER AND 11-JT'S 2 3/8" EUE 8 RD TBG. EOT@ 3862'.
	12:00 - 12:30	0.50	OTH		RU PUMP AND LAY PUMP LINES.
12/7/2010	12:30 - 13:00	0.50	EQT	1	WITH HOLE FULL. PRESSURE UP TO 4000# PSI ON WELL. NO BLEED OFF. SURGE BACK AND PRESSURE UP TO 4000# PSI. NO BLEED OFF. BLED OFF PRESSURE.
	13:00 - 13:15	0.25	TRP	14	POOH WITH 6-JT'S TBG TO DROP FLUID LEVEL. EOT@ 3672'. SWIFD.
	13:15 - 14:00	0.75	OTH		DRAIN UP PUMP AND LINE'S.
	14:00 - 15:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
	05:30 - 07:00	1.50	TRAV	1	12/7/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= VAC. SITP= VAC.
	07:15 - 12:00	4.75	TRP	5	OPEN WELL UP. GET CIRCULATION WITH 1-BBL WATER. REVERSE CIRCULATE, TALLY, RABBIT AND RIH WITH 86-JT'S 2 3/8" TBG. TAG SLEEVE @ 6152' AND WORKED THROUGH. TAG BALL AND SLEEVE @ 6542'. RECOVERED LITE TO MED SAND IN RETURNS.
	12:00 - 13:00	1.00	CIRC	1	CIRCULATE HOLE CLEAN. PUT 5000# WT. ON BALL AND SLEEVE.
	13:00 - 13:45	0.75	TRP	2	POOH WITH 86-JT'S 2 3/8" TBG. EOT@ 3862'.
	13:45 - 14:00	0.25	OTH		RU PUMP AND PRESSURE UP ON WELL. SHIFTED SLEEVE @ 6542' WITH

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Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
12/7/2010	13:45 - 14:00	0.25	OTH		2800# PSI. PUMPED 10-BBLS @ 1.5- BPM WITH 1300# PSI. PUMPED ADDITIONAL 10-BBLS @ 1.5-BPM WITH PRESSURE LEVELED OUT @ 1500# PSI. ISIP= 1300# PSI.
	14:00 - 16:00	2.00	TRP	5	POOH LAYING DOWN 11-JT'S 8RD TBG AND 116-JT'S 2 3/8" HYDRIL TBG.
	16:00 - 16:30	0.50	TRP	2	RIH WITH 50-JT'S 2 3/8" TBG FROM DERRICK. EOT@ 1585'. SWIFN.
	16:30 - 18:00	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
12/8/2010	05:30 - 07:00	1.50	TRAV	1	12/8/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		CHECK PRESSURE: SICP= VAC. SITP= VAC.
	07:15 - 07:45	0.50	TRP	2	POOH WITH 50-JT'S 2 3/8" TBG.
	07:45 - 09:30	1.75	TRP	2	MU AND RIH WITH 2 3/8" BAR N/C, 1-JT 2 3/8" TBG, 2 3/8" SN AND 120-JT'S 2 3/8" N-80 8RD TBG.
	09:30 - 12:30	3.00	WOT	4	WAITED ON WELLHEAD.
	12:30 - 13:00	0.50	BOP	1	ND AND STRIP BOP'S OFF WELLHEAD.
	13:00 - 14:00	1.00	WHD	1	SET SLIPS AND NU LARKIN INDEPENDANT WELLHEAD. SN @ 3803' AND EOT @ 3837'
	14:00 - 15:00	1.00	OTH		RACK OUT BOP'S. CHANGE EQUIPMENT OVER FOR RODS. SWIFN.
	15:00 - 16:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
12/9/2010	05:30 - 07:00	1.50	TRAV	1	12/9/10: TRAVEL TO LOCATION.
	07:00 - 08:15	1.25	OTH		CHECK PRESSURE: SICP= VAC. SITP= VAC.
	08:15 - 11:00	2.75	TRP	6	ROMOVE THREAD PROTECTOR AND PREP RODS TO RIH. PU AND STROKE TEST NEW 20-150-RWAC-24-4-24ROD PUMP. RIH WITH PUMP, 100- 3/4" PLAIN RODS, 51- 7/8" PLAIN RODS, 1- 8' X 7/8" PONY RON AND 1 1/4" X 26' POLISH ROD. SEATED PUMP. FILL TBG WITH 1-BBL WATER. STROKE UP TO 1000# PSI WITH RIG. HELD GOOD.
	11:00 - 12:00	1.00	SEQ	2	PU AND HANG HEAD ON PUMPING UNIT. SPACEDN RODS OUT. HUNG WELL ON. CHECK TAG. NO TAG.
	12:00 - 12:30	0.50	LUN	1	LUNCH.
	12:30 - 14:30	2.00	LOC	4	RACK OUT EQUIPMENT. RDMO. TURN WELL OVER TO PRODUCTION.
	14:30 - 16:00	1.50	TRAV	1	TRAVEL TO TOWN.
12/18/2010	05:30 - 07:00	1.50	TRAV	1	12/18/10: TRAVEL TO LOCATION.
	07:00 - 08:30	1.50	LOC	4	ON 12/17/10: ROADED RIG 125-MILES TO LOCATION. ON 12/18/10: MIRU.
	08:30 - 09:00	0.50	SEQ	2	HUNG WELL OFF. LD HORSES HEAD.
	09:00 - 09:15	0.25	OTH		CHANGE EQUIPMENT OVER FOR RODS.
	09:15 - 09:30	0.25	TRP	6	UNSEAT PUMP AND LD 2-7/8" RODS.
	09:30 - 10:30	1.00	HOT	1	FLUSHED RODS WITH 50-BBLS OF PRODUCTION WATER WITH SNAKE OIL.
	10:30 - 11:30	1.00	TRP	6	POOH WITH 51-7/8" ROD'S, 100-3/4" RODS AND PUMP.
	11:30 - 12:15	0.75	BOP	1	X-OVER FOR TBG. ND WELLHEAD, NU BOP'S.
	12:15 - 12:30	0.25	OTH		RU TBG EQUIPMENT.
	12:30 - 13:00	0.50	LUN	1	LUNCH
	13:00 - 14:15	1.25	TRP	2	POOH WITH 120-JT'S 2 3/8" TBG, SN, 1-JT TBG, BAR N/C.
	14:15 - 16:00	1.75	BOP	1	RD TBG EQUIPMENT. ND BOP'S. NU FRAC HEAD ASSEMBLY. NU FLOWBACK MANIFOLD. READY TO FRAC. SWI FOR WEEKEND.
	16:00 - 17:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
12/20/2010	08:00 - 11:00	3.00	STIM	3	Frac 4 stages
12/21/2010	00:01 - 08:00	7.98	PTST	2	12/21/10: CONTINUED FLOWING WELL TO 8:00 A.M. RECOVERED 720-TOTAL BBLS WITH LAST OIL CUT SHOWING 100% OIL WITH 10# FCP. CWI DUE TO LACK OF ROOM TO FLOW WELL.
	08:00 - 14:00	6.00	WOT	4	CHECK PRESSURE EVERY 30-MINUTES WHILE WAITING ON HOT OILER WHO WAS STUCK IN SNOW STORM.
	14:00 - 15:30	1.50	TRAV	1	TRAVEL TO TOWN.
12/22/2010	06:30 - 08:00	1.50	TRAV	1	12/22/10: TRAVEL TO LOCATION.
	08:00 - 08:15	0.25	OTH		CHECK PRESURE: SICP= 75# PSI.

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
12/22/2010	08:15 - 09:45	1.50	CIRC	1	TRANSFER, HEAT AND PUMP 50-BBLS 2% KCL DOWN CSG.
	09:45 - 10:45	1.00	BOP	1	ND FRAC HEAD AND FLOWBACK MANIFOLD. NU BOP'S.
	10:45 - 11:00	0.25	OTH		RU TBG EQUIPMENT.
	11:00 - 12:00	1.00	TRP	2	MU AND RIH WITH 2 3/8" BAR N/C, 1-JT 2 3/8" TBG, 2 3/8" PUMP SN AND 120 JT'S 2 3/8" TBG.
	12:00 - 12:15	0.25	OTH		RD TBG EQUIPMENT AND RIG FLOOR.
	12:15 - 12:45	0.50	BOP	1	ND BOP'S. SET SLIPS NU WELLHEAD ASSEMBLY. EOT@ 3837' AND SN@ 3803'.
	12:45 - 13:00	0.25	OTH		CHANGE EQUIPMENT OVER FOR RODS.
	13:00 - 13:30	0.50	HOT	1	FLUSHED TBG WITH 30-BBLS 2% KCL@ 200 DEGREES.
	13:30 - 14:30	1.00	TRP	6	PU AND PRIME 25-150-RWAC-24-4-24' ROD PUMP. RIH WITH PUMP, 100-3/4 PLAIN RODS, 51-7/8" PLAIN RODS, 1-8' X 7/8" PONY AND 1- 1 1/2" X 26' POLISH ROD.
	14:30 - 14:45	0.25	TRP	18	SEATED PUMP. LOAD TBG WITH 1-BBL WATER. LONG STROKE AND PRESSURE TEST PUMP AND TBG TO 1000# PSI. HELD GOOD.BLED OFF PRESSURE.
	14:45 - 15:30	0.75	SEQ	2	PU AND HANG HORSES HEAD. SPACED RODS OUT. HUNG WELL ON. CHECK FOR TAG. NO TAG. SWIFN.
15:30 - 16:00	0.50	OTH		CLEAN UP AND RACK OUT EQUIPMENT. SDFN.	
12/23/2010	16:00 - 17:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
	05:30 - 07:00	1.50	TRAV	1	12/23/10: TRAVEL TO LOCATION.
1/6/2011	07:00 - 08:00	1.00	OTH		RACK OUT PUMP, TANK AND REMAINING EQUIPMENT.
	08:00 - 09:30	1.50	LOC	4	RDMO. WELL IS SHUT IN.
1/7/2011	05:30 - 07:00	1.50	TRAV	1	1/6/11: TRAVEL TO LOCATION.
	07:00 - 12:00	5.00	LOC	3	SAFETY MEETING. ROAD RIG 86-MILES TO LOCATION. CHAINING RIG UP WHEN NEEDED.
	12:00 - 14:00	2.00	LOC	4	SPOT RIG EQUIPMENT. MIRU.
1/8/2011	14:00 - 15:00	1.00	OTH		RU ROD EQUIPMENT. SDFD. LEFT WELL PUMPING.
	15:00 - 16:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
	05:30 - 07:00	1.50	TRAV	1	1/7/11: TRAVEL TO LOCATION.
	07:00 - 07:30	0.50	SEQ	2	SAFETY MEETING. HUNG WELL OFF. LD HORSES HEAD.
	07:30 - 08:00	0.50	HOT	1	ALL WATER PUMPED IS FRESH WATER WITH SNAKE OIL PER DISPATH REQUEST.
	08:00 - 08:15	0.25	TRP	6	HOT OILER FINISHED PUMPING 60-BBLS FRESH WATER WITH SNAKE OIL DAWN CSG.
	08:15 - 09:45	1.50	HOT	1	UNSEAT ROD PUMP AND LD 2-RODS.
	09:30 - 10:30	1.00	TRP	6	FLUSHED RODS WITH 45-BBLS WATER AND SNAKE OIL@ 220 DEGREES.
	10:30 - 10:45	0.25	OTH		HAD TO STROKE RODS TO GET FLUSH AWAY.
	10:45 - 11:45	1.00	BOP	1	POOH WITH RODS AND PUMP.
	11:45 - 12:15	0.50	LUN	1	CHANGE EQUIPMENT OVER FOR TBG.
	12:15 - 12:45	0.50	TRP	2	ND WELLHEAD ASSEMBLY. NU BOP'S. RU TBG EQUIPMENT.
	12:45 - 13:15	0.50	HOT	1	LUNCH.
	13:15 - 14:00	0.75	TRP	2	POOH WITH 46-JT'S TBG AND STARTED PULLING WET.
	14:00 - 15:00	1.00	BOP	1	RU HOT OILER AND FLUSHED TBG WITH 15-BBLS WATER WITH SNAKE OIL.
	15:00 - 16:30	1.50	TRP	14	FINISH POOH WITH 74-JT'S TBG, SN, 1-JT AND BAR N/C.
	1/8/2011	16:30 - 18:00	1.50	TRAV	1
06:30 - 08:00		1.50	TRAV	1	CHANGE EQUIPMENT OVER FOR 4 1/2" CSG.
08:00 - 08:15		0.25	OTH		STING OUT OF UPPER LATERAL@ 3888'. LD 2-3', 2-5' AND 2-10' CSG SUBS.
08:15 - 10:30		2.25	CSG	2	SWIFN.
					TRAVEL TO ROOSEVELT.
					1/8/11: TRAVEL TO LOCATION.
					SAFETY MEETING. CHECK PRESSURE: SICP= 0-PSI. SI FRAC ST= 0-PSI.
					TALLY AND PHL WITH 2 JT'S 4 1/2" 11.6# N-80 FRAC STRING. STING INTO

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Printed: 2/23/2011 9:44:35 AM

## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
1/8/2011	08:15 - 10:30	2.25	CSG	2	LOWER LATERAL LINER HANGER@ 3972'. SPACE OUT FRAC STRING. LD 1-JT. MU AND RIH WITH 2-10' SUBS, 1-7' SUB, 1-3'SUB AND 7" 5K BOWL HANGER. LANDED FRAC STRING IN WELLHEAD IN 40,000# COMPRESSION. RU PUMP EQUIPMENT. FILLED FRAC STRING WITH 20-BBLS 2% KCL AND PRESSURE TEST TO 500# PSI. HELD GOOD. BLEED OFF PRESSURE. DRAIN WELL HEAD. SWI FOR WEEKEND.
	10:30 - 11:30	1.00	CIRC	1	DRAIN UP EQUIPMENT.
	11:30 - 12:00	0.50	OTH		TRAVEL TO ROOSEVELT.
	12:00 - 13:30	1.50	TRAV	1	1/10/11: TRAVEL TO LOCATION.
1/10/2011	05:30 - 07:00	1.50	TRAV	1	SAFETY MEETING. CHECK PRESSURE: SI UPPER LATERAL= 0-PSI. SI LOWER LATERAL= 0-PSI.
	07:00 - 07:30	0.50	OTH		ND BOP'S. NU FRAC HEAD ASSEMBLY AND FLOWBACK MANIFOLD. MOVE EQUIPMENT TO MAKE WAY FOR FRAC TRUCKS. SWIFN.
	07:30 - 09:30	2.00	BOP	1	TRAVEL TO ROOSEVELT.
	09:30 - 11:00	1.50	OTH		1/12/11: TRAVEL TO LOCATION.
1/12/2011	11:00 - 12:30	1.50	TRAV	1	SAFETY MEETING. CHECK PRESSURE.
	05:30 - 07:00	1.50	TRAV	1	SHUT IN UPPER LATERAL= 0-PSI.
	07:00 - 07:30	0.50	OTH		SHUT IN LOWER LATERAL= 0-PSI.
	07:30 - 08:30	1.00	STIM	2	FINISH RU HALLIBURTON ENERGY.
	08:30 - 13:30	5.00	OTH		WAIT ON HALLIBURTON TO GET PRO GEL RUNNING.
	13:30 - 14:00	0.50	OTH		WRAP FRAC HEAD AND RU HEATER. SDFD.
	14:00 - 15:30	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
1/13/2011	05:30 - 07:00	1.50	TRAV	1	1/13/11: TRAVEL TO LOCATION.
	07:00 - 07:30	0.50	OTH		SAFETY MEETING: CHECK PRESSURE.
	07:30 - 13:00	5.50	STIM	3	SI UPPER LATERAL= 0-PSI SI LOWER LATERAL= 0-PSI FRACED LOWER LATERAL AS PROCEDURE STATED WITH NO PROBLEMS. RATES, PRESSURES AND VOLUMES ON STIM REPORT.
	13:00 - 16:30	3.50	OTH		SWI. RU FLOWBACK LINE. TURN WELL OVER TO FLOWTESTERS.
	16:30 - 18:00	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
1/14/2011	06:00 -				1/14/11: OPENED WELL UP@ 4:30 P.M. ON 1/13/11 WITH 1500# SHUT IN PRESSURE. RECOVERED 1021- TOTAL BBLS SHOWING AN OIL CUT OF 15% WITH 50# FLOWING PRESSURE ON A 14/64 CHOKE AND 0- SAND.SWI@ 11:00 A.M. ON 1/14/11 AND PLUMBED INTO PRODUCTION FLOWLINE. OPEN BACK UP@ 12:00 P.M. TO PRODUCTION TANKS. TURNED WELL OVER TO PRODUCTION FOR WEEKEND. WILL ATTEMPT TO LAY DOWN TBG AND FRAC STRING ON 1/17/11
1/17/2011	05:30 - 07:00	1.50	TRAV	1	1/17/10: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		SAFETY MEETING. CHECK PRESSURE.
	07:15 - 08:30	1.25	BOP	1	SI UPPER LATERAL= 0-PSI. SI LOWER LATERAL= 0-PSI.
	08:30 - 11:30	3.00	TRP	5	ND FRAC HEAD ASSEMBLY. NU BOP'S AND RU TBG EQUIPMENT. TALLY, RABBIT AND RIH WITH 50-JT'S 2 3/8" HYDRIL TBG. ( BOTTOM JT W/ MULE SHOE ) AND AN ADDITIONAL 118 JT'S 2 3/8" 8RD TBG. TAG SLEEVE @ 5221'.
	11:30 - 14:30	3.00	TRP	5	POOH LAYING DOWN 118- JT'S 8RD TBG AND 50 JT'S OF HYDRIL TBG.
	14:30 - 15:15	0.75	BOP	1	ND BOP. ND 4" 10K FLANGE. NU BOP'S.
	15:15 - 15:45	0.50	OTH		CHANGE EQUIPMENT OVER FOR 4 1/2" CSG.
	15:45 - 16:30	0.75	OTH		PU ON FRAC STRING AND STING OUT OF LINER TOP@ 3972'. WELL WENT ON A VAC. SWI WITH END OF FRAC STRING@ 3962'. DRAIN UP EQUIPMENT. SDFN.
1/18/2011	16:30 - 18:00	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	1/18/11: TRAVEL TO LOCATION.

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## Operations Summary Report

Well Name: WR 16G-32-10-17  
 Location: 32- 10-S 17-E 26  
 Rig Name: BASIN WELL SERVICE

Spud Date: 8/24/2010  
 Rig Release:  
 Rig Number: 3

Date	From - To	Hours	Code	Sub Code	Description of Operations
1/18/2011	07:00 - 07:30	0.50	HOT	1	0-PRESSURE ON WELL. HOT OILER FINISHED PUMPING 150-BBLS 2% KCL DOWN FRAC STRING WITH NO CIRCULATION.
	07:30 - 09:00	1.50	CSG	1	RU FRANKS WESTATES CASING SERVICE.
	09:00 - 12:30	3.50	TRP	5	POOH LAYING DOWN 1-7' PUP JT, 2-10' PUP JT'S, 89-JT'S 4 1/2" CASING AND SEAL ASSEMBLY.
	12:30 - 13:00	0.50	CSG	1	RD CASING EQUIPMENT.
	13:00 - 13:30	0.50	LUN	1	LUNCH
	13:30 - 15:00	1.50	OTH		CHANGE OVER EQUIPMENT FOR 2 7/8" TBG. DRAIN UP EQUIPMENT. WRAP WELLHEAD. TALLY TBG. SWIFN.
1/19/2011	15:00 - 16:30	1.50	TRAV	1	TRAVEL TO TOWN.
	05:30 - 07:00	1.50	TRAV	1	1/19/11: TRAVEL TO LOCATION.
	07:00 - 07:30	0.50	OTH		SAFETY MEETING. CHECK PRESSURE: SICP= 50# PSI.
	07:30 - 10:00	2.50	TRP	5	TALLY, RABBIT AND RIH WITH 2 7/8" BULL PLUG, 3-JT'S 2 7/8" TBG, DESANDER, 2 3/4" WEATHERFORD TBG PUMP, 7" TBG A.C. AND 119- JT'S 2 7/8" TBG.
	10:00 - 10:30	0.50	BOP	1	RD TBG EQUIPMENT. ND BOP'S.
	10:30 - 11:00	0.50	OTH		SET TBG A.C. @ 3736' IN 12,000# TENSION. TBG PUMP@ 3738', DESANDER@ 3770' AND EOT@ 3884'. NU B-1 ADAPTER FLANGE AND LAND TBG.
	11:00 - 11:30	0.50	OTH		CHANGE EQUIPMENT OVER FOR RODS.
	11:30 - 12:00	0.50	TRP	6	RIH WITH 100-3/4" PLAIN RODS.
	12:00 - 12:30	0.50	LUN	1	LUNCH
	12:30 - 13:45	1.25	TRP	6	POOH LAYING DOWN 100-3/4" RODS.
1/20/2011	13:45 - 17:00	3.25	TRP	6	RIH WITH ON/OFF TOOL, 51- 7/8" PLAIN RODS FROM PRODUCTION STRING. PU AN ADDITIONAL 43- 7/8" PLAIN RODS, 55- 1" PLAIN RODS, 1-6' X 1" PONY SUB, 1-4' X 1" PONY SUB AND 1 1/2" X 26' POLISH ROD. SPACED OUT RODS. WITH TBG FULL. PRESSURE TEST TBG AND PUMP TO 1000#PSI. HELD GOOD. BLED OFF PRESSURE AND SWIFN.
	17:00 - 17:30	0.50	OTH		DRAIN UP PUMP AND LINES. WRAP WELLHEAD. SDFN.
	17:30 - 19:00	1.50	TRAV	1	TRAVEL TO ROOSEVELT.
	05:30 - 07:00	1.50	TRAV	1	1/20/11: TRAVEL TO LOCATION.
	07:00 - 07:15	0.25	OTH		SAFETY MEETING. CHECK PRESSURE: SICP= 0 SITP=0
	07:15 - 08:15	1.00	SEQ	2	PU AND HANG HORSES HEAD. HANG WELL ON. ADJUST RODS.
	08:15 - 10:00	1.75	LOC	4	RACK OUT EQUIPMENT. RDMO. FINAL REPORT.

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## United States Department of the Interior

### BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov/ut/st/en.html>



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DIV. OF OIL, GAS & MINING

SEP 23 2011

IN REPLY REFER TO  
3180 (UTU87716A)  
UT-922

Raul R. Chavez  
QEP Energy Company  
1050 17<sup>th</sup> Street, Suite 500  
Denver, Colorado 80265

Re: Initial Participating Area "A"  
Nautilus (GR) Unit  
Duchesne County, Utah

Dear Mr. Chavez:

The Initial Participating Area "A", Nautilus (GR) Unit, UTU87716A, is hereby approved effective as of January 20, 2011, pursuant to Section 11 of the Nautilus (GR) Unit Agreement, Duchesne and Uintah Counties, Utah.

The Initial Participating Area "A" results in 560.00 acres and is based on the completion of Well No. WR 16G-32-10-17, API No. 43-013-50370, surface located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 32 with dual horizontal laterals terminating in the NW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 32, Township 10 South, Range 17 East, SLB&M, Federal Unit Tract No. 9, State Lease No. ML47056; and the NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 33, Township 10 South, Range 17 East, SLB&M, Federal Unit Tract No. 4, Lease No. UTU75086, as being a well capable of producing unitized substances in paying quantities.

For production and accounting reporting purposes, all submissions pertaining to the Initial Participating Area "A" shall refer to UTU87716A.

A copy of the approved request is being distributed to the appropriate agencies and one copy is returned herewith. Please advise all interested parties of the establishment of the Initial Participating Area "A", Nautilus (GR) Unit, and the effective date.

Please direct any questions concerning this approval to Leslie Wilcken of this office at (801) 539-4112.

Sincerely,



*for* Roger L. Bankert  
Chief, Branch of Minerals

Enclosure

cc: UDOGM  
SITLA  
ONRR w/Exhibit B (Attn: Leona Reilly)  
BLM FOM - Vernal w/enclosure



UTAH DEPARTMENT OF NATURAL RESOURCES  
Division of Oil, Gas & Mining  
Oil and Gas Program  
1594 West North Temple, Suite 1210, Box 145801  
Salt Lake City, UT 84114-5801  
(801) 538-5340 Phone  
(801) 359-3940 Fax

This notice shall remain in effect until it is modified, terminated, or vacated by a written notice of an authorized representative of the director of the Division of Oil, Gas and Mining. Failure to comply with this notice will result in the Division pursuing further actions against said operator. Further actions may include initiation of agency actions to order full cost bonding and plugging and abandonment of wells and requests for bond forfeiture and civil penalties.

**Compliance Deadline: April 10, 2013**

Date of Service Mailing: April 1, 2013 Certified Mail No.: 7010 1670 0001 4810 3997



\_\_\_\_\_  
Division Representative Signature

\_\_\_\_\_  
Operator Representative (if presented in person)

cc: Compliance File  
Well File  
Mike Johnson, Board of Oil, Gas and Mining  
James Jensen, Board Chair  
Steve Alder, DOGM  
LaVonne Garrison, SITLA  
Jennifer Casady, Utah Tax Commission

1/2013

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-47056
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b> NAUTILUS (GR)
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY		<b>8. WELL NAME and NUMBER:</b> WR 16G-32-10-17
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078		<b>9. API NUMBER:</b> 43013503700000
<b>PHONE NUMBER:</b> 303 308-3068 Ext		<b>9. FIELD and POOL or WILDCAT:</b> EIGHT MILE FLAT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0635 FSL 1282 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESE Section: 32 Township: 10.0S Range: 17.0E Meridian: S		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH

11.

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/1/2013	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: PIPELINE HOOKUP

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

THE ABOVE REFERENCED WELL WAS HOOKED INTO THE MONARCH  
NATURAL GAS PIPELINE, LLC., ON AUGUST 1, 2013.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
September 13, 2013**

<b>NAME (PLEASE PRINT)</b> Benna Muth	<b>PHONE NUMBER</b> 435 781-4320	<b>TITLE</b> Regulatory Assistant
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/19/2013	