

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*

FORM APPROVED OMB NO. 1040-0136 Expires: February 28, 1995

5. LEASE DESIGNATION AND SERIAL NO.

UTU-68219

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

UTE INDIAN TRIBE

7. UNIT AGREEMENT NAME

GYPSUM HILLS UNIT

8. FARM OR LEASE NAME, WELL NO.

GH 8G-17-8-21

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

TYPE OF WORK

DRILL [x] DEEPEN [ ]

TYPE OF WELL

[x] [ ] [ ] SINGLE ZONE [x] MULTIPLE ZONE [ ]

OIL WELL [ ] GAS WELL [ ] OTHER [ ]

2. NAME OF OPERATOR QEP UINTA BASIN, INC.

Contact: Jan Nelson E-Mail: jan.nelson@questar.com

9. API NUMBER: 43-047-37992

3. ADDRESS 11002 E. 17500 S. Vernal, Ut 84078

Telephone number Phone 435-781-4331 Fax 435-781-4323

10. FIELD AND POOL, OR WILDCAT GYPSUM HILLS

4. LOCATION OF WELL (Report location clearly and in accordance with and State requirements\*)

At Surface 621773 X 4442514 Y 1778' FNL 665' FEL, SENE, SEC. 17, T8S, R21E 40.126022 Y At proposed production zone 1913' FNL 750' FWL, SWNW, SEC. 17, T8S, R21E -109.579

11. SEC., T, R, M, OR BLK & SURVEY OR AREA

SEC.17, T8S, R21E Mer SLB

14. DISTANCE IN MILES FROM NEAREST TOWN OR POSTOFFICE\*

11 + 1 - EAST OF VERNAL, UTAH 40.125372 620602 X 4442422 Y -109.584603

12. COUNTY OR PARISH

Uintah

13. STATE

UT

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (also to nearest drig, unit line if any)

665' +/-

16. NO. OF ACRES IN LEASE

880.00

17. NO. OF ACRES ASSIGNED TO THIS WELL

40

18. DISTANCE FROM PROPOSED location to nearest well, drilling, completed, applied for, on this lease, ft

19. PROPOSED DEPTH

9010' MD

20. BLM/BIA Bond No. on file ESB000024

21. ELEVATIONS (Show whether DF, RT, GR, ect.) 4717.7' GR

22. DATE WORK WILL START ASAP

23. Estimated duration 20 days

24. Attachments

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

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

SIGNED [Signature]

Name (printed/typed) Jan Nelson

DATE 3-30-06

TITLE Regulatory Affairs

(This space for Federal or State office use)

PERMIT NO. 43-047-37992

APPROVAL DATE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY [Signature]

TITLE BRADLEY G. HILL ENVIRONMENTAL MANAGER

DATE 04-17-06

\*See Instructions On Reverse Side

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

RECEIVED

APR 06 2006

DIV. OF OIL, GAS & MINING

Federal Approval of this Action is Necessary

T8S, R21E, S.L.B.&M.

1967 Brass Cap  
0.6' High, Galv.  
Pipe W/Cap SWLY

QUESTAR EXPLORATION & PRODUCTION

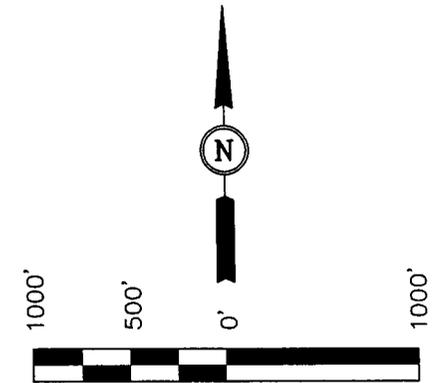
Well location, GH #8G-17-8-21, located as shown in the SE 1/4 NE 1/4 of Section 17, T8S, R21E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK 20EAM LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

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



SCALE

CERTIFICATE

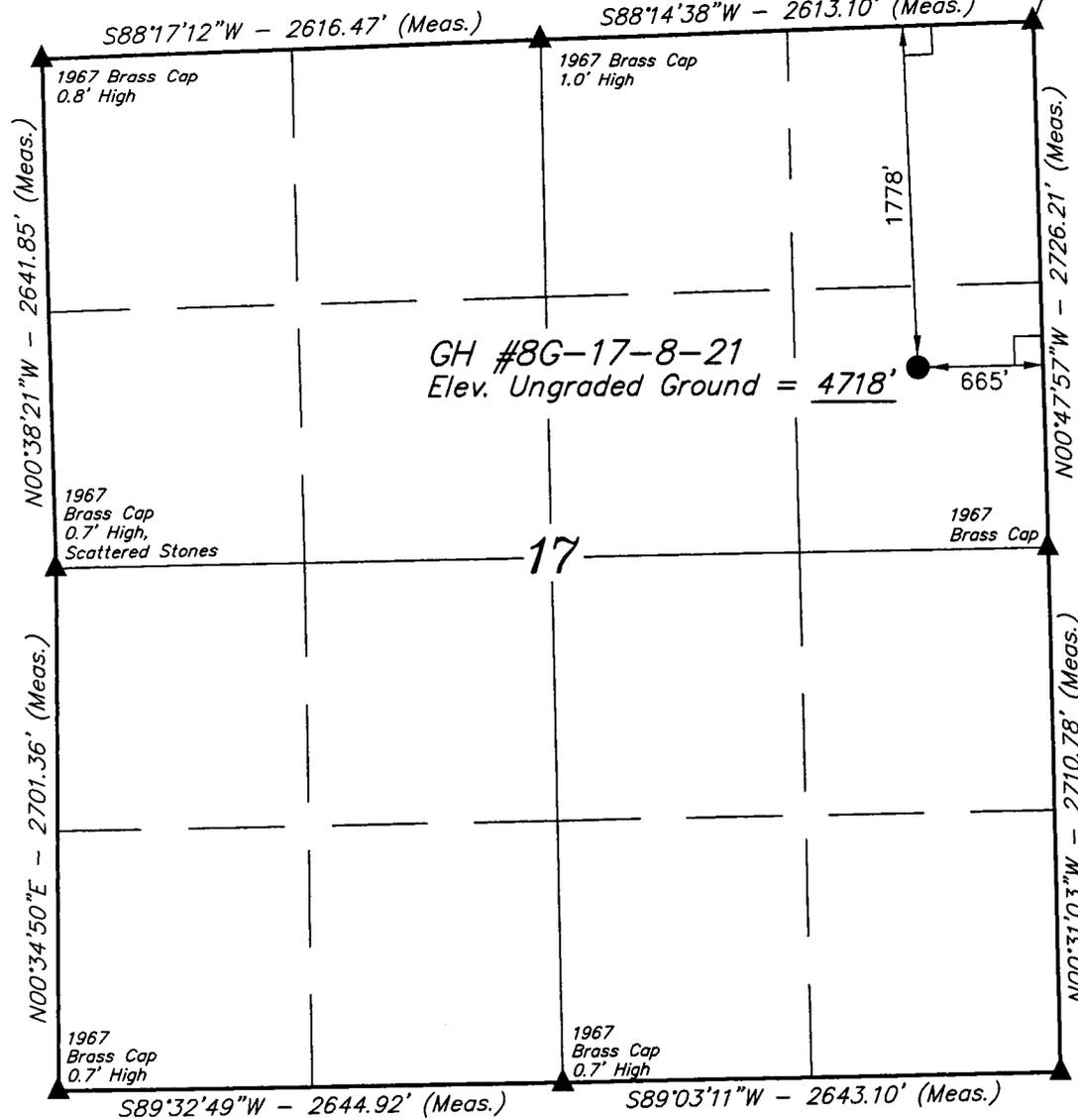
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*John A. H. [Signature]*

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: 2-1-06	DATE DRAWN: 2-17-06
PARTY D.A. C.F. K.G.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE QUESTAR EXPLORATION & PRODUCTION	



BASIS OF BEARINGS

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

(NAD 83)  
LATITUDE = 40°07'33.48" (40.125967)  
LONGITUDE = 109°34'17.55" (109.571542)  
(NAD 27)  
LATITUDE = 40°07'33.61" (40.126003)  
LONGITUDE = 109°34'15.06" (109.570850)

LEGEND:

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*

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OMB NO. 1040-0136  
Expires: February 28, 1995

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 DRILL  DEEPEN

TYPE OF WELL  
   SINGLE ZONE  MULTIPLE ZONE

OIL WELL GAS WELL OTHER

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UTU-68219

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UTE INDIAN TRIBE

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GYPSUM HILLS UNIT

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GH 8G-17-8-21

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Contact: Jan Nelson  
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Phone 435-781-4331 Fax 435-781-4323

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13. STATE UT

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(also to nearest drig.unit line if any)  
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  - A surface Use Plan ( if location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
  - Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
  - Operator certification.
  - Such other site specific information and/or plans as may be required by the authorized officer.

SIGNED Jan Nelson Name (printed/typed) Jan Nelson DATE 3-30-06

TITLE Regulatory Affairs

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

\*See Instructions On Reverse Side

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

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APR 13 2006  
DIV. OF OIL, GAS & MINING

### **Additional Operator Remarks**

QEP Uinta Basin, Inc. proposes to drill a horizontal well to test the G-1 Lime Green River Formation. If productive, well will be produced open hole. If dry will be plugged and abandoned as per BLM and State of Utah requirements"

See Onshore Order No. 1 attached.

Please be advised that QEP Uinta Basin Inc. 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.ESB000024. The principal is QEP Uinta Basin Inc. via surety as consent as provided for the 43 CFR 3104.2.

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 and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. Formation Tops

The estimated tops of important geologic markers are as follows:

<b>Formation</b>	<b>TVD Depth</b>	<b>MD Depth</b>
Uinta	Surface	Surface
Green River	2482'	2482'
G1 Lime	5334'	5549'
Kickoff Point	4870'	4870'
TD	5412'	9010'

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 are as follows:

<b>Substance</b>	<b>Formation</b>	<b>TVD</b>	<b>MD</b>
Oil/Gas	Green River	5412'	9010'

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 no 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 or Red Wash water right # 49-2153 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.

DRILLING PROGRAM

3. Operator's Specification for Pressure Control Equipment:

- A. 3000 psi W.P. Double Gate BOP or Single Gate BOP (schematic attached)
- B. Functional test daily
- C. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, or (70% of the burst whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- D. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 3 system and individual components shall be operable as designed.

4. Casing Program

	<u>Depth</u>	<u>Hole Size</u>	<u>Csg Size</u>	<u>Type</u>	<u>Weight</u>
Surface	450'	12-1/4"	9-5/8"	J-55	36 lb/ft (new) LT&C
Intermediate	5610' MD	8-3/4"	7"	J-55	26 lb/ft (new) LT&C
Open Hole Completion					

5. Auxiliary Equipment

- A. Kelly Cock – yes
- B. Float at the bit – no
- C. Monitoring equipment on the mud system – visually and/or PVT/Flow Show
- D. Full opening safety valve on the rig floor – yes
- E. Rotating Head – yes  
If drilling with air the following will be used:
- F. The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.

DRILLING PROGRAM

- G. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500’).
- H. Compressor shall be tied directly to the blooie line through a manifold.
- I. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

Surface hole will be drilled with air, air/mist, foam, or mud depending on hole conditions. Drilling below surface casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used, oil concentration will be less than 4% by volume. Maximum anticipated mud weight is 9.5 ppg.

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

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

6. Testing, logging and coring program

- A. Cores – none anticipated
- B. DST – none anticipated

Logging – Mud logging – 4,500’ to TD  
GR-SP-Induction  
Neutron Density  
MRI

- C. Formation and Completion Interval: Green River interval, final determination of completion will be made by analysis of logs.  
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

DRILLING PROGRAM

7. Cementing Program

<u>Casing</u>	<u>Volume</u>	<u>Type &amp; Additives</u>
Surface	257 sx	Class "G" single slurry mixed to 15.6 ppg, yield = 1.19 ft <sup>3</sup> /sx, 100% excess. Cement to surface (257sx) calculated. Tail plug used. Allow to set under pressure
Intermediate	Lead - 220 sx Tail - 175sx	Lead/Tail oilfield type cement circulated in place. Tail slurry: Class "G" + gilsonite and additives as required, mixed to 14.8 ppg, yield = 1.34 ft <sup>3</sup> /sx, 20% excess. Lead to surface.  Cement Characteristics: Lead slurry: Class "G" + extender and additives as required, mixed to 11.0 ppg, yield = 3.82 ft <sup>3</sup> /sx, 20% excess in open hole. Fill to surface. Tail plug used. Allow to set under pressure.

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

No abnormal temperatures or pressures are anticipated. No H2S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 2347.0 psi. Maximum anticipated bottom hole temperature is 140° F.

# **Questar Exploration & Production**

**Gypsum Hills Unit**

**SENE Sec.17-T8S-R21E**

**GH #8G-17-8-21**

**Wellbore #1**

**Plan: Plan #1**

## **Pathfinder Planning Report**

**10 March, 2006**

# Pathfinder Energy Services

## Planning Report

<b>Database:</b> EDM 2003.14 Single User Db	<b>Local Co-ordinate Reference:</b> Well GH #8G-17-8-21
<b>Company:</b> Questar Exploration & Production	<b>TVD Reference:</b> WELL @ 4732.0ft (Original Well Elev)
<b>Project:</b> Gypsum Hills Unit	<b>MD Reference:</b> WELL @ 4732.0ft (Original Well Elev)
<b>Site:</b> SENE Sec.17-T8S-R21E	<b>North Reference:</b> True
<b>Well:</b> GH #8G-17-8-21	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> Wellbore #1	
<b>Design:</b> Plan #1	

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

<b>Site</b>	SENE Sec.17-T8S-R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,575,811.98 ft	<b>Latitude:</b>	40° 7' 33.481 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,039,728.72 ft	<b>Longitude:</b>	109° 34' 17.551 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	0.92 °

<b>Well</b>	GH #8G-17-8-21					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	14,575,811.98 ft	<b>Latitude:</b>	40° 7' 33.481 N
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,039,728.72 ft	<b>Longitude:</b>	109° 34' 17.551 W
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,718.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	3/10/2006	11.79	66.10	52,929

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	268.00	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,869.6	0.00	0.00	4,869.6	0.0	0.0	0.00	0.00	0.00	0.00	
5,070.6	24.12	268.00	5,064.7	-1.5	-41.7	12.00	12.00	0.00	268.00	
5,610.4	88.90	268.00	5,347.0	-16.3	-468.0	12.00	12.00	0.00	0.00	EOB-GH8G
9,010.4	88.90	268.00	5,412.2	-135.0	-3,865.3	0.00	0.00	0.00	0.00	BHL-GH8G

# Pathfinder Energy Services

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** Questar Exploration & Production  
**Project:** Gypsum Hills Unit  
**Site:** SENE Sec.17-T8S-R21E  
**Well:** GH #8G-17-8-21  
**Wellbore:** Wellbore #1  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well GH #8G-17-8-21  
**TVD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Green River</b>									
2,482.0	0.00	0.00	2,482.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Start Build 12.00</b>									
4,869.6	0.00	0.00	4,869.6	0.0	0.0	0.0	0.00	0.00	0.00

## Pathfinder Energy Services

### Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** Questar Exploration & Production  
**Project:** Gypsum Hills Unit  
**Site:** SENE Sec.17-T8S-R21E  
**Well:** GH #8G-17-8-21  
**Wellbore:** Wellbore #1  
**Design:** Plan #1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

Well GH #8G-17-8-21  
 WELL @ 4732.0ft (Original Well Elev)  
 WELL @ 4732.0ft (Original Well Elev)  
 True  
 Minimum Curvature

#### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,875.0	0.65	268.00	4,875.0	0.0	0.0	0.0	12.00	12.00	0.00
4,900.0	3.65	268.00	4,900.0	0.0	-1.0	1.0	12.00	12.00	0.00
4,925.0	6.65	268.00	4,924.9	-0.1	-3.2	3.2	12.00	12.00	0.00
4,950.0	9.65	268.00	4,949.6	-0.2	-6.7	6.8	12.00	12.00	0.00
4,975.0	12.65	268.00	4,974.1	-0.4	-11.6	11.6	12.00	12.00	0.00
5,000.0	15.65	268.00	4,998.4	-0.6	-17.7	17.7	12.00	12.00	0.00
5,025.0	18.65	268.00	5,022.3	-0.9	-25.1	25.1	12.00	12.00	0.00
5,050.0	21.65	268.00	5,045.7	-1.2	-33.7	33.7	12.00	12.00	0.00
5,070.6	24.12	268.00	5,064.7	-1.5	-41.7	41.7	12.00	12.00	0.00
5,075.0	24.65	268.00	5,068.7	-1.5	-43.5	43.5	12.00	12.00	0.00
5,100.0	27.65	268.00	5,091.2	-1.9	-54.5	54.5	12.00	12.00	0.00
5,125.0	30.65	268.00	5,113.0	-2.3	-66.7	66.7	12.00	12.00	0.00
5,150.0	33.65	268.00	5,134.2	-2.8	-79.9	80.0	12.00	12.00	0.00
5,175.0	36.65	268.00	5,154.6	-3.3	-94.3	94.4	12.00	12.00	0.00
5,200.0	39.65	268.00	5,174.3	-3.8	-109.8	109.8	12.00	12.00	0.00
5,225.0	42.65	268.00	5,193.1	-4.4	-126.2	126.3	12.00	12.00	0.00
5,250.0	45.65	268.00	5,211.0	-5.0	-143.6	143.7	12.00	12.00	0.00
5,275.0	48.65	268.00	5,228.0	-5.7	-161.9	162.0	12.00	12.00	0.00
5,300.0	51.65	268.00	5,244.0	-6.3	-181.1	181.2	12.00	12.00	0.00
5,325.0	54.65	268.00	5,259.0	-7.0	-201.1	201.2	12.00	12.00	0.00
5,350.0	57.65	268.00	5,273.0	-7.7	-221.8	222.0	12.00	12.00	0.00
5,375.0	60.65	268.00	5,285.8	-8.5	-243.3	243.4	12.00	12.00	0.00
5,400.0	63.65	268.00	5,297.4	-9.3	-265.4	265.5	12.00	12.00	0.00
5,425.0	66.65	268.00	5,308.0	-10.1	-288.0	288.2	12.00	12.00	0.00
5,450.0	69.65	268.00	5,317.3	-10.9	-311.2	311.4	12.00	12.00	0.00
5,475.0	72.65	268.00	5,325.3	-11.7	-334.9	335.1	12.00	12.00	0.00
5,500.0	75.65	268.00	5,332.2	-12.5	-358.9	359.1	12.00	12.00	0.00
5,525.0	78.65	268.00	5,337.7	-13.4	-383.2	383.5	12.00	12.00	0.00
<b>G1 Lime Top</b>									
5,548.7	81.49	268.00	5,341.8	-14.2	-406.6	406.8	12.00	12.00	0.00
5,550.0	81.65	268.00	5,342.0	-14.2	-407.9	408.1	12.00	12.00	0.00
5,575.0	84.65	268.00	5,345.0	-15.1	-432.7	432.9	12.00	12.00	0.00
5,600.0	87.65	268.00	5,346.7	-16.0	-457.6	457.9	12.00	12.00	0.00
<b>Start 3400.0 hold at 5610.4 MD - 7" Casing - EOB-GH8G</b>									
5,610.4	88.90	268.00	5,347.0	-16.3	-468.0	468.3	12.00	12.00	0.00
5,700.0	88.90	268.00	5,348.7	-19.5	-557.5	557.8	0.00	0.00	0.00
5,800.0	88.90	268.00	5,350.6	-23.0	-657.4	657.8	0.00	0.00	0.00
5,900.0	88.90	268.00	5,352.5	-26.4	-757.4	757.8	0.00	0.00	0.00
6,000.0	88.90	268.00	5,354.5	-29.9	-857.3	857.8	0.00	0.00	0.00
6,100.0	88.90	268.00	5,356.4	-33.4	-957.2	957.8	0.00	0.00	0.00
6,200.0	88.90	268.00	5,358.3	-36.9	-1,057.1	1,057.8	0.00	0.00	0.00
6,300.0	88.90	268.00	5,360.2	-40.4	-1,157.0	1,157.7	0.00	0.00	0.00
6,400.0	88.90	268.00	5,362.1	-43.9	-1,257.0	1,257.7	0.00	0.00	0.00
6,500.0	88.90	268.00	5,364.1	-47.4	-1,356.9	1,357.7	0.00	0.00	0.00
6,600.0	88.90	268.00	5,366.0	-50.9	-1,456.8	1,457.7	0.00	0.00	0.00
6,700.0	88.90	268.00	5,367.9	-54.4	-1,556.7	1,557.7	0.00	0.00	0.00
6,800.0	88.90	268.00	5,369.8	-57.9	-1,656.6	1,657.6	0.00	0.00	0.00
6,900.0	88.90	268.00	5,371.7	-61.3	-1,756.6	1,757.6	0.00	0.00	0.00
7,000.0	88.90	268.00	5,373.7	-64.8	-1,856.5	1,857.6	0.00	0.00	0.00
7,100.0	88.90	268.00	5,375.6	-68.3	-1,956.4	1,957.6	0.00	0.00	0.00
7,200.0	88.90	268.00	5,377.5	-71.8	-2,056.3	2,057.6	0.00	0.00	0.00
7,300.0	88.90	268.00	5,379.4	-75.3	-2,156.2	2,157.6	0.00	0.00	0.00
7,400.0	88.90	268.00	5,381.3	-78.8	-2,256.2	2,257.5	0.00	0.00	0.00

## Pathfinder Energy Services

### Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** Questar Exploration & Production  
**Project:** Gypsum Hills Unit  
**Site:** SENE Sec.17-T8S-R21E  
**Well:** GH #8G-17-8-21  
**Wellbore:** Wellbore #1  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well GH #8G-17-8-21  
**TVD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

#### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,500.0	88.90	268.00	5,383.3	-82.3	-2,356.1	2,357.5	0.00	0.00	0.00
7,600.0	88.90	268.00	5,385.2	-85.8	-2,456.0	2,457.5	0.00	0.00	0.00
7,700.0	88.90	268.00	5,387.1	-89.3	-2,555.9	2,557.5	0.00	0.00	0.00
7,800.0	88.90	268.00	5,389.0	-92.7	-2,655.8	2,657.5	0.00	0.00	0.00
7,900.0	88.90	268.00	5,390.9	-96.2	-2,755.8	2,757.4	0.00	0.00	0.00
8,000.0	88.90	268.00	5,392.9	-99.7	-2,855.7	2,857.4	0.00	0.00	0.00
8,100.0	88.90	268.00	5,394.8	-103.2	-2,955.6	2,957.4	0.00	0.00	0.00
8,200.0	88.90	268.00	5,396.7	-106.7	-3,055.5	3,057.4	0.00	0.00	0.00
8,300.0	88.90	268.00	5,398.6	-110.2	-3,155.4	3,157.4	0.00	0.00	0.00
8,400.0	88.90	268.00	5,400.5	-113.7	-3,255.4	3,257.4	0.00	0.00	0.00
8,500.0	88.90	268.00	5,402.4	-117.2	-3,355.3	3,357.3	0.00	0.00	0.00
8,600.0	88.90	268.00	5,404.4	-120.7	-3,455.2	3,457.3	0.00	0.00	0.00
8,700.0	88.90	268.00	5,406.3	-124.1	-3,555.1	3,557.3	0.00	0.00	0.00
8,800.0	88.90	268.00	5,408.2	-127.6	-3,655.0	3,657.3	0.00	0.00	0.00
8,900.0	88.90	268.00	5,410.1	-131.1	-3,755.0	3,757.3	0.00	0.00	0.00
9,000.0	88.90	268.00	5,412.0	-134.6	-3,854.9	3,857.2	0.00	0.00	0.00
<b>TD at 9010.4 - BHL-GH8G</b>									
9,010.4	88.90	268.00	5,412.2	-135.0	-3,865.3	3,867.7	0.00	0.00	0.00

#### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BHL-GH8G - plan hits target - Point		0.00	5,412.2	-135.0	-3,865.3	14,575,614.90	2,035,866.07	40° 7' 32.144 N	109° 35' 7.321 W
EOB-GH8G - plan hits target - Point		0.00	5,347.0	-16.3	-468.0	14,575,788.12	2,039,261.03	40° 7' 33.320 N	109° 34' 23.577 W

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
5,610.4	5,347.0	7" Casing	7	8-3/4

#### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,482.0	2,482.0	Green River		1.10	268.00
5,548.7	5,334.0	G1 Lime Top		1.10	268.00
	5,342.0	G1 Lime Bottom		1.10	268.00
	5,344.0	G1 Sand Top		1.10	268.00

# Pathfinder Energy Services

## Planning Report

**Database:** EDM 2003.14 Single User Db  
**Company:** Questar Exploration & Production  
**Project:** Gypsum Hills Unit  
**Site:** SENE Sec.17-T8S-R21E  
**Well:** GH #8G-17-8-21  
**Wellbore:** Wellbore #1  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well GH #8G-17-8-21  
**TVD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4732.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,869.6	4,869.6	0.0	0.0	Start Build 12.00
5,610.4	5,347.0	-16.3	-468.0	Start 3400.0 hold at 5610.4 MD
9,010.4	5,412.2	-135.0	-3,865.3	TD at 9010.4



Company: Questar Exploration & Production  
 Field: Gypsum Hills Unit  
 Location: SENE Sec.17-T8S-R21E  
 Well: GH #8G-17-8-21  
 Wellbore #1



Plan: Plan #1 (GH #8G-17-8-21/Wellbore #1)

WELL DETAILS: GH #8G-17-8-21

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude	Slot
0.0	0.0	14575811.98	4718.0	2039728.72	40° 7' 33.481 N	109° 34' 17.551 W	

WELLBORE TARGET DETAILS (LAT/LONG)

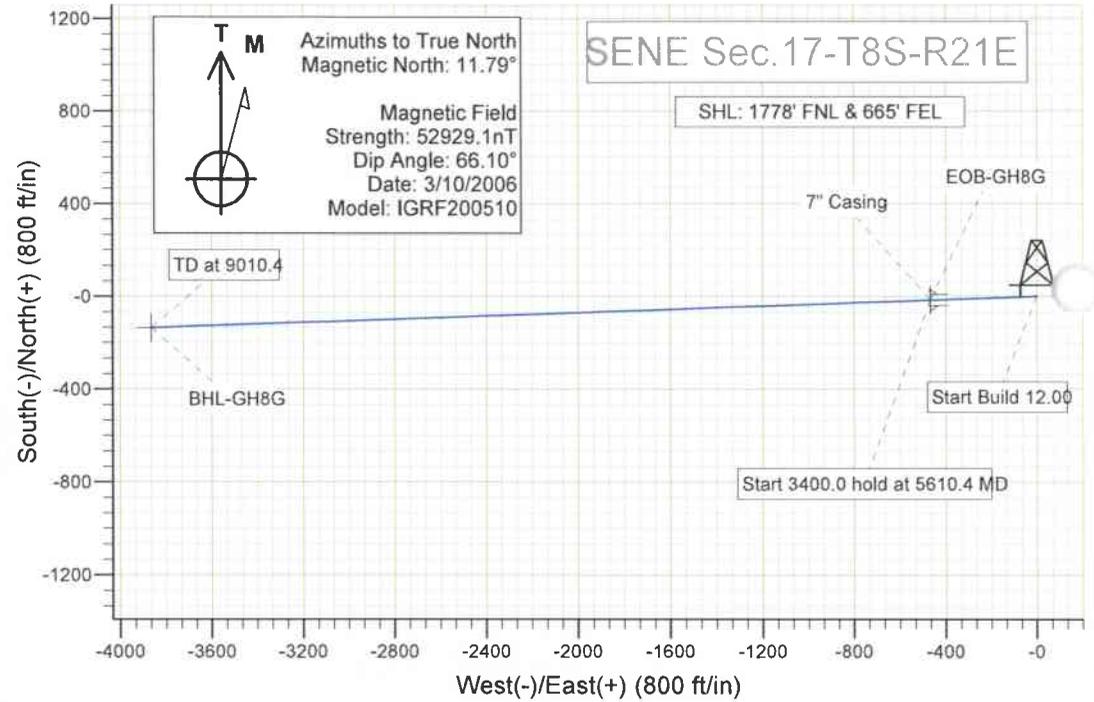
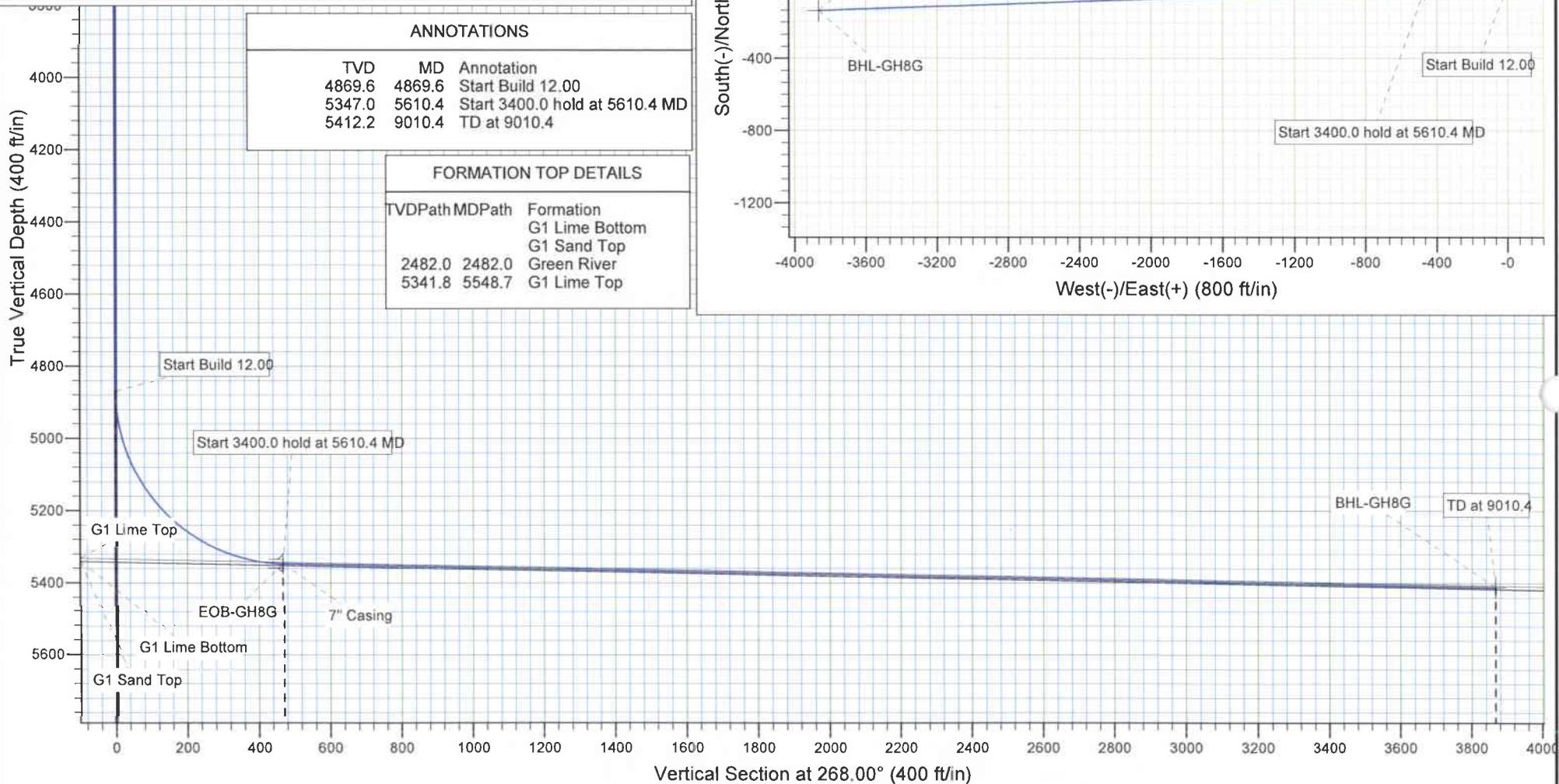
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
EOB-GH8G	5347.0	-16.3	-468.0	40° 7' 33.320 N	109° 34' 23.577 W	Point
BHL-GH8G	5412.2	-135.0	-3865.3	40° 7' 32.144 N	109° 35' 7.321 W	Point

ANNOTATIONS

TVD	MD	Annotation
4869.6	4869.6	Start Build 12.00
5347.0	5610.4	Start 3400.0 hold at 5610.4 MD
5412.2	9010.4	TD at 9010.4

FORMATION TOP DETAILS

TVDP	Path	MDPath	Formation
2482.0	2482.0		G1 Lime Bottom
5341.8	5548.7		G1 Sand Top
			Green River
			G1 Lime Top



**QEP UINTA BASIN, INC.**  
**GH 8G-17-8-21**  
**SL: 1778' FNL 665' FEL, SENE, SEC. 17, T8S, R21E**  
**BHL: 1913' FNL 750' FWL, SWNW SEC. 17, T8S, R21E**  
**UINTAH COUNTY, UTAH**  
**LEASE # UTU-68219**

**ONSHORE ORDER NO. 1**

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

**1. Existing Roads:**

The proposed well site is approximately 11 miles from Ouray, Utah.

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

There will be no improvements made to existing roads.

**2. Planned Access Roads:**

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

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

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

Please refer to Topo Map C.

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

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

Refer to Topo Map D for the location of the proposed pipeline.

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

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

**6. Source of Construction Materials:**

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

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

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

**8. Ancillary Facilities:**

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

**9. Well Site Layout: (See Location Layout Diagram)**

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

A pit liner is required. A felt pit liner will be required if bedrock is encountered.

**10. Plans for Reclamation of the Surface:**

Please see QEP Uinta Basin, Inc. Standard Operating Practices for Green River Formation wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and undesignated fields in Townships 07 and 08 South, Ranges 21 to 24 East.

## **Interim Reclamation**

Please see attached Interim Reclamation plan.

Once the well is put onto production, QEP will reclaim as much of the well pad as possible that will allow for operations to continue in a safe and reasonable manner. Reseeding will be done in the spring or fall of every year to allow winter precipitation to aid in the success of reclamation.

## **Seed Mix:**

*Interim Reclamation:*

6 lbs Hycrest Crested Wheatgrass

6 lbs Needle & Thread Grass

*Final Reclamation:*

Seed Mix # 1      3 lbs. Fourwing Saltbush, 3lbs. Indian Rice Grass, 1 lb. Needle & Thread Grass and  
4 lbs. Hycrest Crested Wheat Grass.

## **11. Surface Ownership:**

Ute Tribe

PO Box 70

FT. Duchesne, UT 84026

(435) 722-5141

## **12. Other Information**

A Class III archaeological survey was conducted by Montgomery Archaeology Consultants. A copy of this report was submitted directly to the appropriate agencies by Montgomery Archaeology Consultants. Cultural resource clearance was recommended for this location.

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

Jan Nelson  
Red Wash Rep.  
QEP Uinta Basin, Inc.  
11002 East 17500 South  
Vernal, Utah 84078  
(435) 781-4331

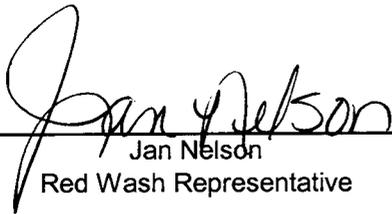
**Certification:**

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 & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees.

QEP Uinta Basin Inc. will be fully responsible for the actions of their 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.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by QEP Uinta Basin, Inc. it's contractors and subcontractors 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  
Red Wash Representative

\_\_\_\_\_  
30-Mar-06  
Date

# QUESTAR EXPLR. & PROD.

GH #8G-17-8-21

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 17, T8S, R21E, S.L.B.&M.

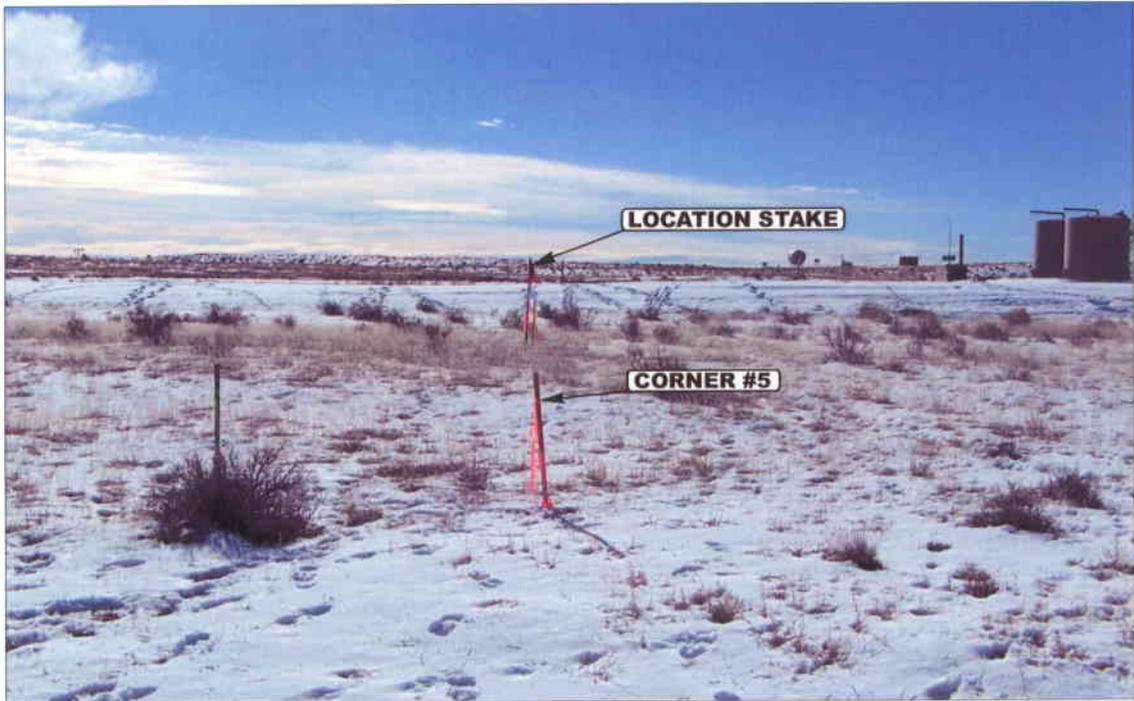


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO: VIEW FROM EXISTING ACCESS

CAMERA ANGLE: NORTHWESTERLY



- Since 1964 -

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

LOCATION PHOTOS

02 13 06  
MONTH DAY YEAR

PHOTO

TAKEN BY: D.A.

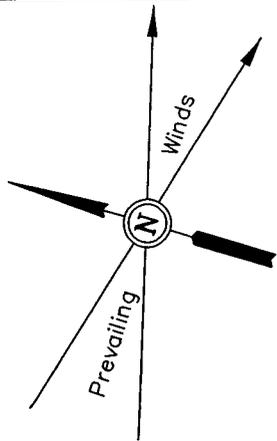
DRAWN BY: C.P.

REVISED: 00-00-00

QUESTAR EXPLR. & PROD.

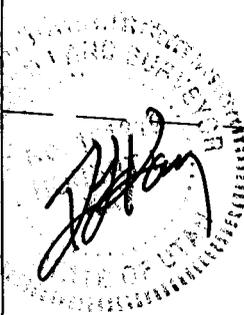
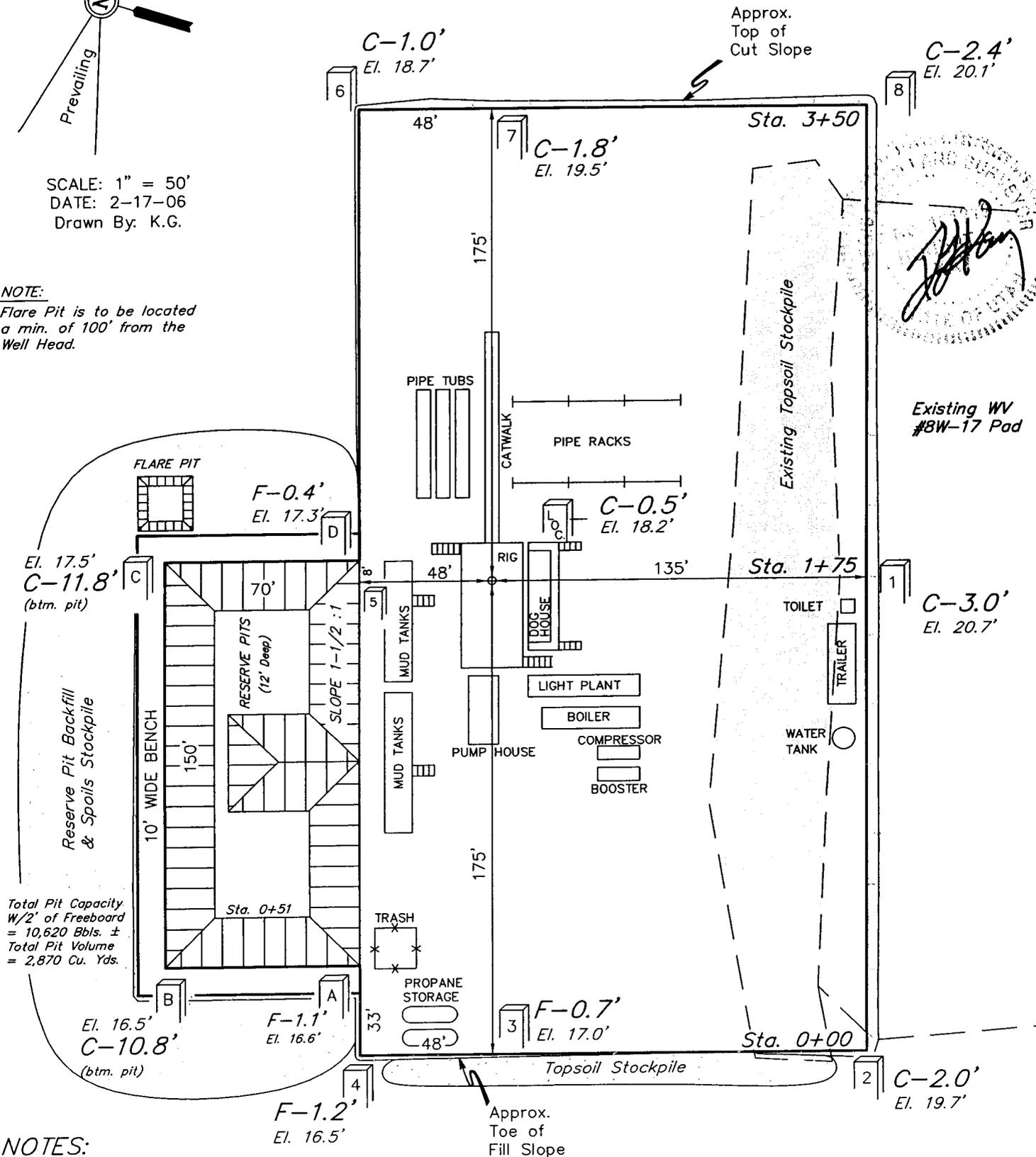
FIGURE #1

LOCATION LAYOUT FOR  
 GH #8G-17-8-21  
 SECTION 17, T8S, R21E, S.L.B.&M.  
 1778' FNL 665' FEL



SCALE: 1" = 50'  
 DATE: 2-17-06  
 Drawn By: K.G.

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



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

NOTES:

Elev. Ungraded Ground At Loc. Stake = 4718.2'  
 FINISHED GRADE ELEV. AT LOC. STAKE = 4717.7'

QUESTAR EXPLR. & PROD.

FIGURE #2

TYPICAL CROSS SECTIONS FOR

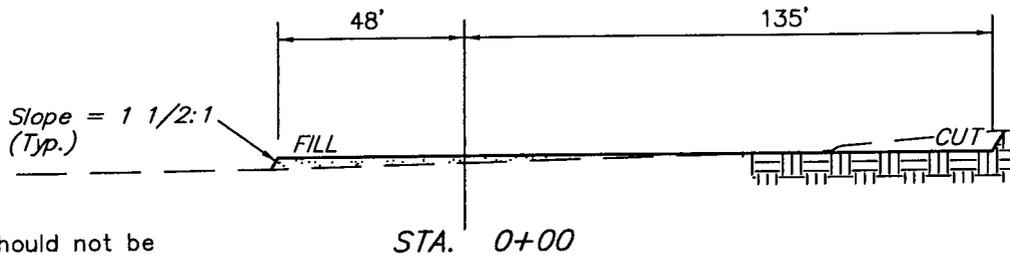
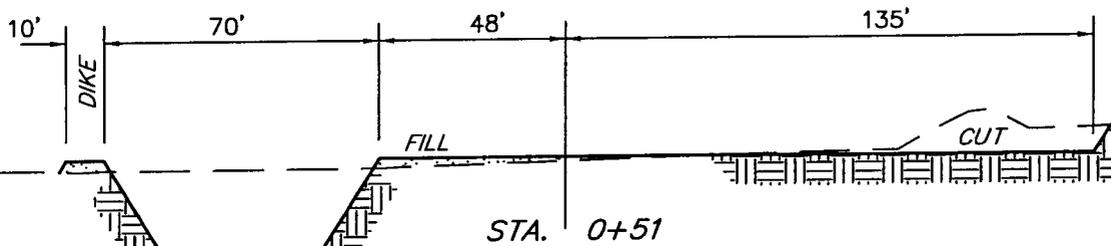
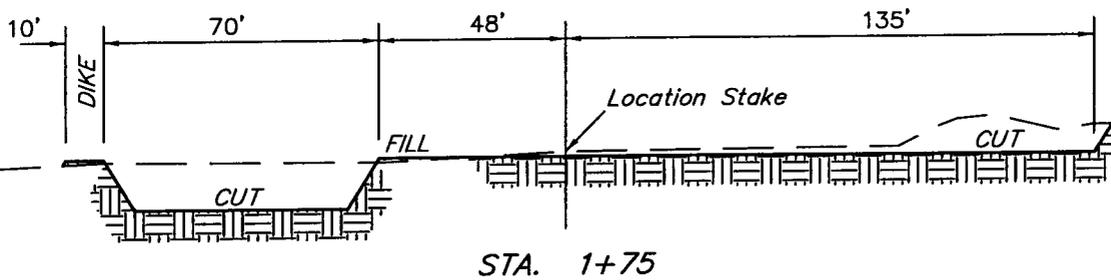
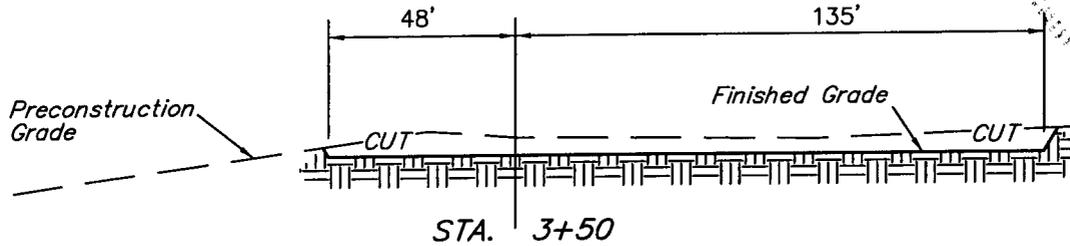
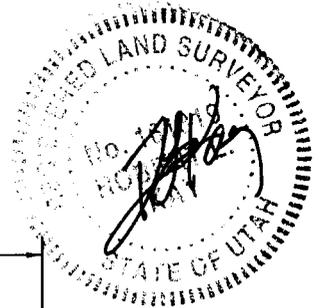
GH #8G-17-8-21

SECTION 17, T8S, R21E, S.L.B.&M.

1778' FNL 665' FEL

1" = 20'  
X-Section Scale  
1" = 50'

DATE: 2-17-06  
Drawn By: K.G.

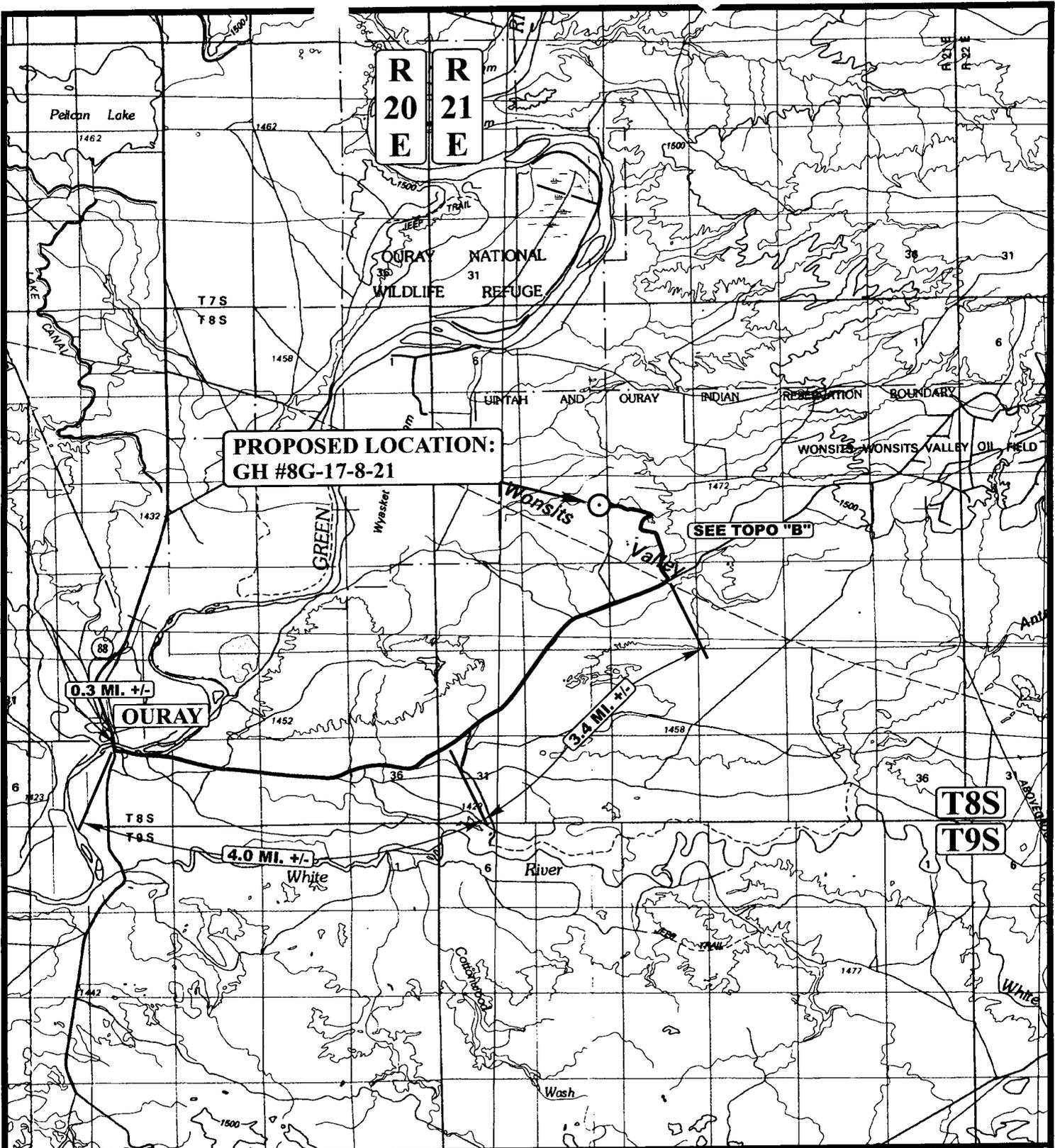


NOTE:  
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

CUT	
(12") Topsoil Stripping	= 3,040 Cu. Yds.
Remaining Location	= 3,580 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 6,620 CU.YDS.</b>
<b>FILL</b>	<b>= 1,320 CU.YDS.</b>

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION  
Excess Material = 5,300 Cu. Yds.  
Topsoil & Pit Backfill (1/2 Pit Vol.) = 4,480 Cu. Yds.  
EXCESS UNBALANCE (After Rehabilitation) = 820 Cu. Yds.



**LEGEND:**

○ PROPOSED LOCATION



**QUESTAR EXPLR. & PROD.**

GH #8G-17-8-21  
 SECTION 17, T8S, R21E, S.L.B.&M.  
 1778' FNL 665' FEL



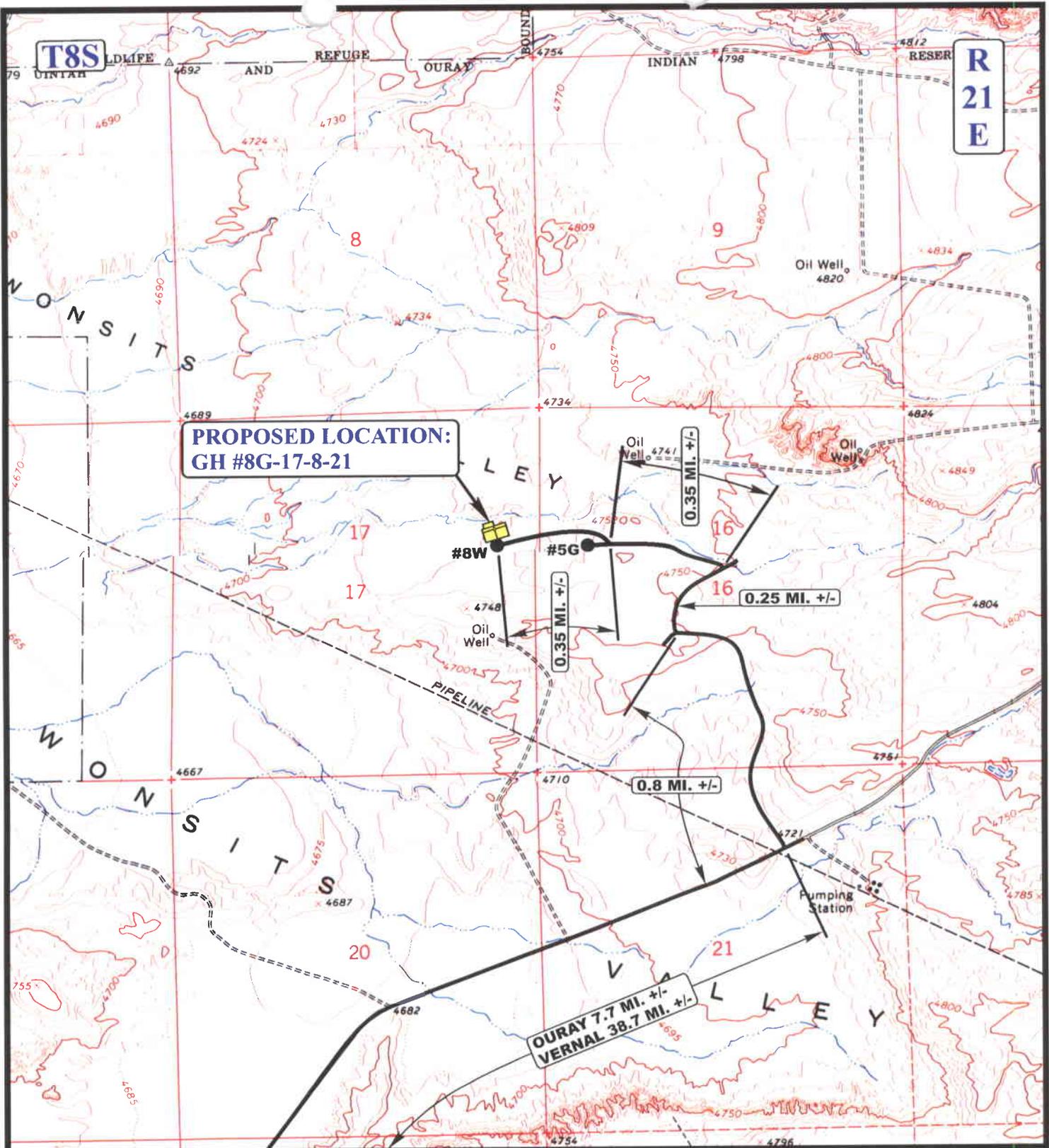
**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC**  
**MAP**

<b>02</b>	<b>13</b>	<b>06</b>
MONTH	DAY	YEAR

SCALE: 1:100,000    DRAWN BY: C.P.    REVISED: 00-00-00





**PROPOSED LOCATION:  
GH #8G-17-8-21**

**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD

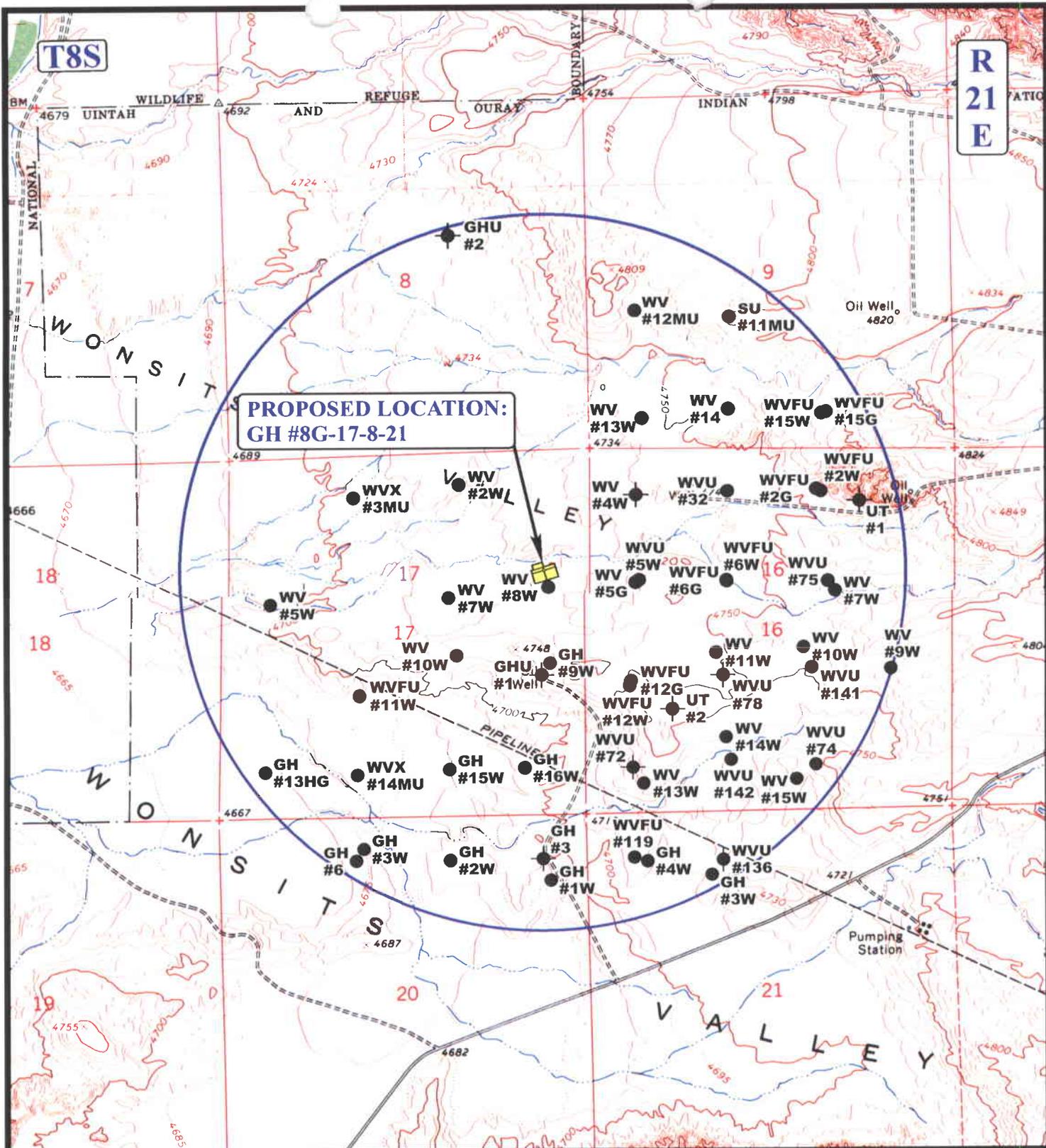
**QUESTAR EXPLR. & PROD.**

**GH #8G-17-8-21  
SECTION 17, T8S, R21E, S.L.B.&M.  
1778' FNL 665' FEL**

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



**TOPOGRAPHIC MAP** 02 13 06  
MONTH DAY YEAR  
SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00 **B TOPO**



**PROPOSED LOCATION:  
GH #8G-17-8-21**

**LEGEND:**

- ⊗ DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- ⊗ WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

**QUESTAR EXPLR. & PROD.**

**GH #8G-17-8-21  
SECTION 17, T8S, R21E, S.L.B.&M.  
1778' FNL 665' FEL**



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



**TOPOGRAPHIC  
MAP**

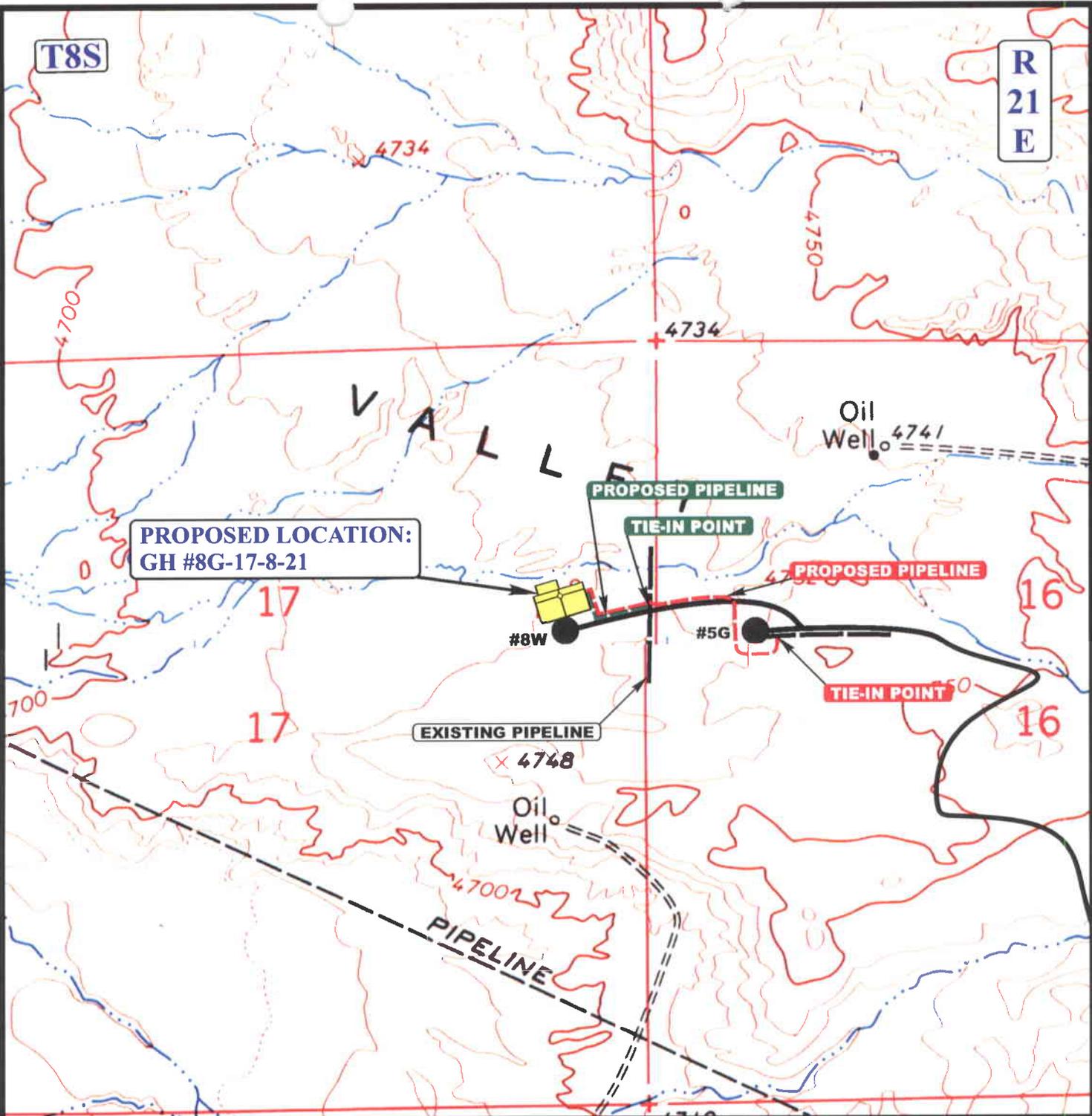
**02 13 06**  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00



T8S

R  
21  
E



APPROXIMATE TOTAL FUEL GAS PIPELINE DISTANCE = 1,785' +/-

APPROXIMATE TOTAL SALE PIPELINE DISTANCE = 597' +/-

**LEGEND:**

- PROPOSED SALE PIPELINE
- EXISTING PIPELINE
- PROPOSED FUEL GAS PIPELINE

**QUESTAR EXPLR. & PROD.**

GH #8G-17-8-21  
 SECTION 17, T8S, R21E, S.L.B.&M.  
 1778' FNL 665' FEL



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

<b>TOPOGRAPHIC MAP</b>	<b>02</b>	<b>13</b>	<b>06</b>
	MONTH	DAY	YEAR
SCALE: 1" = 1000'	DRAWN BY: C.P.		REVISED: 00-00-00



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 04/06/2006

API NO. ASSIGNED: 43-047-37992

WELL NAME: GH 8G-17-8-21

OPERATOR: QEP UINTA BASIN, INC. ( N2460 )

CONTACT: JAN NELSON

PHONE NUMBER: 435-781-4331

PROPOSED LOCATION:

SENE 17 080S <sup>21</sup>/<sub>340E</sub>  
 SURFACE: 1778 FNL 0665 FEL  
 BOTTOM: 1913 FNL 0750 FWL  
 COUNTY: UINTAH  
 LATITUDE: 40.12603 LONGITUDE: -109.5709  
 UTM SURF EASTINGS: 621773 NORTHINGS: 4442514  
 FIELD NAME: GYPSUM HILLS ( 610 )

*SWNW*

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal  
 LEASE NUMBER: UTU-68219  
 SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: GRRV  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. ESB000024 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 43-8496 )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

LOCATION AND SITING:

- R649-2-3. \* *Horizontal*
- Unit: GYPSUM HILLS (GREEN RIVER) *OK*
- R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit  
Board Cause No: 253-01  
Eff Date: 12-14-2004  
Siting: *Suspends General Siting*
- R649-3-11. Directional Drill

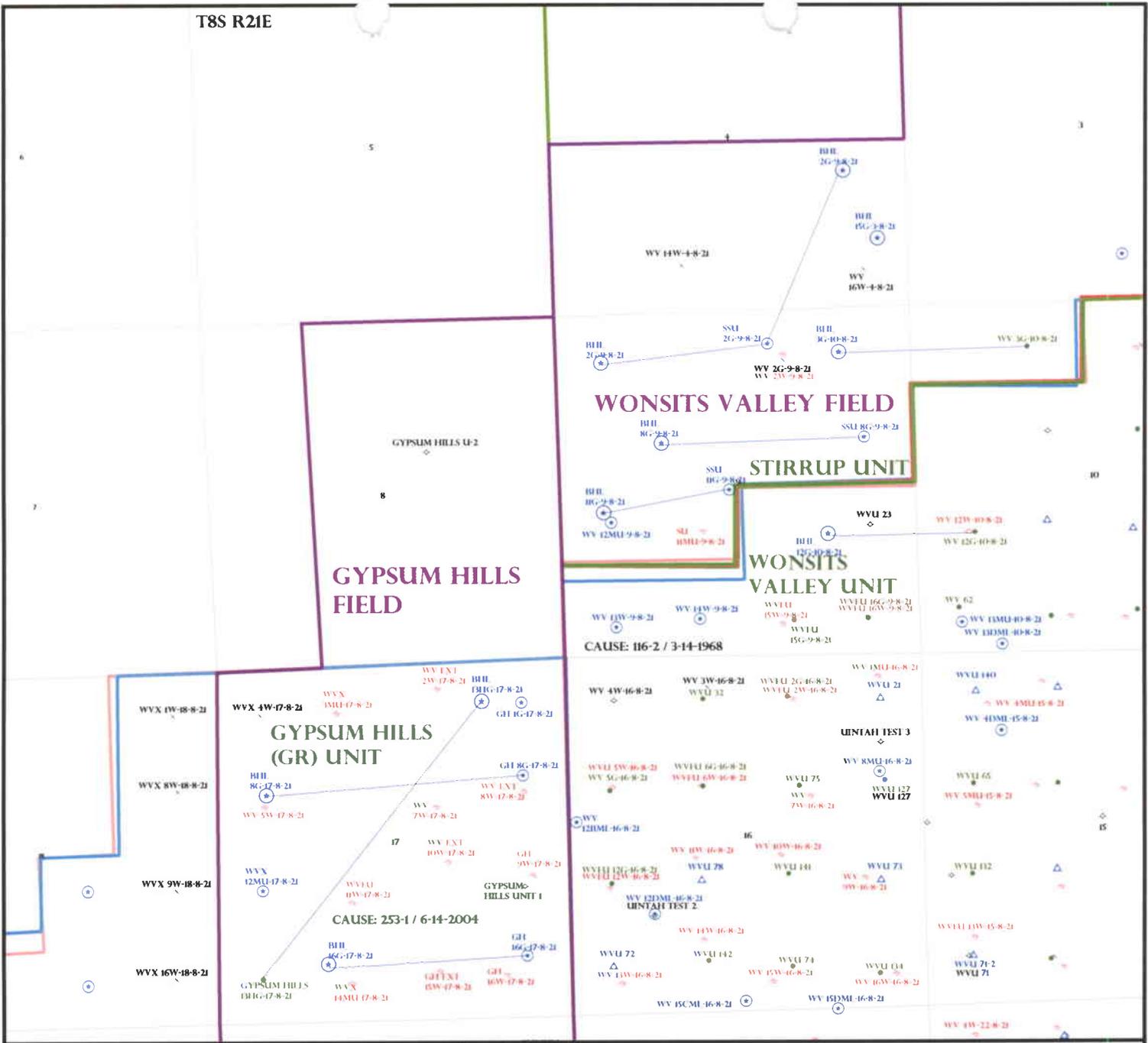
COMMENTS:

*See Separate file*

STIPULATIONS:

*1. Federal Approval*

T8S R21E



### WONSITS VALLEY FIELD

### STIRRUP UNIT

### WONSITS VALLEY UNIT

### GYPSUM HILLS (GR) UNIT

CAUSE: 116-2 / 3-14-1968

CAUSE: 253-1 / 6-14-2004

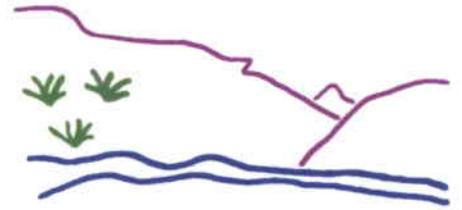
OPERATOR: QEP UINTA BASIN INC (N2460)

SEC: 17 T. 8S R. 21E

FIELD: GYPSUM HILLS (610)

COUNTY: UINTAH

CAUSE: 253-1 / 6-14-2004



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY  
DATE: 14-APRIL-2006

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

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

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



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

April 17, 2006

QEP Uinta Basin, Inc.  
11002 E 17500 S  
Vernal, UT 84078

Re: Gypsum Hills 8G-17-8-21 Well, Surface Location 1778' FNL, 665' FEL,  
SE NE, Sec. 17, T. 8 South, R. 21 East, Bottom Location 1913' FNL, 750' FWL,  
SW NW, Sec. 17, T. 8 South, R. 21 East, Uintah County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37992.

Sincerely,

Gil Hunt  
Associate Director

pab

Enclosures

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

**Operator:** QEP Uinta Basin, Inc.  
**Well Name & Number** Gypsum Hills 8G-17-8-21  
**API Number:** 43-047-37992  
**Lease:** UTU-68219

**Surface Location:** SE NE      **Sec.** 17      **T.** 8 South      **R.** 21 East  
**Bottom Location:** SW NW      **Sec.** 17      **T.** 8 South      **R.** 21 East

### Conditions of Approval

1. 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.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. 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.

CONFIDENTIAL

Form 3160-3  
(July 1992)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APR 3 2006  
SUBMIT IN TRIPLICATE

FORM APPROVED  
OMB NO. 1040-0136  
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

TYPE OF WORK  
DRILL  DEEPEN   
TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

5. LEASE DESIGNATION AND SERIAL NO.  
UTU-68219  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
UTE INDIAN TRIBE  
7. UNIT AGREEMENT NAME  
GYPSUM HILLS UNIT  
8. FARM OR LEASE NAME, WELL NO.  
GH 8G-17-8-21

2. NAME OF OPERATOR  
QEP UINTA BASIN, INC.  
Contact: Jan Nelson  
E-Mail: jan.nelson@questar.com

9. API NUMBER:  
43-047-3792

3. ADDRESS  
11002 E. 17500 S. Vernal, Ut 84078  
Telephone number  
Phone 435-781-4331 Fax 435-781-4323

10. FIELD AND POOL, OR WILDCAT  
GYPSUM HILLS

4. LOCATION OF WELL (Report location clearly and in accordance with and State requirements\*)  
At Surface 1778' FNL 665' FEL, SENE, SEC. 17, T8S, R21E  
At proposed production zone 1913' FNL 750' FWL, SWNW, SEC. 17, T8S, R21E

11. SEC., T, R, M, OR BLK & SURVEY OR AREA  
SEC. 17, T8S, R21E Mer SLB

14. DISTANCE IN MILES FROM NEAREST TOWN OR POSTOFFICE\*  
11 +/- EAST OF VERNAL, UTAH

12. COUNTY OR PARISH  
Utah  
13. STATE  
UT

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.  
(also to nearest drig, unit line if any)  
665' +/-

16. NO. OF ACRES IN LEASE  
880.00

17. NO. OF ACRES ASSIGNED TO THIS WELL  
40

18. DISTANCE FROM PROPOSED location to nearest well, drilling, completed, applied for, on this lease, ft

19. PROPOSED DEPTH  
9010' MD

20. BLM/BIA Bond No. on file  
ESB000024

21. ELEVATIONS (Show whether DF, RT, GR, ect.)  
4717.7' GR

22. DATE WORK WILL START  
ASAP

23. Estimated duration  
20 days

24. Attachments

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

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

SIGNED Jan Nelson Name (printed/typed) Jan Nelson DATE 3-30-06  
TITLE Regulatory Affairs

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_  
APPROVED BY [Signature] TITLE Assistant Field Manager DATE 11-22-2006  
DIV. OF OIL, GAS & MINING  
Lands & Mineral Resources

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

RECEIVED  
DEC 01 2006

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

NOTICE OF APPROVAL  
CONDITIONS OF APPROVAL ATTACHED



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 Uinta Basin, Inc.  
Well No: GH 8G-17-8-21  
API No: 43-047-37992

Location: SENE, Sec 17, T8S, R21E  
Lease No: UTU-68219  
Agreement: Gypsum Hills Unit

Petroleum Engineer:	Matt Baker	Office: 435-781-4490	Cell: 435-828-4470
Petroleum Engineer:	Michael Lee	Office: 435-781-4432	Cell: 435-828-7875
Petroleum Engineer:	James Ashley	Office: 435-781-4470	
Supervisory Petroleum Technician:	Jamie Sparger	Office: 435-781-4502	Cell: 435-828-3913
Environmental Scientist:	Paul Buhler	Office: 435-781-4475	Cell: 435-828-4029
Environmental Scientist:	Karl Wright	Office: 435-781-4484	
Natural Resource Specialist:	Holly Villa	Office: 435-781-4404	
Natural Resource Specialist:	Melissa Hawk	Office: 435-781-4476	
Natural Resource Specialist:	Scott Ackerman	Office: 435-781-4437	
After Hours Contact Number:	435-781-4513	Fax: 435-781-4410	

**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 one-year period. An additional year extension may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

- |   |   |   |
|---|---|---|
| Location Construction<br>(Notify Paul Buhler)           | - | Forty-Eight (48) hours prior to construction of location and access roads.  |
| Location Completion<br>(Notify Paul Buhler)             | - | Prior to moving on the drilling rig.  |
| Spud Notice<br>(Notify Petroleum Engineer)              | - | Twenty-Four (24) hours prior to spudding the well.  |
| Casing String & Cementing<br>(Notify Jamie Sparger)     | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings   |
| BOP & Related Equipment Tests<br>(Notify Jamie Sparger) | - | Twenty-Four (24) hours prior to initiating pressure tests   |
| First Production Notice<br>(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)**

**Additional Stipulations:**

- Move topsoil west of pads.
- Reroute small drainage around the corner of pad stake #6 and pit.
- Enter eastside of damage area.

**General Conditions of Approval**

- A 1,593' by 30' foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- A qualified Archaeologist accompanied by a Tribal Technician will monitor trenching construction of pipeline.
- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipeline.
- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROWs.
- **The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.**
- **You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.**
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- The Company will implement "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APDs and/or ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations shall be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.

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

## **DOWNHOLE CONDITIONS OF APPROVAL**

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

### **SITE SPECIFIC DOWNHOLE CONDITIONS OF APPROVAL**

- An approved Sundry Notice is required before adding any oil to the drilling mud.

### **DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. 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. Any changes in operation must have prior approval from the BLM, Vernal Field Office Petroleum Engineers.
- 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.**
- 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.
- The lessee/operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled and analyzed (a copy of the analyses to be submitted to the BLM Field Office in Vernal, Utah).
- All oil and gas shows shall be adequately tested for commercial possibilities, reported, and protected.
- The lessee/operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, etc.) to Peter Sokolosky or another geologist of 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.

- All shows of fresh water and minerals shall be reported and protected. A sample shall be taken of any water flows and a water analysis furnished the BLM, Vernal Field Office. All oil and gas shows shall be adequately tested for commercial possibilities, reported, and protected.
- 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.
- 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.
- Any change in the program shall be approved by the BLM, Vernal Field Office. "Sundry Notices and Reports on Wells" (Form BLM 3160-5) shall be filed for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- Emergency approval may be obtained orally, but such approval does not waive the written report requirement. 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 pursuant to Onshore Oil & Gas Order No. 1 of 43 CFR 3164.1 and prior approval by the BLM, Vernal Field Office.
- 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.
- 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.
- A cement bond log (CBL) will be run from the production casing shoe to the surface casing shoe 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.**
- 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.
- All measurement points shall be identified as point of sales or allocation for royalty determination prior to the installation of facilities.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The 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.
- 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.
- This APD is approved subject to the requirement that, shall 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 Field Office Petroleum Engineers.
- 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.

- 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.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir  
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.  
**UTU-68219**

6. If Indian, Allottee or Tribe Name  
**UTE TRIBE**

7. If Unit or CA, Agreement Designation  
**GYPSUM HILLS UNIT**

8. Well Name and No.  
**GH 8G 17 8 21**

9. API Well No.  
**43-047-37992**

10. Field and Pool, or Exploratory Area  
**GYPSUM HILLS**

11. County or Parish, State  
**UINTAH COUNTY, UTAH**

**SUBMIT IN TRIPLICATE**

1. Type of Well  
Oil  Gas   
 Well  Well  Other

2. Name of Operator  
**QEP, UINTA BASIN, INC.**

3. Address and Telephone No. **11002 E. 17500 S. VERNAL, UT 84078-8526**  
Contact: **Dahn.Caldwell@questar.com**  
**435-781-4342 Fax 435-781-4357**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**SURFACE LOCATION: 1778' FNL, 665' FEL, SENE, SEC 17-T8S-R21E**  
**BOTTOM LOCATION: 1913' FNL, 750' FWL, SWNW, SEC 17-T8S-R21E**

**CONFIDENTIAL**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>SPUD</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note) Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work)

**On 12/1/06 - Drilled 40' of 20" conductor hole. Set 1 jt of 14" conductor. Cement w/ Ready Mix.**  
**On 12/2/06 - Drilled 525'KB of 12-1/4" hole. Ran 11 jts of 9-5/8" csg. Land shoe @ 495' KB. Cement w/ 225 sxs Premium Cmt.**

**RECEIVED  
DEC 18 2006**

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

3 - BLM, 2- Utah OG&M, 1 - Denver, 1 - file Word file-server

14. I hereby certify that the foregoing is true and correct.  
Signed **Dahn F. Caldwell** *[Signature]* **Office Administrator II** Date **12/8/06**

(This space for Federal or State office use)

Approved by: \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Conditions of approval, if any \_\_\_\_\_

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

**CONFIDENTIAL**

OPERATOR: **QEP Uinta Basin, Inc.**  
ADDRESS: **11002 East 17500 South  
Vernal, Utah 84078-8526**

(435)781-4300

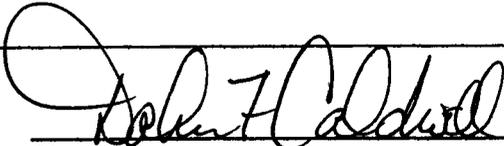
ENTITY ACTION FORM - FORM 6

Action Code	Current Entity No.	New Entity No.	API Number	Well Name	QQ	SC	TP	RG	County	Spud Date	Effective Date
B	99999	5355	43-047-37992	GH 8G 17 8 21	SENE	17	8S	21E	Uintah	12/1/06	12/21/06
WELL 1 COMMENTS: Bottom Location: SWNW, SEC 17-T8S-R21E <i>GRU</i>											RECEIVED DEC 18 2006 DIV. OF OIL, GAS & MINING
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

CONFIDENTIAL

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)



Signature

Office Administrator II

12/8/06

Title

Date

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

Phone No. (435)781-4342

CONFIDENTIAL

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

**ROUTING**

1. DJJ
2. CDW

Change of Operator (Well Sold)

**X - Operator Name Change/Merger**

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

**1/1/2007**

**FROM: (Old Operator):**  
 N2460-QEP Uinta Basin, Inc.  
 1050 17th St, Suite 500  
 Denver, CO 80265

**TO: ( New Operator):**  
 N5085-Questar E&P Company  
 1050 17th St, Suite 500  
 Denver, CO 80265

Phone: 1 (303) 672-6900

Phone: 1 (303) 672-6900

**CA No.**

**Unit:**

**GYPSUM HILLS UNIT**

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

**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: 4/19/2007
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/16/2007
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 1/31/2005
- Is the new operator registered in the State of Utah: \_\_\_\_\_ Business Number: 764611-0143
- (R649-9-2)Waste Management Plan has been received on: IN PLACE
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: n/a
- 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 4/23/2007 BIA
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 4/23/2007
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: \_\_\_\_\_
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: \_\_\_\_\_

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 4/30/2007 and 5/15/2007
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 4/30/2007 and 5/15/2007
- Bond information entered in RBDMS on: 4/30/2007 and 5/15/2007
- Fee/State wells attached to bond in RBDMS on: 4/30/2007 and 5/15/2007
- Injection Projects to new operator in RBDMS on: 4/30/2007 and 5/15/2007
- 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: 799446
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965003033
- 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: THIS IS A COMPANY NAME CHANGE.**

**SOME WELL NAMES HAVE BEEN CHANGED AS REQUESTED**

QEP Uinta Basin (N2460) to QUESTAR E and P (N5085)  
GYPSUM HILLS UNIT

4/30/2007 and 5/15/2007

Original Well Name	Well Name & No.	Q/Q	SEC	TWP	RNG	API	Entity	Lease	Well Type	Status
GYPSUM HILLS 3	GH 3	NENE	20	080S	210E	4304720002	5355	Federal	WI	A
GYPSUM HILLS 4	GH 4	SWSE	19	080S	210E	4304730028	5355	Federal	OW	P
GYPSUM HILLS 6	GH 6	NENW	20	080S	210E	4304730099	5251	Federal	WI	A
COSTAS FED 1-20-4B	GH 1-20	NESW	20	080S	210E	4304731006	5355	Federal	WI	A
WHITON FED 1-19-3C	GH 1-19	SESE	19	080S	210E	4304731065	5355	Federal	OW	P
COSTAS FED 2-20-3B	GH 2-20	NESE	20	080S	210E	4304731066	5355	Federal	WI	A
STAGECOACH FED 23-21	GH 23-21	NWSW	21	080S	210E	4304731541	5355	Federal	OW	P
COSTAS FED 3-21-1D	GH 3-21	SWNW	21	080S	210E	4304731604	5355	Federal	WI	A
COSTAS FED 4-21-1C	GH 4-21	SENE	21	080S	210E	4304731826	5355	Federal	OW	P
COSTAS FED 5-21-2C	GH 5-21	SENE	21	080S	210E	4304731827	5355	Federal	OW	P
SRU 8-I	GH 8-I	SWNE	20	080S	210E	4304731932	5355	Federal	WI	A
GYPSUM HILLS 9	GH 9	SENE	20	080S	210E	4304732304	5355	Federal	OW	P
GYPSUM HILLS 10	GH 10	NWSE	21	080S	210E	4304732306	5355	Federal	WI	A
GYPSUM HILLS 12	GH 12	NESE	19	080S	210E	4304732458	5355	Federal	WI	A
GYPSUM HILLS 11	GH 11	NWSE	20	080S	210E	4304732459	5355	Federal	OW	P
GYPSUM HILLS 13	GH 13	NESW	21	080S	210E	4304732460	5355	Federal	OW	P
GYPSUM HILLS 14	GH 13	NWSW	20	080S	210E	4304732647	5355	Federal	OW	P
GYPSUM HILLS 15	GH 15	SWSW	20	080S	210E	4304732648	5355	Federal	WI	A
GYPSUM HILLS 17	GH 17	SWSE	20	080S	210E	4304732649	5355	Federal	WI	A
GYPSUM HILLS 18	GH 18	SESE	20	080S	210E	4304732650	5355	Federal	OW	P
GYPSUM HILLS 19	GH 19	SWNW	20	080S	210E	4304732651	5355	Federal	OW	P
GYPSUM HILLS 20	GH 20	SENE	20	080S	210E	4304732652	5355	Federal	OW	P
GYPSUM HILLS 16	GH 16	SESW	20	080S	210E	4304732675	5355	Federal	OW	P
GHU 10W-19-8-21	GH 10W-19-8-21	NWSE	19	080S	210E	4304733528	12736	Federal	GW	P
GH 10G-19-8-21	GH 10G-19-8-21	NWSE	19	080S	210E	4304733566	5355	Federal	OW	P
WVFU 11W-17-8-21	WV 11W-17-8-20	NESW	17	080S	210E	4304733912	13228	Federal	GW	P
WV 5W-17-8-21	WV 5W-17-8-21	SWNW	17	080S	210E	4304733954	13332	Federal	GW	P
WV 7W-17-8-21	WV 7W-17-8-21	SWNE	17	080S	210E	4304733956	13330	Federal	GW	P
GH 9W-17-8-21	GH 9W-17-8-21	NESE	17	080S	210E	4304734150	13392	Federal	GW	P
GH 16W-17-8-21	GH 16W-17-8-21	SESE	17	080S	210E	4304734156	13354	Federal	GW	P
WV EXT 10W-17-8-21	WVX 10W-17-8-20	NWSE	17	080S	210E	4304734561	13744	Federal	GW	P
GH EXT 15W-17-8-21	GHX 15W-17-8-20	SWSE	17	080S	210E	4304734562	13674	Federal	GW	P
GYPSUM HILLS 13HG-17-8-21	GHX 13HG-17-8-21	SWSW	17	080S	210E	4304734723	5355	Federal	OW	S
GH 1G-17-8-21	GH 1G-17-8-21	NENE	17	080S	210E	4304734927	5355	Federal	OW	P
WV EXT 2W-17-8-21	WVX 2W-17-8-20	NWNE	17	080S	210E	4304734928	14253	Federal	GW	P
WV EXT 8W-17-8-21	WVX 8W-17-8-20	SENE	17	080S	210E	4304734929	13792	Federal	GW	P
GH 4MU-20-8-21	GH 4MU-20-8-21	NWNW	20	080S	210E	4304735068	14213	Federal	GW	P
GYPSUM HILLS 13MU-20-8-21	GH 13MU-20-8-20	SWSW	20	080S	210E	4304735070	14817	Federal	GW	P
GH 5W-20-8-21	GH 5W-20-8-21	SWNW	20	080S	210E	4304735097	14557	Federal	GW	P
WVX 3MU-17-8-21	WVX 3MU-17-8-21	NENW	17	080S	210E	4304735318	14113	Federal	GW	P
GH 15ML-18-8-21	GH 15ML-18-8-21	SWSE	18	080S	210E	4304735323	15483	Federal	GW	DRL

QEP Uinta Basin (N2460) to QUESTAR E and P (N5085)  
GYPSUM HILLS UNIT

4/30/2007 and 5/15/2007

Original Well Name	Well Name & No.	Q/Q	SEC	TWP	RNG	API	Entity	Lease	Well Type	Status
GH 1ML-19-8-21	GH 1ML-19-8-21	NENE	19	080S	210E	4304735324	14824	Federal	GW	P
GH 16W-19-8-21	GH 16W-19-8-21	SESE	19	080S	210E	4304735325	14823	Federal	GW	DRL
WVX 14MU-17-8-21	WVX 14MU-17-8-21	SESW	17	080S	210E	4304735369	14098	Federal	GW	P
WVX 12MU-17-8-21	WVX 12MU-17-8-21	NWSW	17	080S	210E	4304735370	15108	Federal	GW	P
WVX 8MU-19-8-21	WVX 8MU-19-8-21	SENE	19	080S	210E	4304735372	14241	Federal	GW	P
GH 10ML-18-8-21	GH 10ML-18-8-21	NWSE	18	080S	210E	4304735391	15482	Federal	GW	P
GH 8G-17-8-21	GH 8G-17-8-21	SENE	17	080S	210E	4304737992	5355	Federal	OW	DRL
GH 16G-17-8-21	GH 16G-17-8-21	SESE	17	080S	210E	4304737993	5355	Federal	OW	DRL
WVX 1MU-17-8-21	WVX 1MU-17-8-21	NENE	17	080S	210E	4304738156		Federal	GW	APD
GH 8MU-20-8-21	GH 8-20-8-21	SENE	20	080S	210E	4304738157		Federal	GW	APD
WVX 13MU-17-8-21	WVX 13MU-17-8-21	SWSW	17	080S	210E	4304738188		Federal	GW	APD
WVX 6MU-17-8-21	WVX 6MU-17-8-21	SENE	17	080S	210E	4304738189		Federal	GW	APD
WVX 4MU-17-8-21	WVX 4MU-17-8-21	NWNW	17	080S	210E	4304738190		Federal	GW	APD
WVX 16MU-18-8-21	WVX 16MU-18-8-21	SESE	18	080S	210E	4304738191		Federal	GW	APD
GH 2MU-19-8-21	GH 2MU-19-8-21	NWNE	19	080S	210E	4304738192		Federal	GW	APD
GH 3MU-19-8-21	GH 3MU-19-8-21	NENW	19	080S	210E	4304738250		Federal	GW	APD
GH 4MU-19-8-21	GH 4MU-19-8-21	NWNW	19	080S	210E	4304738264		Federal	GW	APD
GH 5MU-19-8-21	GH 5MU-19-8-21	SWNW	19	080S	210E	4304738265		Federal	GW	APD
GH 6MU-19-8-21	GH 6MU-19-8-21	SENE	19	080S	210E	4304738266		Federal	GW	APD
GH 7MU-19-8-21	GH 7D-19-8-21	SWNE	19	080S	210E	4304738267		Federal	GW	APD
GH 11MU-19-8-21	GH 11MU-19-8-21	NESW	19	080S	210E	4304738268		Federal	GW	APD
GH 12MU-19-8-21	GH 12MU-19-8-21	NWSW	19	080S	210E	4304738269		Federal	GW	APD
GH 15MU-19-8-21	GH 15MU-19-8-21	SWSE	19	080S	210E	4304738270		Federal	GW	APD
GH 14MU-19-8-21	GH 14MU-19-8-21	SESW	19	080S	210E	4304738472		Federal	GW	APD
WVX 1MU-18-8-21	WVX 1MU-18-8-21	NENE	18	080S	210E	4304738659		Federal	GW	APD
WVX 9MU-18-8-21	WVX 9MU-18-8-21	NESE	18	080S	210E	4304738660		Federal	GW	APD
WVX 8MU-18-8-21	GH 8G-18-8-21	SENE	18	080S	210E	4304738661		Federal	GW	APD
GH 6MU-20-8-21	GH 6-20-8-21	SENE	20	080S	210E	4304738662		Federal	GW	APD

**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		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> see attached
<b>3. ADDRESS OF OPERATOR:</b> 1050 17th Street Suite 500 CITY Denver STATE CO ZIP 80265		<b>7. UNIT or CA AGREEMENT NAME:</b> see attached
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: attached COUNTY: Uintah		<b>8. WELL NAME and NUMBER:</b> see attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH		<b>9. API NUMBER:</b> attached
		<b>10. FIELD AND POOL, OR WILDCAT:</b>

**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>1/1/2007</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.

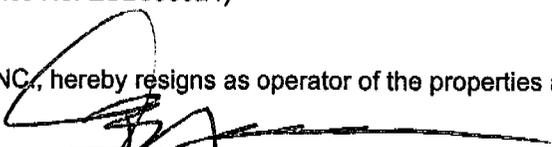
Effective January 1, 2007 operator of record, QEP Uinta Basin, Inc., will hereafter be known as QUESTAR EXPLORATION AND PRODUCTION COMPANY. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible 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)

Utah State Bond Number: 965003033

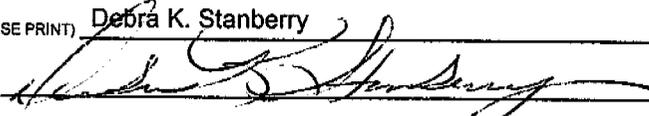
Fee Land Bond Number: 965003033

Current operator of record, QEP UINTA BASIN, INC., hereby resigns as operator of the properties as described on the attached list.

  
Jay B. Neese, Executive Vice President, QEP Uinta Basin, Inc.

Successor operator of record, QUESTAR EXPLORATION AND PRODUCTION COMPANY, hereby assumes all rights, duties and obligations as operator of the properties as described on the attached list

  
Jay B. Neese, Executive Vice President  
Questar Exploration and Production Company

NAME (PLEASE PRINT) <u>Debra K. Stanberry</u>	TITLE <u>Supervisor, Regulatory Affairs</u>
SIGNATURE 	DATE <u>3/16/2007</u>

(This space for State use only)

**RECEIVED**  
**APR 13 2007**

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.

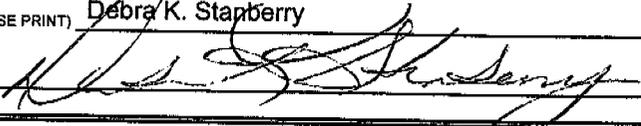
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: see attached
2. NAME OF OPERATOR: QUESTAR EXPLORATION AND PRODUCTION COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: see attached
3. ADDRESS OF OPERATOR: 1050 17th Street Suite 500 City: Denver STATE: CO ZIP: 80265		7. UNIT or CA AGREEMENT NAME: see attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: attached		8. WELL NAME and NUMBER: see attached
PHONE NUMBER: (303) 308-3068		9. API NUMBER: attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		10. FIELD AND POOL, OR WILDCAT:
COUNTY: Uintah		STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>1/1/2007</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> 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>Well Name Changes</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.

PER THE ATTACHED LIST OF WELLS, QUESTAR EXPLORATION AND PRODUCTION COMPANY REQUESTS THAT THE INDIVIDUAL WELL NAMES BE UPDATED IN YOUR RECORDS.

NAME (PLEASE PRINT) <u>Debra K. Stappberry</u>	TITLE <u>Supervisor, Regulatory Affairs</u>
SIGNATURE 	DATE <u>4/17/2007</u>

(This space for State use only)

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APR 19 2007

DIV. OF OIL, GAS & MINING



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

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



IN REPLY REFER TO  
3180  
UT-922

April 23, 2007

Questar Exploration and Production Company  
1050 17th Street, Suite 500  
Denver, Colorado 80265

Re: Gypsum Hills (GR) Unit  
Uintah County, Utah

Gentlemen:

On April 12, 2007, we received an indenture dated April 6, 2007, whereby QEP Uinta Basin, Inc. resigned as Unit Operator and Questar Exploration and Production Company was designated as Successor Unit Operator for the Gypsum Hills (GR) Unit, Uintah County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective April 23, 2007. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Gypsum Hills (GR) Unit Agreement.

Your nationwide oil and gas bond No. ESB000024 will be used to cover all federal operations within the Gypsum Hills (GR) Unit.

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

Sincerely,

/s/ Greg J. Noble

Greg J. Noble  
Acting Chief, Branch of Fluid Minerals

### Enclosure

bcc: Field Manager - Vernal (w/enclosure)  
SITLA  
Division of Oil, Gas & Mining  
File - Gypsum Hills (GR) Unit (w/enclosure)  
Agr. Sec. Chron  
Reading File  
Central Files

UT922:TAThompson:tt:4/23/07

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APR 30 2007

DIV. OF OIL, GAS & MINING

QEP  
GH 8G 17 8 21  
43-047-37992  
17 8S 21E

**CONFIDENTIAL**

11/21/06-12/13/06 Currently drilling @ 4275 as of 12/13/06  
Received 12/13/06

12/14/06-12/21/06 Currently drilling @ 5619 as of 12/21/06  
Received 12/21/06

12/22/06-12/29/06 Currently drilling @ 7722 as of 12/29/06  
Received 12/29/07

12/30/06-1/16/07 TD @ 11050 on 1/10/07, Rig Released on 1/2/07  
Received 1/16/07

CONFIDENTIAL

MONTHLY COMPLETION OPERATIONS REPORT – 1/3/07 – 1/31/07

0210

UINTA BASIN“Completions & New Wells”:T OBS R21E S-17  
43049-37992Uinta Basin Completion Update for 1/3/07 – 1/31/07**GH 8G-17-8-21: (Gudac)**

1/8/07 - Gudac moved over today for completion.  
 1/9/07 – RU Gudac, will RIH tomorrow to retrieve RBP.  
 1/10/07 - TIH to retrieve RBP; TIH to window.  
 1/12/07 - Retrieved RBP; TIH to toe; no problems; acidize Mon.  
 1/15/07 - TIH; retrieved RBP; TIH to toe; no problems; acid job postponed from Mon. until Tues. due to cold temps (-30 to -40 below pending location this a.m.).  
 1/16/07 - TIH; retrieved RBP; TIH to toe; no problems; acid job postponed to Weds.; due to HES trucks tied up.  
 1/17/07 - Acid job pumped per design today; will finish TOOH Thurs.  
 1/18/07 - acid job pumped per design Weds.; had 500 psi SIP this a.m.; was flowing 5 BWPH w/ 35% oil cut before oil starting plugging up flow; will TOOH Fri; then run prod. string & rods.  
 1/19/07 - RU Gudac; acid job pumped per design Weds.; circ out 75 bbls. fluid - 50 bbls. was oil; have plugging prob. w/ paraffin under control; need 2 days back-to-back to TOOH, TIH w/ prod. string & rods and pump which will be Mon./Tues.  
 1/22/07 - TIH w/ rods and pump Tues.  
 1/23/07 - RD Gudac; crane will set PU Weds  
 1/24/07 - RD Gudac; crane set PU Weds  
 1/25/07 - Pumping unit set today, will set production facilities tomorrow.  
 1/26/07 - Pumping unit set yesterday, setting prod facilities today, should start pumping late today / early tomorrow.  
 1/29/07 - Pumping unit started 6:00 p.m. Fri; 155 BO & 65 BW.  
 1/30/07 - Oil 174 BOPD, Water 35 BWPD, FL 2455' over pump, TP 250 psi, CP 100 psi

RECEIVED

FEB 06 2007

DIV. OF OIL, GAS &amp; MINING



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE  
(See other instructions on reverse side.)

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

**CONFIDENTIAL**

- 5. LEASE DESIGNATION AND SERIAL NO.  
**UTU - 68219**
- 6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**UTE INDIAN TRIBE**
- 7. UNIT AGREEMENT NAME  
**GYPSUM HILLS UNIT**
- 8. FARM OR LEASE NAME  
**N/A**
- 9. WELL NO.  
**GH 8G 17 8 21**
- 10. FIELD AND POOL, OR WILDCAT  
**GYPSUM HILLS**
- 11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
**SEC 17-T8S-R21E**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG \***

1a. TYPE OF WELL  
OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION  
NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR  Other \_\_\_\_\_

2. NAME OF OPERATOR  
**QUESTAR EXPLORATION & PRODUCTION CO.**

3. ADDRESS OF OPERATOR  
**1571 East 1700 South - Vernal, UT 84078**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface **SENE, 1778' FNL, 665' FEL, SEC 17-T8S-R21E**  
At top rod. interval reported below **1988 FNL 1590 FWL**  
At total depth **SWNW, 1913' FNL, 750' FWL, SEC 17-T8S-R21E**

14. PERMIT NO. **43-047-37992** DATE ISSUED \_\_\_\_\_

12. COUNTY OR PARISH **UINTAH** 13. STATE **UT**

15. DATE SPUNDED **12/01/06** 16. DATE T.D. REACHED **01/01/07** 17. DATE COMPL. (Ready to prod.) **01/23/07** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* **KB** 19. ELEV. CASINGHEAD \_\_\_\_\_

20. TOTAL DEPTH, MD & TVD **5413' (VERT) TUD 8262' (HORIZ) MD** 21. PLUG BACK T.D., MD & TVD **5452'** 22. IF MULTIPLE COMPL., HOW MANY\* \_\_\_\_\_ 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*  
**G-1 Lime Green River**

25. WAS DIRECTIONAL SURVEY MADE **YES**

27. WAS WELL CORED **NO**

26. TYPE ELECTRIC AND OTHER LOGS RUN  
**CBL**

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	36#	495'	12-1/4"	225 SXS	
7"	26#	5497'	8-3/4"	385 SXS	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	5341'	

31. PERFORATION RECORD (Interval, size and number)  
**N/A - OPEN HOLE 5497' - 8262'**

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5497' - 8262'	Acidized

33. PRODUCTION

DATE FIRST PRODUCTION **01/26/07** PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) \_\_\_\_\_ WELL STATUS (Producing or shut-in) **PRODUCING**

**PUMPING**

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD	OIL-BBL.	GAS-MCF.	WATER-BBL.	GAS-OIL RATIO
01/29/07	24			155	N/A	60	

FLOW. TUBING PRESS. **250** CASING PRESSURE **5** CALCULATED 24-HOUR RATE \_\_\_\_\_ OIL-BBL. \_\_\_\_\_ WATER-BBL. \_\_\_\_\_ OIL GRAVITY-API (CORR.) \_\_\_\_\_

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)  
**OIL - SOLD**

35. LIST OF ATTACHMENTS  
**WELLBORE SCHEMATIC**

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

SIGNED **JIM SIMONTON** TITLE **COMPLETION SUPERVISOR** DATE **06/18/07**

(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (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):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
UINTA	SURFACE		
GREEN RIVER	2482'		
G 1 LIME	5334'		
KICKOFF POINT	4870'		
TD	5413' (VERT)		
TD	8262' (HORIZ)		

38. GEOLOGIC MARKERS  
GH 8G 17 8 21

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
UINTA	SURFACE	
GREEN RIVER	2482'	
G 1 LIME	5334'	
KICKOFF POINT	4870'	
TD	5413' (VERT)	
TD	8262' (HORIZ)	

**CONFIDENTIAL**

SUT08819088

FIELD: Gypsum Hills

GL: 4,718 ' KBE: 4,733 '

Spud Date: 12-1-06 Date of last work: 1-23-07

Well: GH 8G-17-8-21

Vert 5413 ' PBDT: n/a

Current Well Status: Producing Oil Well

Location: SENE SEC 17 TOWN 7S RANGE 21E

Horiz. To 8262'

Reason for Pull/Workover:

Complete Green River G-1 Lime - Horizontal

API#: 43-047 37992

Utah County, Utah

Wellbore Schematic

Surface casing\*

Size: 9 5/8"
Weight: 36#
Grade: K-55
Set @ 495'
Cmtd w/ 225 sxs
Hole size: 12 1/4

EXCLUDED PERES

OPEN PERES

Production Casing\*

Size: 7"
Weight: 26#
Grade: J-55
Set @ 5497' 74\* inclination
Cmtd w/ 385 sxs
Hole size: 9"

4275' vertical to horizontal @ 5633'
Open Hole 5497' - 8262'

Tubing Landing Detail:

Table with 4 columns: Description, Size, Footage, Depth. Rows include KB, Tension, 145 Jts 2 7/8" J-65 tbg, 7" TAC Weatherford, 16 Jts 2 7/8" special hardened pipe, PSN, 1 Jts 2 7/8" special hardened pipe, Pinned NC, and EOT @.

Tubing Information:

Condition:
New: x Used: Rerun:
Grade: J-55
Weight (#/ft): 6.5#

Sucker Rod Detail:

Table with 3 columns: Size, #Rods, Rod Type. Rows include 1 1/2" x 26' Polish Rod, 2-4x7/8", 1-6x7/8", 1-8x7/8" ponies, 7/8" plain rods, 3/4" plain rods, and guided 3/4" rods.

Rod Information

Condition:
New: x Used: Rerun:
Grade:
Manufacture:

Pump Information:

Pump size: 2.5x1.5x20x20.5x21
Make & SN: Weatherford RHAC 3 top cup #1994
Max Stroke: 190" Run Date: 1-23-07
Rerun: New Run: x Rebuild:

ESP Well

Cable Size: SN @
Pump Intake @ PKR @
End of Pump @ EOT @

Flowing Well

Wellhead Detail: Example: 7-1/16" 3000#
7-1/6" 3000#

Other:

Hanger: Yes XX No

SUMMARY

1/17/2007
Bullhead 3000 gal 15% down tbg @ 5-8 bpm. At 8130'
Bullhead 3000 gal 15% down tbg @ 5-8 bpm. At 7733'
Bullhead 4000 gal 15% down tbg @ 5-8 bpm. At 7410'
Bullhead 4000 gal 15% down tbg @ 5-8 bpm. At 7000'
Bullhead 5000 gal 15% down tbg @ 5-8 bpm. At 6750'
Bullhead 4000 gal 15% down tbg @ 5-8 bpm. At 6100'
Swab test well. RIH w/ production tbg & pump & rods.
OPEN HOLE LATERAL 5497' - 8262'

**Deviation Summary**

Well Name: GH 8G-17-8-21 TMD: 8,205.0 (ft) Closure Distance: 3,002.5 (ft)										Location: 17- 8-S 21-E 26 Spud Date: 12/1/2006 Calculation Method: Minimum Curvature		S/T #	V.S. AZI (°)
TVD: 5,413.57 (ft) Closure Direction: 265.98 (°)										OH	268.00		
S/T #	TMD (ft)	Angle (°)	Azimuth (°)	CTM	TVD (ft)	N-S (ft)	E-W (ft)	Vert. Section (ft)	DLS (°/100ft)	BUR (°/100ft)	Type		
OH	568.0	1.00	0.00	NYN	0.00	0.00	0.00	0.00	0.00	0.00	TOT		
OH	1,090.0	1.50	0.00	YNN	521.87	11.39	0.00	-0.40	0.10	0.10	TOT		
OH	1,694.0	1.50	0.00	YNN	1,125.67	27.20	0.00	-0.95	0.00	0.00	TOT		
OH	2,370.0	1.00	0.00	YNN	1,801.50	41.95	0.00	-1.46	0.07	-0.07			
OH	2,997.0	0.50	0.00	YNN	2,428.45	50.15	0.00	-1.75	0.08	-0.08			
OH	3,601.0	1.50	0.00	YNN	3,032.35	60.69	0.00	-2.12	0.17	0.17			
OH	4,275.0	1.27	0.00	YNN	3,706.15	76.98	0.00	-2.69	0.03	-0.03			
OH	4,787.0	1.18	215.93	NYN	4,786.55	-54.04	16.14	-15.69	0.00	0.00	MWD		
OH	4,820.0	2.88	284.35	YNN	4,819.53	-54.11	15.14	-13.24	8.12	5.15	MWD		
OH	4,852.0	4.51	287.95	YNN	4,851.46	-53.52	13.16	-11.29	5.14	5.09	MWD		
OH	4,883.0	6.00	287.47	YNN	4,882.33	-52.66	10.46	-8.61	4.81	4.81	MWD		
OH	4,912.0	7.96	290.34	YNN	4,911.12	-51.51	7.13	-5.33	6.86	6.76			
OH	4,944.0	10.31	290.60	YNN	4,942.71	-49.73	2.37	-0.63	7.34	7.34			
OH	4,976.0	12.75	286.59	YNN	4,974.06	-47.71	-3.70	5.36	8.02	7.63			
OH	5,007.0	14.88	280.72	YNN	5,004.16	-46.00	-10.89	12.49	8.22	6.87			
OH	5,039.0	17.19	276.72	YNN	5,034.92	-44.68	-19.62	21.17	8.00	7.22			
OH	5,070.0	19.44	274.60	YNN	5,064.35	-43.73	-29.31	30.82	7.57	7.26			
OH	5,102.0	21.75	274.22	YNN	5,094.30	-42.86	-40.54	42.01	7.23	7.22			
OH	5,135.0	23.90	273.13	YNN	5,124.71	-42.05	-53.31	54.75	6.64	6.52	MWD		
OH	5,167.0	26.25	271.97	YNN	5,153.70	-41.45	-66.86	68.26	7.50	7.34	MWD		
OH	5,198.0	28.75	271.62	YNN	5,181.19	-41.01	-81.16	82.55	8.08	8.06			
OH	5,231.0	31.54	271.74	YNN	5,209.72	-40.52	-97.73	99.08	8.46	8.45			
OH	5,262.0	35.50	270.60	YNN	5,235.56	-40.18	-114.84	116.17	12.93	12.77	MWD		
OH	5,279.0	37.88	270.10	YNN	5,249.20	-40.12	-125.00	126.32	14.11	14.00	MWD		
OH	5,293.0	40.45	269.82	YNN	5,260.05	-40.12	-133.84	135.16	18.40	18.36	MWD		
OH	5,325.0	45.05	270.42	YNN	5,283.54	-40.07	-155.55	156.86	14.43	14.38	MWD		
OH	5,357.0	49.94	270.60	YNN	5,305.16	-39.86	-179.14	180.42	15.29	15.28	MWD		
OH	5,388.0	55.01	270.32	YNN	5,324.03	-39.67	-203.71	204.97	16.37	16.35	MWD		
OH	5,420.0	60.25	269.96	YNN	5,341.16	-39.60	-230.73	231.97	16.40	16.38	MWD		
OH	5,438.0	63.63	269.55	YNN	5,349.62	-39.67	-246.61	247.85	18.88	18.78	MWD		
OH	5,506.0	74.88	269.80	YNN	5,373.67	-40.03	-310.10	311.31	16.55	16.54	MWD		
OH	5,537.0	75.03	268.55	YNN	5,381.72	-40.46	-340.03	341.24	3.92	0.48	MWD		
OH	5,569.0	78.13	268.65	YNN	5,389.14	-41.22	-371.15	372.36	9.69	9.69	MWD		

**Deviation Summary**

Well Name: GH 8G-17-8-21 TMD: 8,205.0 (ft) Closure Distance: 3,002.5 (ft)										Location: 17- 8-S 21-E 26 Spud Date: 12/1/2006 Calculation Method: Minimum Curvature		S/T #	V.S. AZI (°)
TVD: 5,413.57 (ft) Closure Direction: 265.98 (°)										OH	268.00		
S/T #	TMD (ft)	Angle (°)	Azimuth (°)	CTM	TVD (ft)	N/-S (ft)	E/-W (ft)	Vert. Section (ft)	DLS (°/100ft)	BUR (°/100ft)	Type		
OH	5,601.0	84.35	268.39	YNN	5,394.02	-42.04	-402.75	403.97	19.45	19.44	MWD		
OH	5,633.0	90.92	269.08	YNN	5,395.34	-42.74	-434.69	435.92	20.64	20.53	MWD		
OH	5,666.0	95.11	269.76	YNN	5,393.60	-43.08	-467.64	468.86	12.86	12.70	MWD		
OH	5,698.0	96.58	269.62	YNN	5,390.34	-43.25	-499.47	500.68	4.61	4.59	MWD		
OH	5,728.0	97.98	269.03	YNN	5,386.54	-43.60	-529.23	530.43	5.06	4.67	MWD		
OH	5,760.0	99.09	268.35	YNN	5,381.79	-44.32	-560.86	562.07	4.06	3.47	MWD		
OH	5,778.0	99.00	267.65	YNN	5,378.96	-44.94	-578.63	579.84	3.87	-0.50	MWD		
OH	5,794.0	97.52	267.69	YNN	5,376.66	-45.59	-594.45	595.68	9.25	-9.25	MWD		
OH	5,823.0	95.70	267.47	YNN	5,373.32	-46.80	-623.23	624.48	6.32	-6.28	MWD		
OH	5,855.0	96.17	267.23	YNN	5,370.02	-48.27	-655.02	656.31	1.65	1.47	MWD		
OH	5,886.0	96.88	266.81	YNN	5,366.49	-49.87	-685.78	687.10	2.66	2.29	MWD		
OH	5,918.0	95.44	266.05	YNN	5,363.06	-51.86	-717.53	718.91	5.08	-4.50	MWD		
OH	5,950.0	95.25	266.51	YNN	5,360.08	-53.92	-749.33	750.75	1.55	-0.59	MWD		
OH	5,982.0	93.52	265.61	YNN	5,357.63	-56.12	-781.16	782.64	6.09	-5.41	MWD		
OH	6,015.0	91.34	265.16	YNN	5,356.23	-58.77	-814.02	815.57	6.75	-6.61	MWD		
OH	6,045.0	89.57	265.05	YNN	5,355.99	-61.33	-843.91	845.53	5.91	-5.90	MWD		
OH	6,077.0	88.26	265.05	YNN	5,356.60	-64.09	-875.78	877.48	4.09	-4.09	MWD		
OH	6,109.0	89.40	265.47	YNN	5,357.25	-66.73	-907.66	909.44	3.80	3.56	MWD		
OH	6,142.0	90.51	266.13	YNN	5,357.28	-69.15	-940.57	942.41	3.91	3.36	MWD		
OH	6,174.0	91.20	265.52	YNN	5,356.80	-71.48	-972.49	974.39	2.88	2.16	MWD		
OH	6,207.0	89.97	265.63	YNN	5,356.47	-74.02	-1,005.39	1,007.36	3.74	-3.73	MWD		
OH	6,235.0	90.04	266.08	YNN	5,356.46	-76.05	-1,033.31	1,035.34	1.63	0.25	MWD		
OH	6,298.0	88.31	267.85	YNN	5,357.37	-79.38	-1,096.21	1,098.31	3.93	-2.75	MWD		
OH	6,329.0	87.69	268.22	YNN	5,358.45	-80.45	-1,127.17	1,129.30	2.33	-2.00	MWD		
OH	6,361.0	86.79	268.22	YNN	5,359.99	-81.44	-1,159.12	1,161.26	2.81	-2.81	MWD		
OH	6,393.0	86.88	268.60	YNN	5,361.76	-82.32	-1,191.06	1,193.21	1.22	0.28	MWD		
OH	6,425.0	87.07	268.22	YNN	5,363.45	-83.21	-1,223.00	1,225.16	1.33	0.59	MWD		
OH	6,456.0	87.66	268.11	YNN	5,364.87	-84.20	-1,253.95	1,256.13	1.94	1.90	MWD		
OH	6,488.0	88.19	267.89	YNN	5,366.03	-85.32	-1,285.91	1,288.11	1.79	1.66	MWD		
OH	6,520.0	89.00	267.22	YNN	5,366.82	-86.68	-1,317.88	1,320.10	3.28	2.53	MWD		
OH	6,551.0	89.74	267.30	YNN	5,367.16	-88.17	-1,348.84	1,351.09	2.40	2.39	MWD		
OH	6,583.0	87.69	267.35	YNN	5,367.87	-89.66	-1,380.79	1,383.08	6.41	-6.41	MWD		
OH	6,615.0	86.29	267.62	YNN	5,369.56	-91.06	-1,412.72	1,415.03	4.48	-4.38	MWD		

**Deviation Summary**

Well Name: GH 8G-17-8-21	Location: 17- 8-S 21-E 26	S/T #	V.S. AZI (°)
TMD: 8,205.0 (ft)	TVD: 5,413.57 (ft)	OH	268.00
Closure Distance: 3,002.5 (ft)	Closure Direction: 265.98 (°)	Calculation Method: Minimum Curvature	

S/T #	TMD (ft)	Angle (°)	Azimuth (°)	CTM	TVD (ft)	N-S (ft)	E-W (ft)	Vert. Section (ft)	DLS (°/100ft)	BUR (°/100ft)	Type
OH	6,647.0	86.19	267.35	YNN	5,371.65	-92.46	-1,444.62	1,446.96	0.90	-0.31	MWD
OH	6,678.0	88.11	268.50	YNN	5,373.19	-93.58	-1,475.56	1,477.92	7.22	6.19	MWD
OH	6,709.0	90.06	268.97	YNN	5,373.69	-94.27	-1,506.54	1,508.92	6.47	6.29	MWD
OH	6,741.0	90.43	268.97	YNN	5,373.55	-94.84	-1,538.54	1,540.91	1.16	1.16	MWD
OH	6,772.0	90.73	268.21	YNN	5,373.24	-95.60	-1,569.53	1,571.91	2.64	0.97	MWD
OH	6,804.0	91.63	268.10	YNN	5,372.58	-96.64	-1,601.50	1,603.90	2.83	2.81	MWD
OH	6,846.0	90.80	267.64	YNN	5,371.69	-98.20	-1,643.46	1,645.89	2.26	-1.98	MWD
OH	6,877.0	90.11	267.16	YNN	5,371.44	-99.60	-1,674.43	1,676.89	2.71	-2.23	MWD
OH	6,909.0	86.25	267.10	YNN	5,372.46	-101.20	-1,706.37	1,708.86	12.06	-12.06	MWD
OH	6,940.0	86.07	267.55	YNN	5,374.54	-102.65	-1,737.27	1,739.79	1.56	-0.58	MWD
OH	6,971.0	87.13	267.35	YNN	5,376.37	-104.02	-1,768.18	1,770.73	3.48	3.42	MWD
OH	7,003.0	88.71	267.48	YNN	5,377.54	-105.47	-1,800.13	1,802.71	4.95	4.94	MWD
OH	7,034.0	89.81	267.85	YNN	5,377.94	-106.73	-1,831.10	1,833.71	3.74	3.55	MWD
OH	7,066.0	90.46	267.76	YNN	5,377.86	-107.95	-1,863.07	1,865.71	2.05	2.03	MWD
OH	7,098.0	91.04	267.83	YNN	5,377.44	-109.19	-1,895.05	1,897.70	1.83	1.81	MWD
OH	7,129.0	89.81	267.08	YNN	5,377.21	-110.56	-1,926.01	1,928.70	4.65	-3.97	MWD
OH	7,161.0	87.63	266.60	YNN	5,377.93	-112.33	-1,957.96	1,960.68	6.98	-6.81	MWD
OH	7,192.0	87.23	266.96	YNN	5,379.32	-114.06	-1,988.87	1,991.64	1.74	-1.29	MWD
OH	7,224.0	87.34	266.35	YNN	5,380.83	-115.93	-2,020.78	2,023.60	1.93	0.34	MWD
OH	7,254.0	87.90	266.20	YNN	5,382.08	-117.88	-2,050.70	2,053.56	1.93	1.87	MWD
OH	7,286.0	86.82	265.86	YNN	5,383.55	-120.09	-2,082.58	2,085.51	3.54	-3.38	MWD
OH	7,318.0	86.27	266.02	YNN	5,385.48	-122.35	-2,114.45	2,117.43	1.79	-1.72	MWD
OH	7,349.0	86.58	266.19	YNN	5,387.41	-124.45	-2,145.31	2,148.35	1.14	1.00	MWD
OH	7,381.0	87.13	266.23	YNN	5,389.17	-126.57	-2,177.20	2,180.29	1.72	1.72	MWD
OH	7,413.0	85.90	265.97	YNN	5,391.11	-128.74	-2,209.06	2,212.21	3.93	-3.84	MWD
OH	7,444.0	85.47	265.43	YNN	5,393.45	-131.06	-2,239.89	2,243.10	2.22	-1.39	MWD
OH	7,475.0	86.44	265.48	YNN	5,395.63	-133.51	-2,270.71	2,273.99	3.13	3.13	MWD
OH	7,506.0	87.47	265.38	YNN	5,397.28	-135.97	-2,301.57	2,304.91	3.34	3.32	MWD
OH	7,538.0	88.44	264.90	YNN	5,398.42	-138.68	-2,333.43	2,336.85	3.38	3.03	MWD
OH	7,570.0	88.72	264.80	YNN	5,399.22	-141.55	-2,365.29	2,368.79	0.93	0.88	MWD
OH	7,601.0	89.10	265.54	YNN	5,399.80	-144.16	-2,396.18	2,399.75	2.68	1.23	MWD
OH	7,633.0	92.08	264.16	YNN	5,399.48	-147.03	-2,428.04	2,431.70	10.26	9.31	MWD
OH	7,665.0	93.08	263.87	YNN	5,398.03	-150.37	-2,459.84	2,463.59	3.25	3.13	MWD

**Deviation Summary**

Well Name: GH 8G-17-8-21	Location: 17- 8-S 21-E 26	S/T #	V.S. AZI (°)
TMD: 8,205.0 (ft)	TVD: 5,413.57 (ft)	OH	268.00
Closure Distance: 3,002.5 (ft)	Closure Direction: 265.98 (°)	Calculation Method: Minimum Curvature	

S/T #	TMD (ft)	Angle (°)	Azimuth (°)	CTM	TVD (ft)	N-S (ft)	E-W (ft)	Vert. Section (ft)	DLS (°/100ft)	BUR (°/100ft)	Type
OH	7,696.0	93.54	263.67	YNN	5,396.25	-153.73	-2,490.60	2,494.45	1.62	1.48	MWD
OH	7,728.0	93.08	263.28	YNN	5,394.40	-157.36	-2,522.34	2,526.30	1.88	-1.44	MWD
OH	7,759.0	92.11	262.90	YNN	5,392.99	-161.08	-2,553.08	2,557.15	3.36	-3.13	MWD
OH	7,791.0	90.97	262.82	YNN	5,392.13	-165.06	-2,584.82	2,589.01	3.57	-3.56	MWD
OH	7,823.0	90.31	263.54	YNN	5,391.78	-168.86	-2,616.59	2,620.89	3.05	-2.06	MWD
OH	7,855.0	90.61	263.66	YNN	5,391.52	-172.42	-2,648.39	2,652.80	1.01	0.94	MWD
OH	7,887.0	91.10	263.48	YNN	5,391.04	-176.01	-2,680.19	2,684.70	1.63	1.53	MWD
OH	7,919.0	89.60	263.09	YNN	5,390.85	-179.75	-2,711.97	2,716.59	4.84	-4.69	MWD
OH	7,934.0	87.86	263.10	YNN	5,391.18	-181.55	-2,726.86	2,731.53	11.60	-11.60	MWD
OH	7,983.0	87.77	263.00	YNN	5,393.05	-187.48	-2,775.46	2,780.31	0.27	-0.18	MWD
OH	8,015.0	87.72	263.25	YNN	5,394.31	-191.30	-2,807.21	2,812.17	0.80	-0.16	MWD
OH	8,046.0	87.06	263.19	YNN	5,395.72	-194.96	-2,837.96	2,843.03	2.14	-2.13	MWD
OH	8,079.0	83.13	264.69	YNN	5,398.54	-198.43	-2,870.64	2,875.82	12.74	-11.91	MWD
OH	8,110.0	81.68	265.25	YNN	5,402.64	-201.13	-2,901.25	2,906.50	5.01	-4.68	MWD
OH	8,142.0	81.41	264.83	YNN	5,407.34	-203.86	-2,932.79	2,938.11	1.55	-0.84	MWD
OH	8,158.0	82.13	264.10	YNN	5,409.63	-205.39	-2,948.55	2,953.92	6.37	4.50	MWD
OH	8,158.0	83.33	264.43	YNN	5,409.63	-205.39	-2,948.55	2,953.92	0.00	0.00	mwd
OH	8,205.0	87.06	263.32	YNN	5,413.57	-210.39	-2,995.11	3,000.62	8.28	7.94	mwd

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

CA No.		Unit:		GYPSUM HILLS (GRRV)				
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
- Is the new operator registered in the State of Utah: Business Number: 764611-0143
- (R649-9-2) Waste Management Plan has been received on: Requested
- Inspections of LA PA state/fee well sites complete on: n/a
- 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
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965010695
- 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.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER See attached
2. NAME OF OPERATOR: Questar Exploration and Production Company <i>N5085</i>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: See attached
3. ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 CITY Denver STATE CO ZIP 80265		7. UNIT or CA AGREEMENT NAME: See attached
PHONE NUMBER: (303) 672-6900		8. WELL NAME and NUMBER: See attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See attached		9. API NUMBER: Attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		10. FIELD AND POOL, OR WILDCAT: See attached
COUNTY: 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"/> NOTICE OF INTENT (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"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> 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~~  
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

(See Instructions on Reverse Side)

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)  
 GYPSUM HILLS (GRRV)  
 effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
GH 4	19	080S	210E	4304730028	5355	Federal	OW	P	
GH 1-19	19	080S	210E	4304731065	5355	Federal	OW	P	
GH 23-21	21	080S	210E	4304731541	5355	Federal	OW	P	
GH 4-21	21	080S	210E	4304731826	5355	Federal	OW	P	
GH 5-21	21	080S	210E	4304731827	5355	Federal	OW	P	
GH 9	20	080S	210E	4304732304	5355	Federal	OW	DRL	C
GH 11	20	080S	210E	4304732459	5355	Federal	OW	P	
GH 13	21	080S	210E	4304732460	5355	Federal	OW	P	
GH 14	20	080S	210E	4304732647	5355	Federal	OW	P	
GH 18	20	080S	210E	4304732650	5355	Federal	OW	P	
GH 19	20	080S	210E	4304732651	5355	Federal	OW	P	
GH 20	20	080S	210E	4304732652	5355	Federal	OW	P	
GH 16	20	080S	210E	4304732675	5355	Federal	OW	P	
GH 10W-19-8-21	19	080S	210E	4304733528	12736	Federal	GW	P	
GH 10G-19-8-21	19	080S	210E	4304733566	5355	Federal	OW	P	
WV 11W-17-8-21	17	080S	210E	4304733912	13228	Federal	GW	P	
WV 5W-17-8-21	17	080S	210E	4304733954	13332	Federal	GW	P	
WV 7W-17-8-21	17	080S	210E	4304733956	13330	Federal	GW	P	
GH 9W-17-8-21	17	080S	210E	4304734150	13392	Federal	GW	P	
GH 16W-17-8-21	17	080S	210E	4304734156	13354	Federal	GW	P	
WVX 10W-17-8-21	17	080S	210E	4304734561	13744	Federal	GW	P	
GHX 15W-17-8-21	17	080S	210E	4304734562	13674	Federal	GW	P	
GHX 13HG-17-8-21	17	080S	210E	4304734723	5355	Federal	OW	P	
GH 1G-17-8-21	17	080S	210E	4304734927	5355	Federal	OW	P	
WVX 2W-17-8-21	17	080S	210E	4304734928	14253	Federal	GW	P	
WVX 8W-17-8-21	17	080S	210E	4304734929	13792	Federal	GW	P	
GH 4MU-20-8-21	20	080S	210E	4304735068	14213	Federal	GW	P	
GH 13MU-20-8-21	20	080S	210E	4304735070	14817	Federal	GW	P	
GH 5W-20-8-21	20	080S	210E	4304735097	14557	Federal	GW	P	
WVX 3MU-17-8-21	17	080S	210E	4304735318	14113	Federal	GW	P	
GH 15ML-18-8-21	18	080S	210E	4304735323	15483	Federal	GW	P	
GH 1ML-19-8-21	19	080S	210E	4304735324	14824	Federal	GW	P	
WVX 14MU 17-8-21	17	080S	210E	4304735369	14098	Federal	GW	P	
WVX 12MU-17-8-21	17	080S	210E	4304735370	15108	Federal	GW	P	
WVX 8MU-19-8-21	19	080S	210E	4304735372	14241	Federal	GW	P	
GH 10ML-18-8-21	18	080S	210E	4304735391	15482	Federal	GW	P	
GH 8G-17-8-21	17	080S	210E	4304737992	5355	Federal	OW	P	
GH 16G-17-8-21	17	080S	210E	4304737993	5355	Federal	OW	P	
GH 8G-18-8-21	18	080S	210E	4304738661		Federal	GW	APD	C
GH 6-20-8-21	20	080S	210E	4304738662	17041	Federal	GW	P	

Bonds: BLM = ESB000024  
 BIA = 956010693  
 State = 965010695



# 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>



IN REPLY REFER TO:  
3100  
(UT-922)

JUL 28 2010

### Memorandum

To: Vernal Field Office, Price Field Office, Moab Field Office

From: Chief, Branch of Minerals

*Roy L. Bankart*

Subject: Name Change Recognized

Attached is a copy of the Certificate of Name Change issued by the Texas Secretary of State and a decision letter recognizing the name change from the Eastern States Office. We have updated our records to reflect the name change in the attached list of leases.

The name change from **Questar Exploration and Production Company** into **QEP Energy Company** is effective June 8, 2010.

cc: MMS  
UDOGM

RECEIVED

AUG 16 2010

DIV. OF OIL, GAS & MINERALS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
1595 WYNKOOP STREET
DENVER, CO 80202-1129
http://www.epa.gov/region8

MAY 16 2012

Ref: 8P-W-UIC

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED
MAY 23 2012
DIV. OF OIL, GAS & MINING

Morgan Anderson
QEP Energy Company
Independence Plaza
1050 17th Street, Suite 500
Denver, Colorado 80265

Accepted by the
Utah Division of
Oil, Gas and Mining

FOR RECORD ONLY

Re: FINAL Permit
EPA UIC Permit UT22222-09434
Well: GH 8G-17-8-21
SENE Sec. 17-T8S-R21E
Uintah County, Utah
API No.: 43-047-37992

Dear Ms. Anderson:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Program Permit for the proposed GH 8G-17-8-21 injection well. A Statement of Basis that discusses the conditions and requirements of this Environmental Protection Agency (EPA) UIC Permit, is also included.

The public comment period for this permit ended on 5/11/12. No comments on the draft permit were received during the public notice period; therefore the effective date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this final permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the final permit, Part II Section C.1, and obtain written Authorization to Inject from EPA. It is your responsibility to be familiar with and to comply with all provisions of your final permit. The EPA forms referenced in the permit are available at http://www.epa.gov/safewater/uic/reportingforms.html. Guidance documents for Cement Bond Logging, Radioactive Tracer Testing, Step Rate Testing, Mechanical Integrity Demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at http://www.epa.gov/region8/water/uic/deep\_injection.html. Upon request, hard copies of the EPA forms and guidances can be provided.

This EPA UIC permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

If you have any questions on the enclosed final permit or Statement of Basis, please call Bruce Suchomel of my staff at (303) 312-6001, or toll-free at (800) 227-8917, ext. 312-6001.

Sincerely,



 Callie A. Videtich  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis

cc: letter only

Uintah & Ouray Business Committee  
Irene Cuch, Chairman  
Ronald Wopsock, Vice-Chairman  
Frances Poowegup, Councilwoman  
Phillip Chimburas, Councilman  
Stewart Pike, Councilman  
Richard Jenks, Jr., Councilman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

with enclosures

Mike Natchees  
Environmental Coordinator  
Ute Indian Tribe

Manual Myore  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Brad Hill  
Acting Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Robin Hansen  
Fluid Minerals Engineering Office  
BLM - Vernal Office



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: May 2012

**Permit No. UT22222-09434**

Class II Enhanced Oil Recovery Injection Well

**GH 8G-17-8-21  
Uintah County, UT**

Issued To

**QEP Energy Company**

11002 East 17500 South

Vernal, UT 84078

## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

QEP Energy Company  
11002 East 17500 South  
Vernal, UT 84078

is authorized to construct and to operate the following Class II injection well or wells:

GH 8G-17-8-21  
Surface Location: 1778' FNL 665' FEL  
Bottom Hole Location: 1996' FNL 1564' FWL, SENE S17, T8S, R21E  
Uintah County, UT

EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR §144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: 5/15/12

Effective Date 5/15/12



Callie A. Videtich  
Acting Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

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## PART II. SPECIFIC PERMIT CONDITIONS

### Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least seven calendar days prior to any mechanical integrity test unless the mechanical integrity test is conducted after a well construction, well conversion, or a well rework, in which case any prior notice is sufficient. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

**1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

**2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

**3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

**4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

**5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

**6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## PART III. CONDITIONS APPLICABLE TO ALL PERMITS

### Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### Section B. CHANGES TO PERMIT CONDITIONS

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

**2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

**3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

**4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

**5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

**6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

**7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

**8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

**9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See diagram.

The GH 8G-17-8-21 enhanced oil recovery injection well is drilled to a Total Measured Depth (TMD) of 8,262'. The production casing is set at 5,497' MD. The injection zone, including all perforations, is within the horizontal portion of the well.

#### FORMATION DATA:

- \* Base of USDWs: Publication 92 approximates the depth at 2,218'.
- \* Confining Zone:  
Douglas Creek Member Upper 5,155' - 5,420' MD, or 5,134' - 5,330' True Vertical Depth (TVD).
- \* Injection Zone:  
G1 Lime 5,497' - 8,262' MD, or 5,344' - 5,418' TVD.

#### WELL CONSTRUCTION:

Surface Casing (9-5/8", 36# K-55) is set to a depth of 495' in a 12-1/4" hole, cemented to the surface using 225 sacks of Class G cement.

Production Casing (7", 26# J-55) is set to a depth of 5,497' MD in a 9" hole using 385 sacks of Class G cement. At the time of this permit no CBL is available, and the TOC is not identified.

Perforations: The perforations will be entirely within the horizontal portion of this well, between 5,497' and 8,262' MD.

The packer will be set no higher than 100' above the lowermost vertical portion of the wellbore prior to the beginning of the horizontal portion of the well.

FIELD: REDWASH

GL 4,718' KBE: 4,733'

TE 5413' TVC PBTD 5413' TVD

.8262' MD .8262' MD

WELL NAME: GH 8G-17-8-21

Location: SENE SEC 17 TOWN 7S RANGE 21E

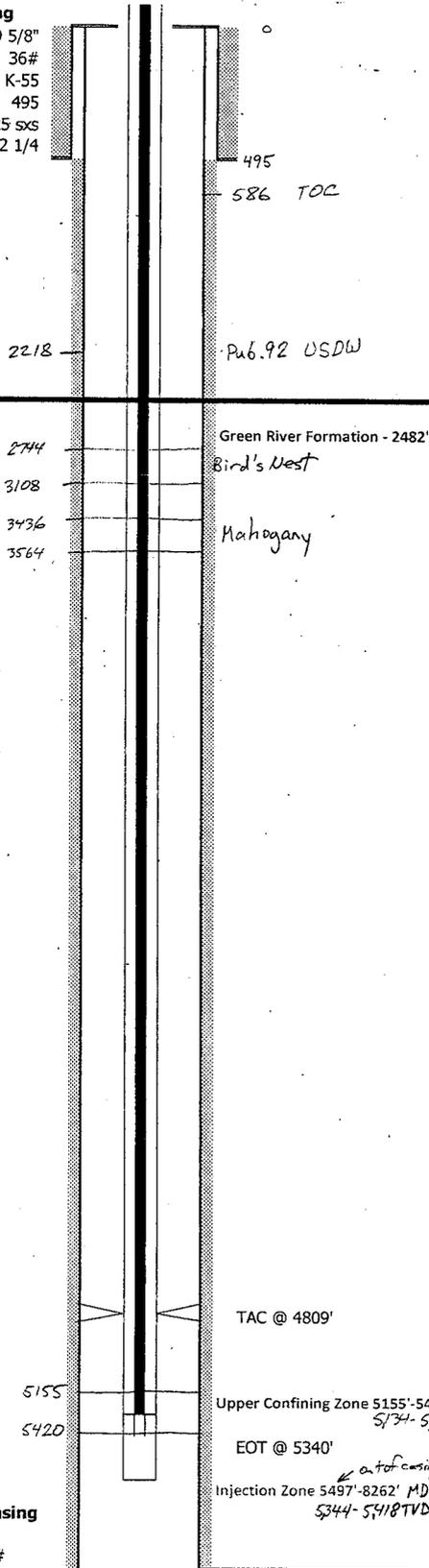
API#: 43-047- 37992

Uintah County, Utah

Current Schematic

Surface casing

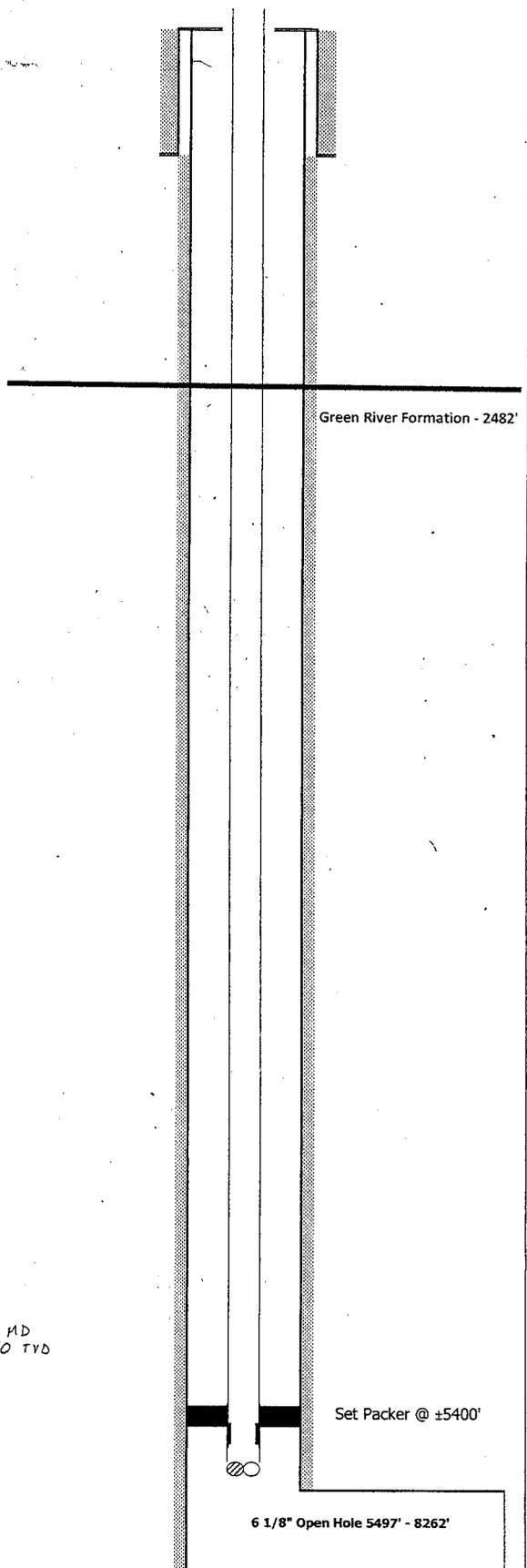
Size: 9 5/8"  
Weight: 36#  
Grade: K-55  
Set @ 495  
Cmtd w/ 225 sxs  
Hole size: 12 1/4"



Production Casing

Size: 7"  
Weight: 26#  
Grade: J-55  
Set @ 5497'  
74\* inclination  
Cmtd w/ 385 sxs  
Hole size: 9"

Proposed Schematic



## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

A successful RTS will be considered a valid confirmation that cementing records show adequate cement to prevent the upward migration of injection fluids from the injection zone at injection pressures up to the MAIP, until one of the following events occurs, at which time a subsequent RTS is required:

- (a) If the submitted RTS is determined to be inconclusive or inadequate by EPA.
- (b) If the MAIP of the injection well is exceeded for any reason (it is a violation to exceed the MAIP without prior EPA approval).
- (c) If new injection perforations are added to the injection well, either through the creation of new perforations or the adjustment of the packer depth to inject into a set of existing perforations that were previously inactive.
- (d) If the injection formation is acid-treated, hydraulically stimulated, or stimulated by any other method through the injection well, which may affect the cement integrity of the well.
- (e) If the Director requests that a RTS be run for any reason.

A submitted RTS which indicates the movement of fluid behind casing from the injection zone will result in a requirement to demonstrate Part II Mechanical Integrity using an approved Part II demonstration method such as a temperature log, oxygen activation log, or noise log at a frequency no less than once every five years.

**WELL NAME:** GH 8G-17-8-21

<b>TYPE OF LOG</b>	<b>DATE DUE</b>
Porosity	Prior to receiving authorization to inject.
CBL/VDL/GAMMA RAY	All AOR wells. Prior to receiving authorization to inject. If a new CBL is not run through the Lower Confining Zone (LCZ), a RATS must be run through the LCZ.
RATS	All AOR wells. RATS is req'd prior to authorization to inject (unless a limited authorization to inject is obtained in order to produce a valid test) and at least once every 5 years after the last successful demonstration of Part II MI.
TEMP	All AOR wells. If a new CBL is not run, and the RATS is unsuccessful, must run a Temperature, Oxygen Activation, or Noise Log to determine Part II MI. Conduct Temp Log frequency IAW current guidance.

**Tests.**

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

**WELL NAME:** GH 8G-17-8-21

<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Standard Annulus Pressure	Prior to authorization to inject and at least once every 5 years after the last successful demonstration of Part I Mechanical Integrity.
Pore Pressure	Prior to receiving authorization to inject.
Step Rate Test	Prior to receiving authorization to inject. The SRT shall be performed following current EPA guidance.
Injection Zone Water Sample	Prior to receiving authorization to inject, a representative sample (stabilized specific conductivity from three successive swab runs) from the injection zone will be analyzed for TDS, pH, Specific Gravity and Specific Conductivity.

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
GH 8G-17-8-21	1,615

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: GH 8G-17-8-21	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
	FORMATION NAME		
G1 zone	5,344.00	5,418.00	0.750

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
<b>OBSERVE AND RECORD</b>	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)
ANNUALLY	
<b>ANALYZE</b>	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH
ANNUALLY	
<b>REPORT</b>	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to APPENDIX B - LOGGING AND TESTING REQUIREMENTS.

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State, or local laws or regulations. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within 60 days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG 1: Seal Injection Zone:** Set a Cast Iron Bridge Plug (CIBP) or a Cast Iron Cement Retainer (CICR) at a depth of 5,450'. (Typically this plug needs to be no more than 50' above the top perforation, but the perforations lie within the horizontal portion of this well.) Set at least 100' of Class G cement on top.

**PLUG 2: Seal Mahogany Bench and Bird's Nest:** Set a CIBP or CICR at a depth of 3,614', which is 50' below the base of the Mahogany. Set a cement plug on top that goes to at least 2,694', which is 50' above the top of the Bird's Nest. This allows one plug to seal both the Mahogany Bench and Bird's Nest formations.

**PLUG 3: Seal Green River:** Set a CIBP or CICR at a depth of 2,632', which is 50' below the top of the Green River Formation. Set at least 100' of cement on top.

**PLUG 4: Seal the surface:** Place a cement plug across the casing from 50' to surface. Operator may elect to plug from a deeper depth to surface.

FIELD: REDWASH

GL 4,718' KBE: 4,733'

WELL NAME: GH 8G-17-8-21

TD 5413' TVC PBD 5413' TVD  
8262' MD 8262' MD

Location: SENE SEC 17 TOWN 7S RANGE 21E

API#: 43-047- 37992

Uintah County, Utah

Current Schematic

Surface casing

Size: 9 5/8"  
Weight: 36#  
Grade: K-55  
Set @ 495  
Cmtd w/ 225 sxs  
Hole size: 12 1/4

Cement from 50' to Surface

Plug 4

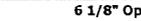
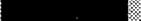
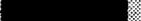
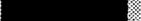
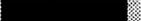
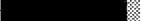
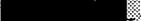
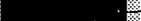
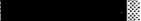
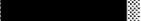
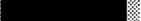
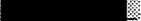
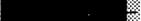
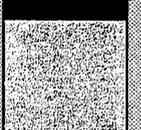
Perforate at 500', circulate cement back to surface in the 9 5/8" - 7" annulus

Optional Plug

2218

Rub 92 USDW

2532



Plug 3  
CIBP-2632

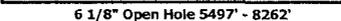
Plug 2

Plug 1

Production Casing

Size: 7"  
Weight: 26#  
Grade: J-55  
Set @ 5497'  
74\* inclination  
Cmtd w/ 385 sxs  
Hole size: 9"

CIBP @ ~~5450'~~ 5,450'  
capped with 100' cmt



6 1/8" Open Hole 5497' - 8262'

CIBP = Cast Iron Bridge Plug  
CICR = Cast Iron Cement Retainer

IZ = Injection Zone  
CZ = Confining Zone

IZ 5344-5418 TVD  
5497-8262 MD

## APPENDIX F

### CORRECTIVE ACTION REQUIREMENTS

No corrective action is deemed necessary for this project. (Unless the logging/testing requirements shown in Appendix B are not met regarding adequate cement for the AOR wells.)

# STATEMENT OF BASIS

**QEP ENERGY COMPANY  
GH 8G-17-8-21  
UINTAH COUNTY, UT**

**EPA PERMIT NO. UT22222-09434**

**CONTACT:** Bruce Suchomel  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6001

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

QEP Energy Company  
11002 East 17500 South  
Vernal, UT 84078

on

December 9, 2011

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

GH 8G-17-8-21  
Surface Location: 1778' FNL 665' FEL  
Bottom Hole Location: 1996' FNL 1564' FWL, SENE S17, T8S, R21E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

<b>TABLE 1.1</b>		
<b>WELL STATUS / DATE OF OPERATION</b>		
<b>CONVERSION WELLS</b>		
<b>Well Name</b>	<b>Well Status</b>	<b>Date of Operation</b>
GH 8G-17-8-21	Conversion	N/A

## PART II. Permit Considerations (40 CFR 146.24)

## Hydrogeologic Setting

### GREEN RIVER FORMATION

The Green River Formation is mostly lacustrine shale that contains some limestone, marlstone, and siltstone. The formation includes beds of oil shale and of carbonate evaporite. The Green River interfingers with both the overlying Uinta and the underlying Wasatch Formation, as well as laterally with other formations near the edges of the basin.

The Green River Formation is very low to low permeability except where fractured. Sandstones near oil-shale beds have values of transmissivity from 0.9 to 2.4 sq ft/day. In most of the basin the formation yields only saline or briny water, though in and near the areas of outcrop in the southern part of the basin the water is fresh to slightly saline, and in the area of the outcrop near Strawberry Reservoir the water is fresh where the formation is fractured.

### WASATCH FORMATION

In most of the basin, the Wasatch Formation is mainly lacustrine shale, sandstone, and conglomerate. It interfingers with the overlying and underlying formations and laterally with the North Horn, Carrant Creek, and Green River Formations. The Wasatch outcrops only in the far eastern end of the northern Uinta Basin and in the canyons of deeply incised streams in the southern Uinta Basin.

The Wasatch Formation is very low to low permeability, except where fractured. In the Greater Altamont-Bluebell oil field, the Wasatch sands reportedly have only 4 to 5 percent porosity, but are permeable because of fracturing. Much of the water produced with petroleum is moderately saline to very saline; generally, however, the water is less mineralized than is water from the Green River Formation.

### Geologic Setting (TABLE 2.1)

The well is located in the Gypsum Hills area in the central portion of the Uinta Basin. The majority of the Basin is located in northeastern Utah, with a small portion in northwest Colorado. The basin is bounded on the north by the east-west trending Uinta Mountains and the Uinta Basin boundary fault and a gently dipping south flank. The basin was formed in Paleocene to early Eocene time creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed sediments deposited in and around Lake Uinta make up the Uinta and Green River Formations.

The Uinta Formation generally consists of 5' to 20' thick brown lenticular fluvial sandstone and interbedded varicolored shales. The Uinta is underlain by the Green River Formation which consists of interbedded lake (lacustrine) margin sandstones, limestones and shale beds. The cyclic nature of Green River deposition resulted in numerous stacked deltaic deposits. The Green River Formation is a highly oil-productive formation from which over 500 billion barrels have been produced. Several distinct geologic hydrocarbon productive members within the Green River formation are identified as the Evaluation Creek, Parachute Creek, Garden Gulch, Douglas Creek, and Basal Carbonate Members.

Formation depths below the G1 Lime injection zone are estimates only.

**TABLE 2.1  
GEOLOGIC SETTING  
GH 8G-17-8-21**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta fm.	0	2,482		Shale and sandstone.
Green River fm.	2,482	6,089		Shale and sandstone.
Evacuation Creek mbr	2,570	2,744		Shale and sandstone.
Birds Nest zone	2,744	3,108	17,500	Shale with nodular trona.
Parachute Creek mbr	3,108	4,414		Shale and sandstone.
Mahogany zone	3,436	3,564		Oil shale.
Garden Gulch mbr	4,414	5,155		Shale and sandstone.
Douglas Creek mbr	5,134	5,330		Shale and sandstone.
G1 zone	5,344	5,418	18,600	Limestone and sandstone.
lwr Douglas Creek mbr	5,580	6,089		Shale and sandstone. Depths are estimates.
Wasatch fm	6,089	9,319		Shale and sandstone. Depths are estimates.

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The Douglas Creek member and the G1 Lime interval shown in the geologic setting, injection zones, and confining zones tables (Tables 2.1, 2.2, and 2.3) are given in True Vertical Depth (TVD).

**TABLE 2.2  
INJECTION ZONES  
GH 8G-17-8-21**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
G1 zone	5,344	5,418	18,600	0.750		N/A

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

**TABLE 2.3  
CONFINING ZONES  
GH 8G-17-8-21**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Douglas Creek Mbr	Shale and sandstone. (Note the top and bottom is in TVD.)	5,134	5,330
lwr Douglas Creek mbr	Shale and sandstone.	5,580	6,089

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

**TABLE 2.4  
UNDERGROUND SOURCES OF DRINKING WATER (USDW)  
GH 8G-17-8-21**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	Shale and sandstone.	0	2,482	< 10,000

**PART III. Well Construction (40 CFR 146.22)**

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**GH 8G-17-8-21**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Surface	12.25	9.63	0 - 495	0 - 495
Intermediate	8.75	7.00	0 - 5,497	586 - 5,497

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

**Casing and Cementing (TABLE 3.1)**

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

The cased interval noted in Table 3.1 is in Measured Depth (MD).

**Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

**Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

**Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

**TABLE 4.1  
AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
GH 1G17-8-21	Producer	No	8,316		Unk
WV 12BML16-8-21	Producer	No	11,550	330	Unk
WV 5W17-8-21	Producer	No	7,873	990	Unk
WV 7W17-8-21	Producer	No	7,775	1,506	Unk
WVX 10W17-8-21	Producer	No	7,932	2,170	Unk
WVX 2W-17-8-21	Producer	No	7,900	2,241	Yes
WVX 3MU17-8-21	Producer	No	10,170	420	Unk
WVX 8W17-8-21	Producer	No	7,852	1,946	Unk

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

Regarding Table 4.1, the "unknown" under CAP required is due to the need to await the outcome of the testing and logging requirements shown in Appendix B. Also, see Appendix B for the CAP required for well WVX 2W-17-8-21.

### Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**GH 8G-17-8-21**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
G1 zone	5,344	0.750	1,615

### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The operator shall run a Step Rate Test (SRT) in order to either verify the initial MAIP or to support an updated MAIP. Since the application's water sample was from another well (14G-4-8-22), the operator shall obtain an injection zone water sample from the injector well for the purposes shown in Appendix B-2.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

- FP = formation fracture pressure (measured at surface)
- fg = fracture gradient (from submitted data or tests)
- sg = specific gravity (of injected fluid)
- d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs

into an aquifer that has been exempted from protection as a USDW.

### **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Surety Bond, received April 11, 2003
--------------------------------------

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

<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> UTU-68219
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE  <b>7. UNIT or CA AGREEMENT NAME:</b> GYPSUM HILLS (GRRV)
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> GH 8G-17-8-21
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY	<b>9. API NUMBER:</b> 43047379920000
<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> 1778 FNL 0665 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENE Section: 17 Township: 08.0S Range: 21.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> GYPSUM HILLS  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>6/19/2012</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input type="text" value="CONVERT TO INJECTION"/>

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

THE GH 8G-17-8-21 WILL BE CONVERTED TO AN INJECTION WELL BY THE FOLLOWING PROCEDURE: 1. POOH WITH EXISTING PRODUCTION EQUIPMENT. 2. RIH WITH TUBING AND PACKER. 3. CIRCULATION PACKER FLUID DOWN CASING. 4. SET PACKER AT 5400'. 5. TEST ANNULUS TO 2000 PSI. 6. PLACE WELL ON INJECTION.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 June 28, 2012**

<b>NAME (PLEASE PRINT)</b> Valyn Davis	<b>PHONE NUMBER</b> 435 781-4369	<b>TITLE</b> Regulatory Affairs Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/19/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-68219
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>1. TYPE OF WELL</b> Water Injection Well		<b>7. UNIT or CA AGREEMENT NAME:</b> GYPSUM HILLS (GRRV)
<b>2. NAME OF OPERATOR:</b> QEP ENERGY COMPANY		<b>8. WELL NAME and NUMBER:</b> GH 8G-17-8-21
<b>3. ADDRESS OF OPERATOR:</b> 11002 East 17500 South , Vernal, Ut, 84078		<b>9. API NUMBER:</b> 43047379920000
<b>PHONE NUMBER:</b> 303 308-3068 Ext		<b>9. FIELD and POOL or WILDCAT:</b> GYPSUM HILLS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1778 FNL 0665 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENE Section: 17 Township: 08.0S Range: 21.0E Meridian: S		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH

11.

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

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: 4/24/2013	<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: <input type="text" value="COMMENCED INJECTION"/>

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

THIS WELL COMMENCED INJECTION: 04/24/2013

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
May 14, 2013**

<b>NAME (PLEASE PRINT)</b> Valyn Davis	<b>PHONE NUMBER</b> 435 781-4369	<b>TITLE</b> Regulatory Affairs Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/2/2013	



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>  
**APR 12 2013**

Ref: 8P-W-UIC

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Morgan Anderson  
QEP Energy  
1050 17<sup>th</sup> Street, Suite 500  
Denver, Colorado 80265

Accepted by the  
Utah Division of  
Oil, Gas and Mining

**FOR RECORD ONLY**

RE: Underground Injection Control (UIC)  
Authorization to Commence Injection  
EPA UIC Permit UT22222-09434  
Well: GH 8G-17-8-21  
SESW Sec. 17-T8S-R21E  
Uintah County, Utah  
API # 43-047-37992

Dear Ms. Anderson:

The QEP Energy Company (QEP) has satisfactorily completed the Environmental Protection Agency Region 8 "Prior to Commencing Injection" requirements for Final Permit UT22222-09434 effective the date of this letter. The Step Rate Test (SRT) was received by the EPA on March 22, 2013, and approved on April 4, 2013. The standard annulus pressure test was received by the EPA on March 26, 2013, and also approved on April 4, 2013. The other test requirements were previously approved on February 25, 2013, including the pore pressure and water samples.

As of the date of this letter, QEP is authorized to commence injection into GH 8G-17-8-21 at the permitted maximum authorized injection pressure (MAIP) of 1,615 psig. Until such time as the permittee demonstrates through an updated SRT that the Fracture Gradient is other than that shown in Appendix C of the final permit, GH 8G-17-8-21 shall be operated at an MAIP of no greater than 1,615 psig.

As of this approval, responsibility for permit compliance and enforcement is transferred to the EPA Region 8 UIC Technical Enforcement Program Office. Therefore, please direct all monitoring and compliance correspondence, referencing your well name and UIC Permit number on all correspondence regarding this well to:

Ms. Sarah Roberts  
Technical Enforcement Program – UIC  
USEPA Region 8: Mail Code 8ENF-UFO  
1595 Wynkoop Street  
Denver, Colorado 80202-1129

Please remember that it is QEP's responsibility to be aware of, and to comply with, all conditions of Permit UT22222-09434 for the GH 8G-17-8-21 enhanced recovery injection well.

If you have questions regarding the above action, please call Bruce Suchomel at (303) 312-6001 or (800) 227- 8917, extension 312-6001.

Sincerely,



*for* Derrith R. Watchman-Moore  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc:

Uintah & Ouray Business Committee  
Irene Cuch, Chairman  
Ronald Wopsock, Vice-Chairman  
Frances Poowegup, Councilwoman  
Phillip Chimburas, Councilman  
Stewart Pike, Councilman  
Richard Jenks, Jr., Councilman

Johnna Blackhair  
BIA - Uintah & Ouray Indian Agency

Mike Natchees  
Environmental Coordinator  
Ute Indian Tribe

Manual Myore  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Brad Hill  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Robin Hansen  
Fluid Minerals Engineering Office  
BLM - Vernal Office



Independence Plaza  
1050 17th Street, Suite 500  
Denver, CO 80265  
Tel: 303.672.6900  
Fax: 303.294.9632

RECEIVED

JAN 13 2016

DIV. OF OIL, GAS & MINING

January 8, 2016

U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

Attn: Don Breffle

RE: Mechanical Integrity Test (MIT)  
**GH 8G-17-8-21**  
UIC# UT22222-09434  
API# 43-047-37992  
Location: Sec. 17, T8S, R21E, Uintah County, UT

Dear Mr. Breffle:

Please be advised that the above captioned well passed a successful Mechanical Integrity Test (MIT) on January 6, 2016. Enclosed please find a Pressure Test Chart and a Casing or Annulus Pressure Test form recorded from the test. The well has been shut in since September 16, 2014. The MIT for this well was a regularly scheduled test.

If you have any additional questions or concerns, please don't hesitate to contact me at (303) 260-6745 or via email at [laura.abrams@qepres.com](mailto:laura.abrams@qepres.com).

Sincerely,

Laura Abrams  
Sr. Regulatory Affairs Analyst

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
For Record Only

Enclosures: MIT Casing or Annulus Pressure Test Form  
MIT Results Spreadsheet with Pressure Test Chart

cc: Utah Division of Oil Gas and Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, UT 84114-5801

Bureau of Land Management  
Vernal Field Office  
170 South 500 East  
Vernal, UT 84078

## MECHANICAL INTEGRITY TEST CASING OR ANNULUS PRESSURE TEST

U.S. ENVIRONMENTAL PROTECTION AGENCY  
UNDERGROUND INJECTION CONTROL PROGRAM, UIC IMPLEMENTATION SECTION (8P-W-GW)  
999 18TH STREET, SUITE 300, DENVER, CO. 80202-2466

EPA WITNESS: NONE DATE: 1/6/2016 TIME: 12:30  AM  PM

TEST CONDUCTED BY: TONY JENNE QEP ENERGY COMPANY

OTHERS PRESENT: CODY BROMLEY D&M HOT OIL SERVICE

API NUMBER 43-047-37992 EPA ID NUMBER- UT22222-09434

WELL NAME: <u>GH 8G-17-8-21</u>		TYPE: <input checked="" type="checkbox"/> ER <input type="checkbox"/> SWD	STATUS: <input type="checkbox"/> AC <input checked="" type="checkbox"/> TA <input type="checkbox"/> UC
FIELD: <u>GYPSUM HILLS</u>			
WELL LOCATION: <u>SE/4, NE/4</u>	<u>Sec 17</u>	<u>Sec 17</u>	T8 <input type="checkbox"/> N <input checked="" type="checkbox"/> S
		R21 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	COUNTY: <u>UINTAH</u> STATE: <u>UTAH</u>
OPERATOR: <u>QEP ENERGY COMPANY</u>			
LAST MIT: <u>1/6/2014</u>	MAXIMUM ALLOWABLE PRESSURE:		<u>1615</u> PSIG

IS THIS A REGULAR SCHEDULED TEST?  YES  NO

INITIAL TEST FOR PERMIT?  YES  NO

TEST AFTER WELL WORK?  YES  NO

WELL INJECTING DURING TEST?  YES  NO IF YES, RATE: \_\_\_\_\_ BPD

PRE-TEST CASING/TUBING ANNULUS PRESSURE: \_\_\_\_\_ 0 :PSIG

MIT DATA TABLE	TEST #1	TEST #2	TEST #3
TUBING	PRESSURE		
INITIAL PRESSURE	<u>13</u> PSIG	PSIG	PSIG
END OF TEST PRESSURE	<u>14</u> PSIG	PSIG	PSIG
CASING/TUBING	ANNULUS	TUBING	
0 MINUTES	<u>1052.5</u> PSIG	<u>41</u> PSIG	PSIG
5 MINUTES	<u>1046.8</u> PSIG	<u>22</u> PSIG	PSIG
10 MINUTES	<u>1044.3</u> PSIG	<u>15</u> PSIG	PSIG
15 MINUTES	<u>1042.8</u> PSIG	<u>14</u> PSIG	PSIG
20 MINUTES	<u>1041.7</u> PSIG	<u>13</u> PSIG	PSIG
25 MINUTES	<u>1040.7</u> PSIG	<u>13</u> PSIG	PSIG
30 MINUTES	<u>1039.9</u> PSIG	<u>12</u> PSIG	PSIG
MINUTES	PSIG	PSIG	PSIG
MINUTES	PSIG	PSIG	PSIG
RESULT	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL

DOES THE ANNULUS PRESSURE BUILD BACK UP AFTER THE TEST?  YES  NO

Date	Time	Casing Pressure	Tubing Pressure	Temp
1/6/2016	1:46:06	0	13	66
1/6/2016	1:46:22	0		66
1/6/2016	1:46:38	0		66
1/6/2016	1:46:54	0		66
1/6/2016	1:47:10	0		66
1/6/2016	1:47:26	0		66
1/6/2016	1:47:42	0		66
1/6/2016	1:47:58	0		66
1/6/2016	1:48:14	0		66
1/6/2016	1:48:30	0		66
1/6/2016	1:48:46	0		66
1/6/2016	1:49:02	0		66
1/6/2016	1:49:18	20.361		66
1/6/2016	1:49:34	87.57		66
1/6/2016	1:49:50	140.81		66
1/6/2016	1:50:06	140.22		66
1/6/2016	1:50:22	196.64		64
1/6/2016	1:50:38	345.07		64
1/6/2016	1:50:54	480.08		64
1/6/2016	1:51:10	483.83		64
1/6/2016	1:51:26	483.3		64
1/6/2016	1:51:42	482.52		64
1/6/2016	1:51:58	481.74		64
1/6/2016	1:52:14	481.01		64
1/6/2016	1:52:30	480.3		64
1/6/2016	1:52:46	479.62		64
1/6/2016	1:53:02	371.47		62
1/6/2016	1:53:18	46.966		62
1/6/2016	1:53:34	43.697		62
1/6/2016	1:53:50	44.273		62
1/6/2016	1:54:06	44.34		62
1/6/2016	1:54:22	0		62
1/6/2016	1:54:38	0		62
1/6/2016	1:54:54	0		62
1/6/2016	1:55:10	44.545		60
1/6/2016	1:55:26	44.598		60
1/6/2016	1:55:42	102.53		60
1/6/2016	1:55:58	241.78		60
1/6/2016	1:56:14	392.25		60
1/6/2016	1:56:30	547.8		60
1/6/2016	1:56:46	726.1		60
1/6/2016	1:57:02	909.9		60

Date	Time	Casing Pressure	Tubing Pressure	Temp
1/6/2016	1:57:18	1062.6		60
1/6/2016	1:57:34	1054.8		60
1/6/2016	1:57:50	1053.5		60
1/6/2016	1:58:06	1053		59
1/6/2016	1:58:22	1052.5	41	59
1/6/2016	1:58:38	1052		59
1/6/2016	1:58:54	1051.5		59
1/6/2016	1:59:10	1051		59
1/6/2016	1:59:26	1050.6		59
1/6/2016	1:59:42	1050.2		59
1/6/2016	1:59:58	1049.9		59
1/6/2016	2:00:14	1049.5		59
1/6/2016	2:00:30	1049.2		57
1/6/2016	2:00:46	1048.9		57
1/6/2016	2:01:02	1048.7		57
1/6/2016	2:01:18	1048.4		57
1/6/2016	2:01:34	1048.2		57
1/6/2016	2:01:50	1047.9		57
1/6/2016	2:02:06	1047.7		57
1/6/2016	2:02:22	1047.5		57
1/6/2016	2:02:38	1047.3		57
1/6/2016	2:02:54	1047.1		57
1/6/2016	2:03:10	1046.9		57
1/6/2016	2:03:26	1046.8	22	55
1/6/2016	2:03:42	1046.6		55
1/6/2016	2:03:58	1046.4		55
1/6/2016	2:04:14	1046.2		55
1/6/2016	2:04:30	1046.1		55
1/6/2016	2:04:46	1045.9		55
1/6/2016	2:05:02	1045.8		55
1/6/2016	2:05:18	1045.6		55
1/6/2016	2:05:34	1045.5		55
1/6/2016	2:05:50	1045.4		55
1/6/2016	2:06:06	1045.3		55
1/6/2016	2:06:22	1045.2		55
1/6/2016	2:06:38	1045.1		55
1/6/2016	2:06:54	1045		53
1/6/2016	2:07:10	1044.8		53
1/6/2016	2:07:26	1044.7		53
1/6/2016	2:07:42	1044.6		53
1/6/2016	2:07:58	1044.6		53
1/6/2016	2:08:14	1044.5		53
1/6/2016	2:08:30	1044.3	15	53
1/6/2016	2:08:46	1044.3		53

Date	Time	Casing Pressure	Tubing Pressure	Temp
1/6/2016	2:09:02	1044.1		53
1/6/2016	2:09:18	1044		53
1/6/2016	2:09:34	1044		53
1/6/2016	2:09:50	1043.9		53
1/6/2016	2:10:06	1043.8		53
1/6/2016	2:10:22	1043.7		53
1/6/2016	2:10:38	1043.7		51
1/6/2016	2:10:54	1043.6		51
1/6/2016	2:11:10	1043.5		51
1/6/2016	2:11:26	1043.4		51
1/6/2016	2:11:42	1043.3		51
1/6/2016	2:11:58	1043.3		51
1/6/2016	2:12:14	1043.2		51
1/6/2016	2:12:30	1043.1		51
1/6/2016	2:12:46	1043		51
1/6/2016	2:13:02	1043		51
1/6/2016	2:13:18	1042.9		51
1/6/2016	2:13:34	1042.8	14	51
1/6/2016	2:13:50	1042.8		51
1/6/2016	2:14:06	1042.7		51
1/6/2016	2:14:22	1042.7		51
1/6/2016	2:14:38	1042.6		50
1/6/2016	2:14:54	1042.6		50
1/6/2016	2:15:10	1042.5		50
1/6/2016	2:15:26	1042.4		50
1/6/2016	2:15:42	1042.4		50
1/6/2016	2:15:58	1042.3		50
1/6/2016	2:16:14	1042.2		50
1/6/2016	2:16:30	1042.2		50
1/6/2016	2:16:46	1042.2		50
1/6/2016	2:17:02	1042.1		50
1/6/2016	2:17:18	1042		50
1/6/2016	2:17:34	1042		50
1/6/2016	2:17:50	1041.9		50
1/6/2016	2:18:06	1041.8		50
1/6/2016	2:18:22	1041.8		50
1/6/2016	2:18:38	1041.7	13	50
1/6/2016	2:18:54	1041.7		50
1/6/2016	2:19:10	1041.6		50
1/6/2016	2:19:26	1041.6		50
1/6/2016	2:19:42	1041.5		48
1/6/2016	2:19:58	1041.5		48
1/6/2016	2:20:14	1041.4		48
1/6/2016	2:20:30	1041.4		48

Date	Time	Casing Pressure	Tubing Pressure	Temp
1/6/2016	2:20:46	1041.3		48
1/6/2016	2:21:02	1041.3		48
1/6/2016	2:21:18	1041.2		48
1/6/2016	2:21:34	1041.2		48
1/6/2016	2:21:50	1041.1		48
1/6/2016	2:22:06	1041.1		48
1/6/2016	2:22:22	1041		48
1/6/2016	2:22:38	1040.9		48
1/6/2016	2:22:54	1040.9		48
1/6/2016	2:23:10	1040.8		48
1/6/2016	2:23:26	1040.8		48
1/6/2016	2:23:42	1040.7	13	48
1/6/2016	2:23:58	1040.7		48
1/6/2016	2:24:14	1040.7		48
1/6/2016	2:24:30	1040.6		48
1/6/2016	2:24:46	1040.6		48
1/6/2016	2:25:02	1040.5		48
1/6/2016	2:25:18	1040.5		48
1/6/2016	2:25:34	1040.4		46
1/6/2016	2:25:50	1040.4		46
1/6/2016	2:26:06	1040.4		46
1/6/2016	2:26:22	1040.4		46
1/6/2016	2:26:38	1040.3		46
1/6/2016	2:26:54	1040.2		46
1/6/2016	2:27:10	1040.2		46
1/6/2016	2:27:26	1040.2		46
1/6/2016	2:27:42	1040.1		46
1/6/2016	2:27:58	1040.1		46
1/6/2016	2:28:14	1040.1		46
1/6/2016	2:28:30	1040		46
1/6/2016	2:28:46	1040		46
1/6/2016	2:29:02	1039.9		46
1/6/2016	2:29:18	1039.9	12	46
1/6/2016	2:29:34	1039.8		46
1/6/2016	2:29:50	1039.8		46
1/6/2016	2:30:06	1039.7		46
1/6/2016	2:30:22	1039.7		46
1/6/2016	2:30:38	1039.7		46
1/6/2016	2:30:54	1039.6		46
1/6/2016	2:31:10	1039.6		46
1/6/2016	2:31:26	1039.6		46
1/6/2016	2:31:42	1039.6		44
1/6/2016	2:31:58	1039.5		44
1/6/2016	2:32:14	1039.5		44

Date	Time	Casing Pressure	Tubing Pressure	Temp
1/6/2016	2:32:30	1039.4		44
1/6/2016	2:32:46	1038.7		44
1/6/2016	2:33:02	756.8		44
1/6/2016	2:33:18	173.97		44
1/6/2016	2:33:34	30.86		44
1/6/2016	2:33:50	32.495		44
1/6/2016	2:34:06	32.94		44
1/6/2016	2:34:22	0		44
1/6/2016	2:34:38	0		44
1/6/2016	2:34:54	0		44
1/6/2016	2:35:10	0		44
1/6/2016	2:35:26	0		44
1/6/2016	2:35:42	0		44
1/6/2016	2:35:58	0		44
1/6/2016	2:36:14	0		44
1/6/2016	2:36:30	0		44
1/6/2016	2:36:46	0		44
1/6/2016	2:37:02	0		44
1/6/2016	2:37:18	0		44
1/6/2016	2:37:34	0		46
1/6/2016	2:37:50	0		46
1/6/2016	2:38:06	0		46
1/6/2016	2:38:22	0		46
1/6/2016	2:38:38	0		46
1/6/2016	2:38:54	0		46
1/6/2016	2:39:10	0		46
1/6/2016	2:39:26	0		46
1/6/2016	2:39:42	0		46
1/6/2016	2:39:58	0		46
1/6/2016	2:40:14	0		46
1/6/2016	2:40:30	0		46
1/6/2016	2:40:46	0		48

