





### **Additional Operator Remarks**

Questar Explor. & Prod. Co. proposes to drill a well to 11,475' to test the MesaVerde. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements"

Please see Questar Explor. & Prod. Co. Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 East.

Please be advised that Questar Explor. & Prod. Co. 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 Questar Explor. & Prod. Co. via surety as consent as provided for the 43 CFR 3104.2.

Questar Exploration & Production, Co.  
WV 4BML-23-8-21

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>Depth</b>
Uinta	Surface
Green River	2774'
Mahogany Ledge	3334'
Wasatch	5909'
Mesa Verde	8939'
Sego	11,354'
TD	11,475'

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>Depth</b>
Oil/Gas	Mesa Verde	11,475'

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.

3. Anticipated Bottom Hole Pressures

Maximum anticipated bottom hole pressure equals approximately 6564.0 psi.

5M BOP STACK

11" Rotating Head

11" Spacer Spool

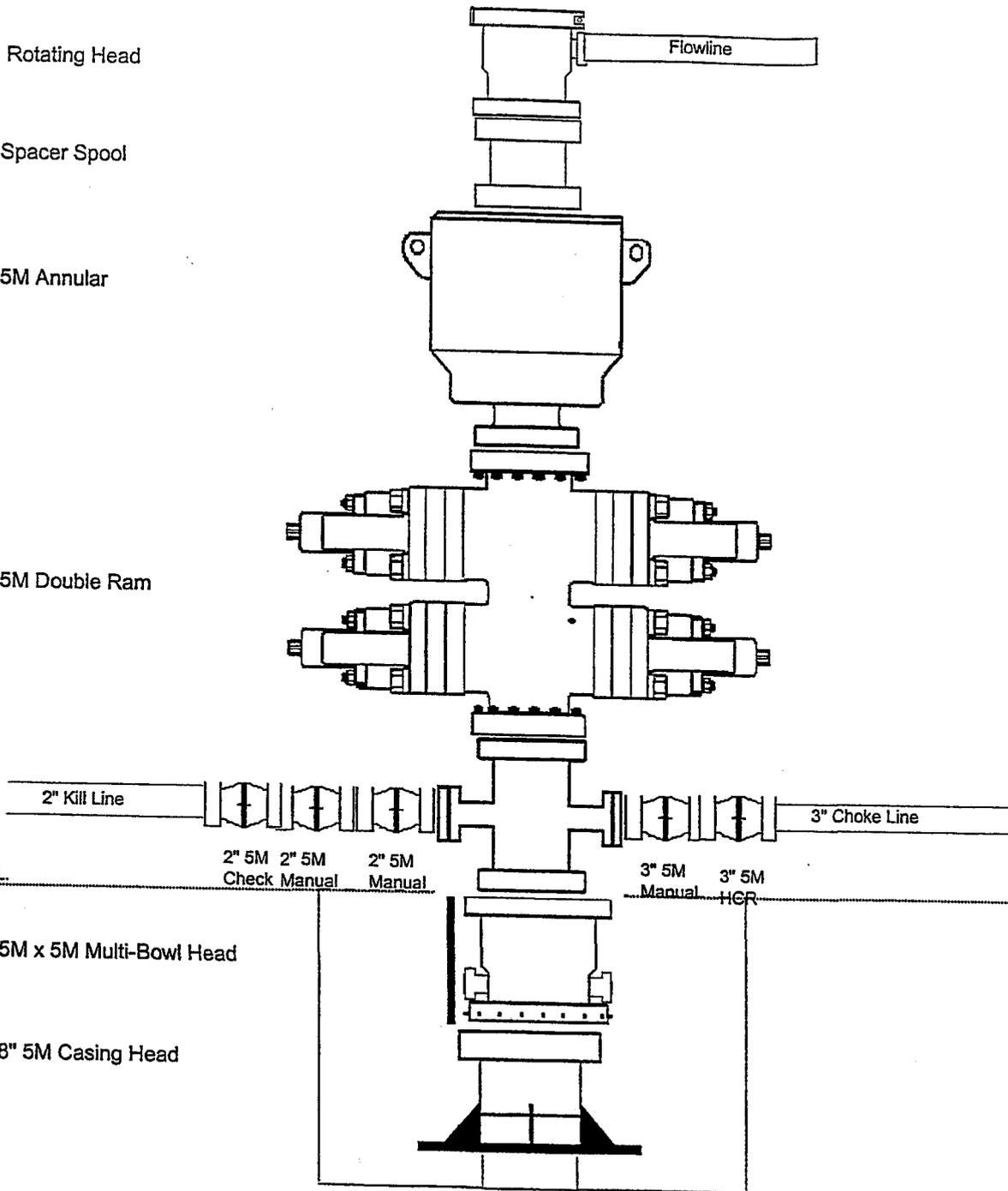
11" 5M Annular

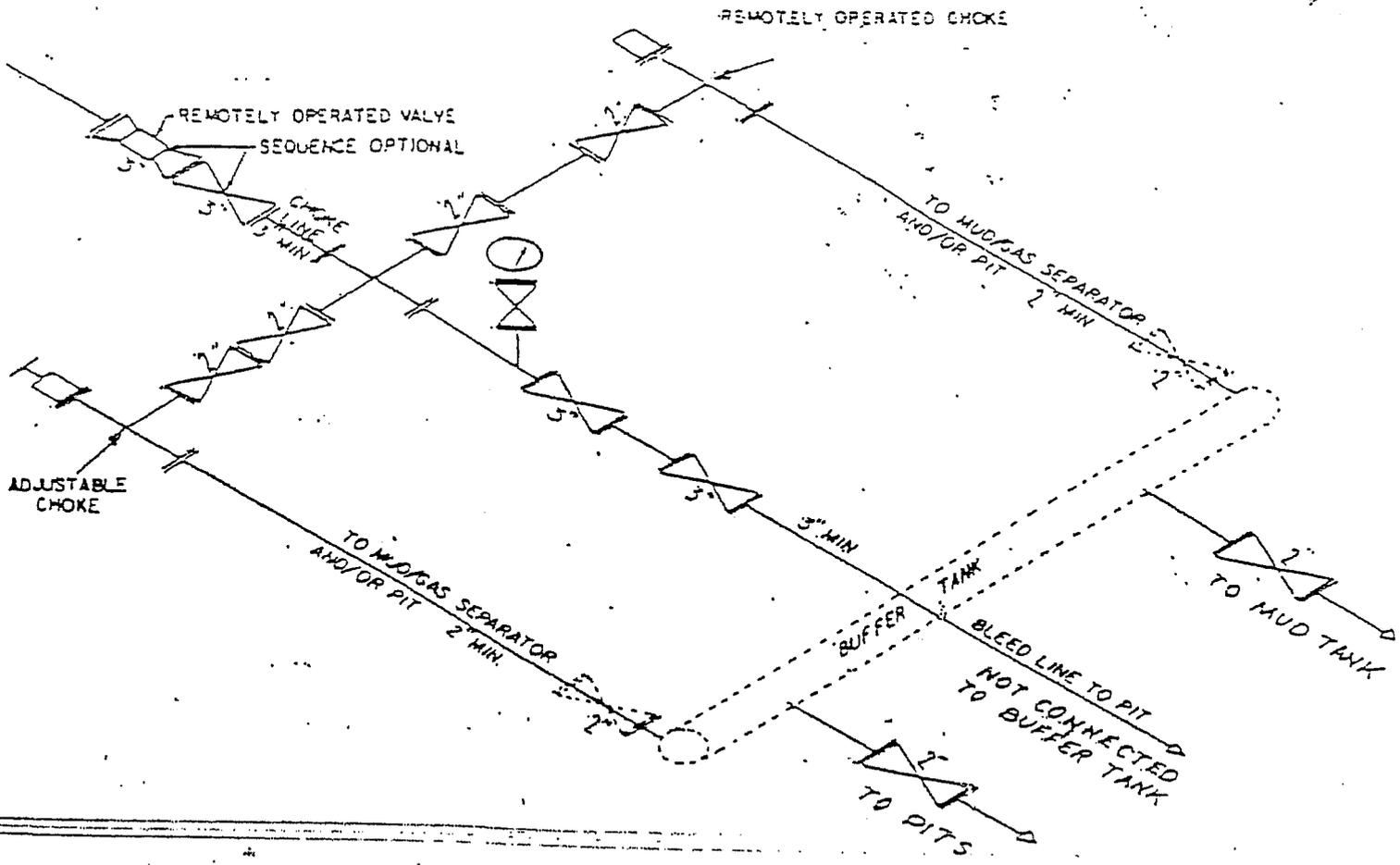
11" 5M Double Ram

G.L.

11" 5M x 5M Multi-Bowl Head

9 5/8" 5M Casing Head





② 5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

[FR Doc. 88-26738 Filed 11-17-88; 2:45 am]  
 BILLING CODE 4310-34-C

QUESTAR EXPLORATION & PRODUCTION, CO.  
WV 4BML-23-8-21  
189' FNL 101' FWL  
NWNW, SECTION 23, T8S, R21E  
UINTAH COUNTY, UTAH  
LEASE # UTU-0809

ONSHORE ORDER NO. 1

MULTI – POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

The proposed well site is approximately 9 miles east of 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 Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 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 Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 East.

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

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

Please see Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 East.

6. **Source of Construction Materials:**

Please see Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 East.

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

Please see Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 East.

8. **Ancillary Facilities:**

Please see Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 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 Questar Explor. & Prod. Co Standard Operating Practices dated October 18, 2005, for Mesa Verde Formation Wells located in Red Wash, Wonsits Valley, Gypsum Hills, White River, Glen Bench, and Undesignated fields in Townships 07, 08 and 09 South, Ranges 21 to 25 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 & Threadgrass

*Final Reclamation:*

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

11. **Surface Ownership:**

The well pad and access road are located on lands owned by:

Ute Tribe

PO Box 70

FT. Duchesne, UT 84026

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.  
Questar Exploration & Production, Co.  
1571 East 1700 South  
Vernal, Utah 84078  
(435) 781-4032

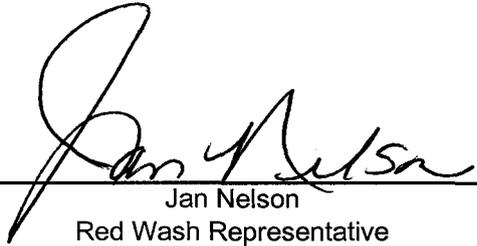
**Certification:**

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 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 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

01-Feb-07  
\_\_\_\_\_  
Date

# QUESTAR EXPLR. & PROD.

WV #4BML-23-8-21

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 23, T8S, R21E, S.L.B.&M.

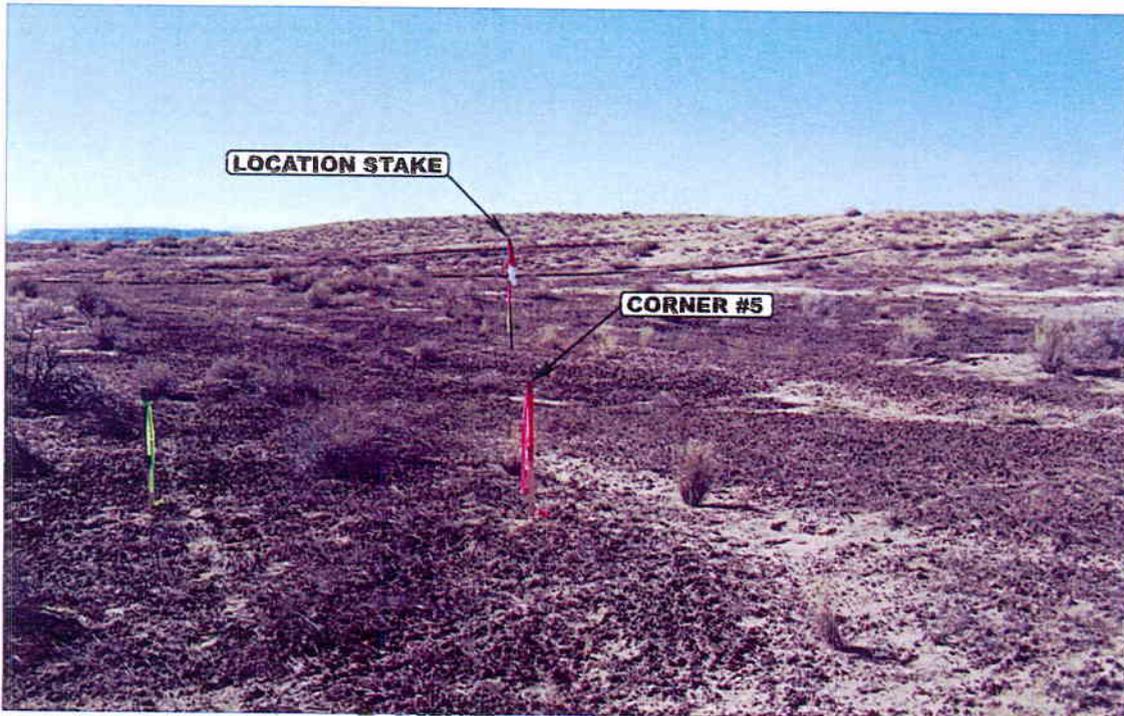


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: WESTERLY

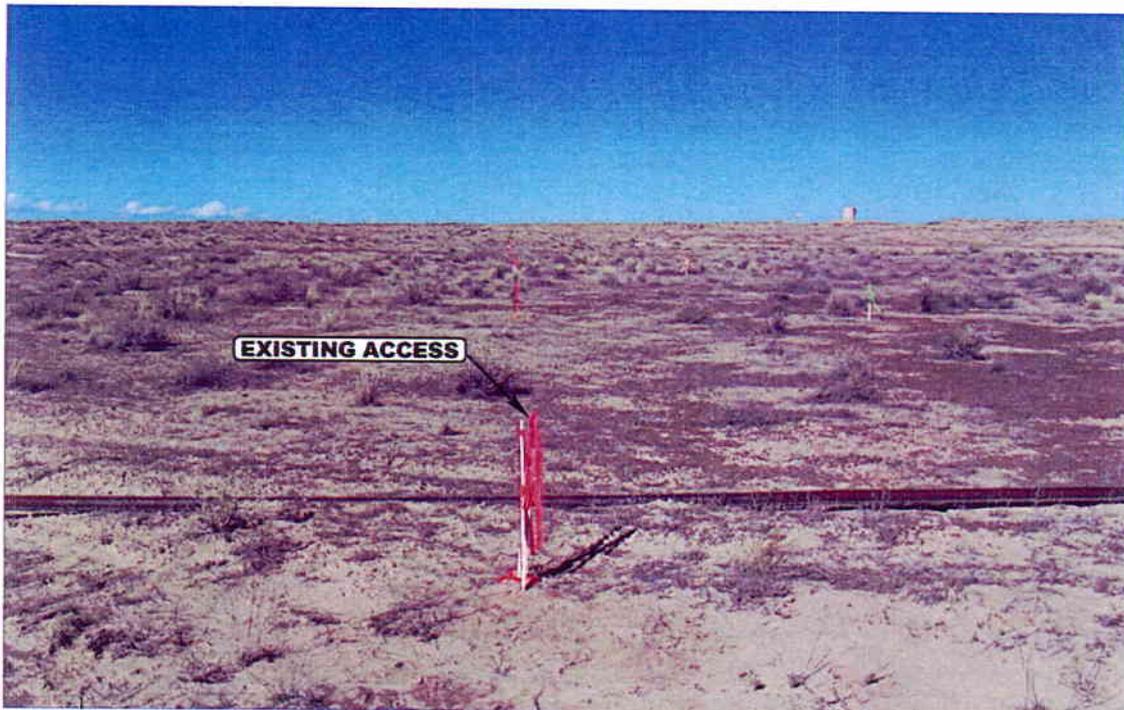


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHERLY



- Since 1964 -

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

LOCATION PHOTOS

10 19 06  
MONTH DAY YEAR

PHOTO

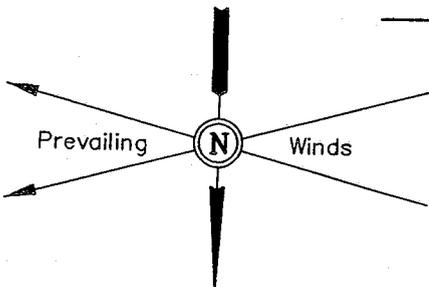
TAKEN BY: D.A. DRAWN BY: L.K. REVISED: 00-00-00

QUESTAR EXPLR. & PROD.

FIGURE #1

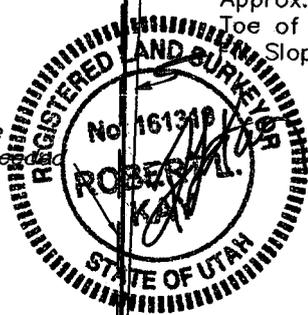
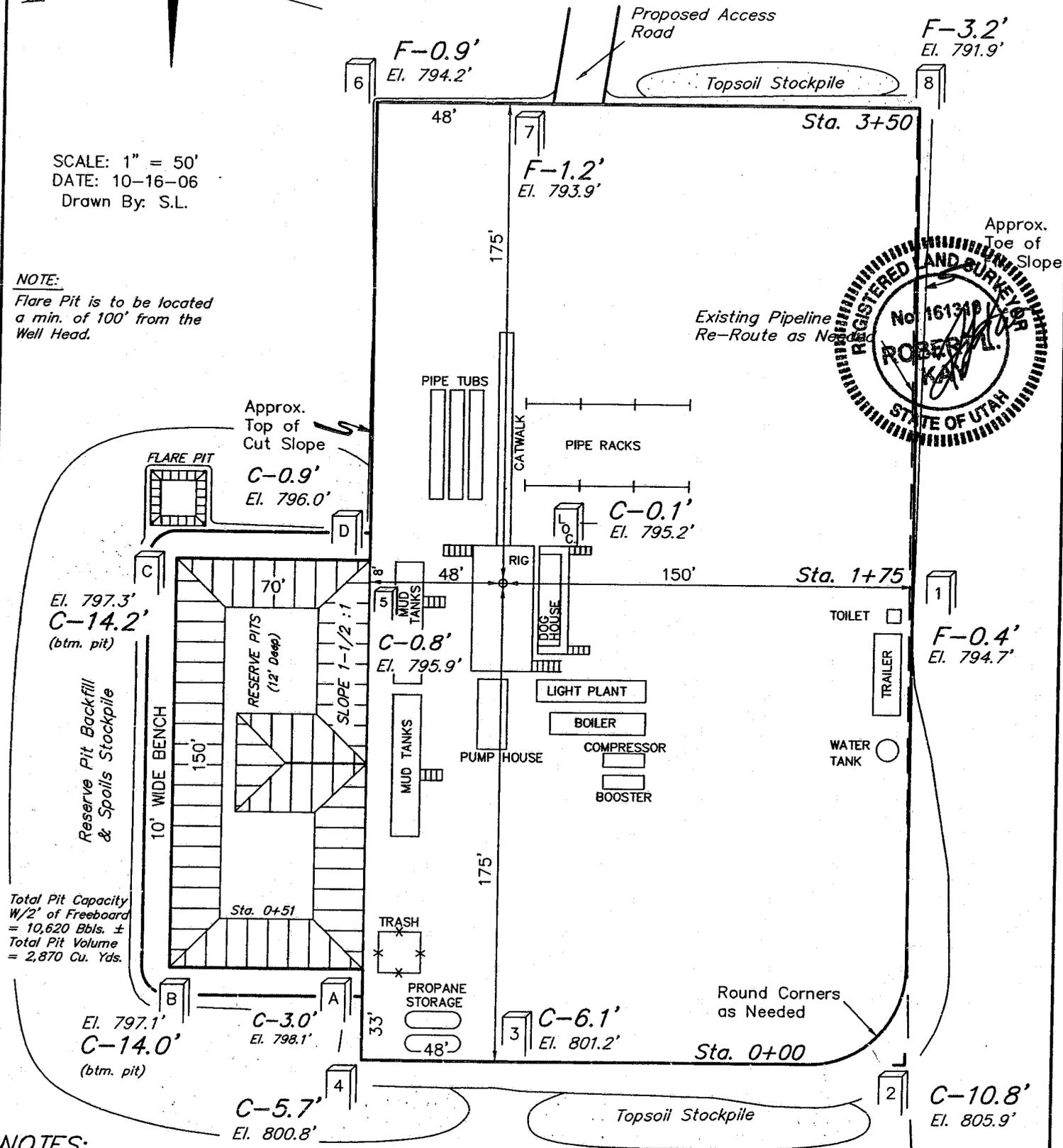
LOCATION LAYOUT FOR

WV #4BML-23-8-21  
SECTION 23, T8S, R21E, S.L.B.&M.  
189' FNL 101' FWL



SCALE: 1" = 50'  
DATE: 10-16-06  
Drawn By: S.L.

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



NOTES:

Elev. Ungraded Ground At Loc. Stake = 4795.2'  
FINISHED GRADE ELEV. AT LOC. STAKE = 4795.1'

QUESTAR EXPLR. & PROD.

FIGURE #2

TYPICAL CROSS SECTIONS FOR

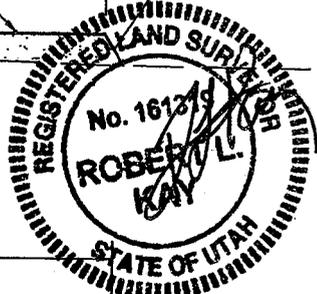
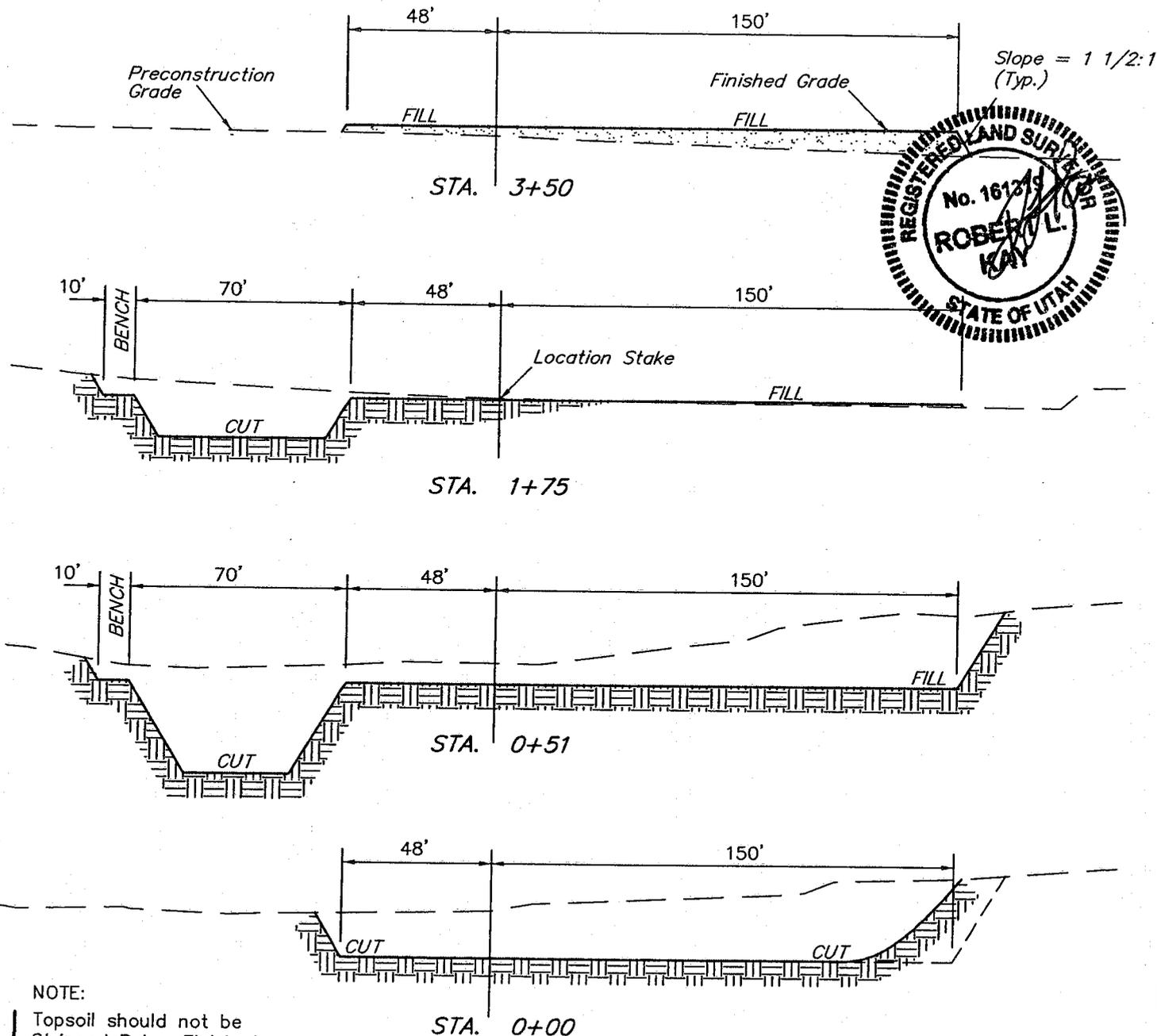
WV #4BML-23-8-21

SECTION 23, T8S, R21E, S.L.B.&M.

189' FNL 101' FWL

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

DATE: 10-16-06  
Drawn By: S.L.



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

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 1,700 Cu. Yds.
Remaining Location	= 6,970 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 8,670 CU.YDS.</b>
<b>FILL</b>	<b>= 3,000 CU.YDS.</b>

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION  
Excess Material = 5,670 Cu. Yds.  
Topsoil & Pit Backfill (1/2 Pit Vol.) = 3,140 Cu. Yds.  
EXCESS UNBALANCE (After Interim Rehabilitation) = 2,530 Cu. Yds.

QUESTAR EXPLR. & PROD.

FIGURE #3

INTERIM RECLAMATION PLAN FOR

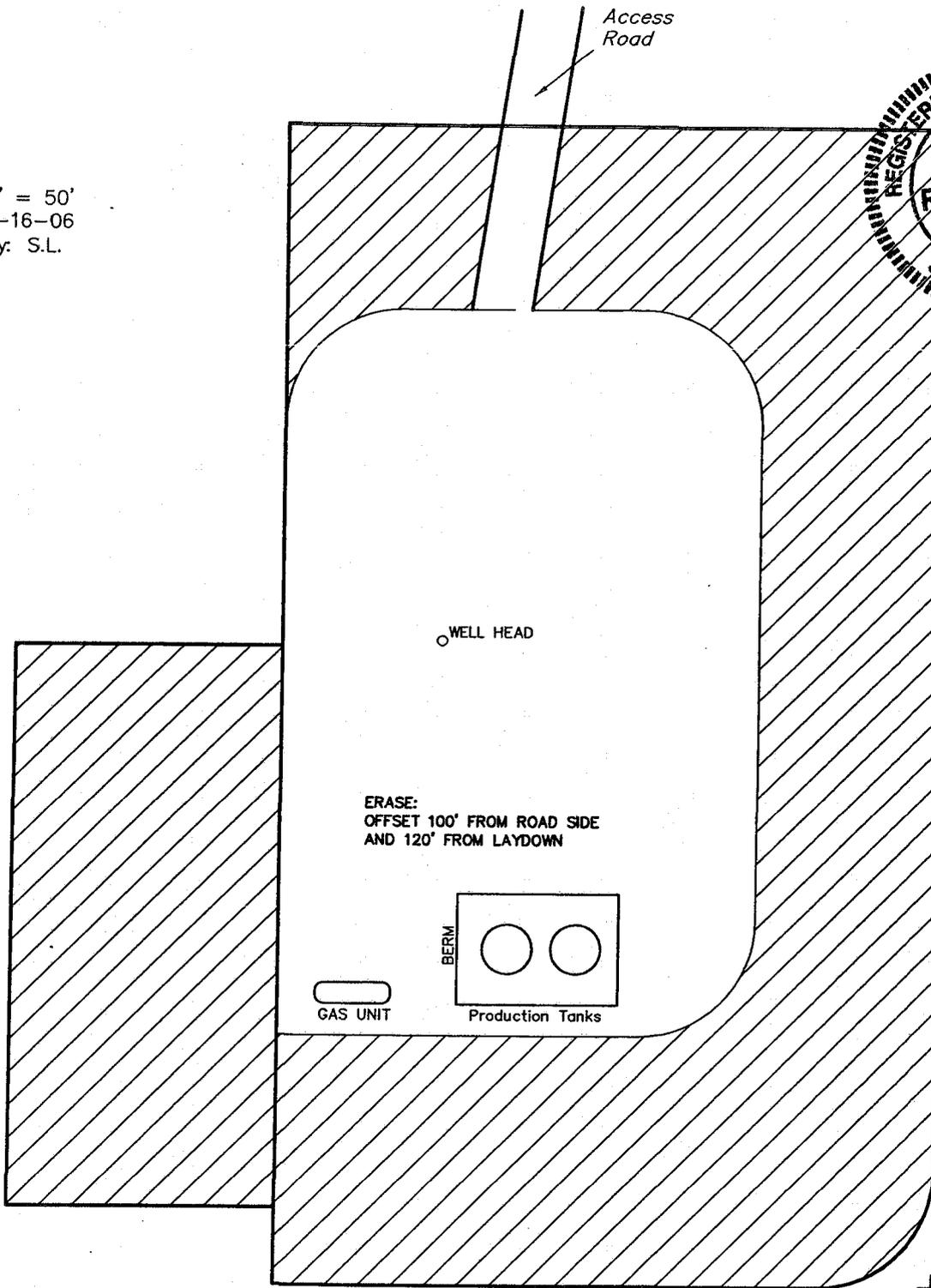
WV #4BML-23-8-21

SECTION 23, T8S, R21E, S.L.B.&M.

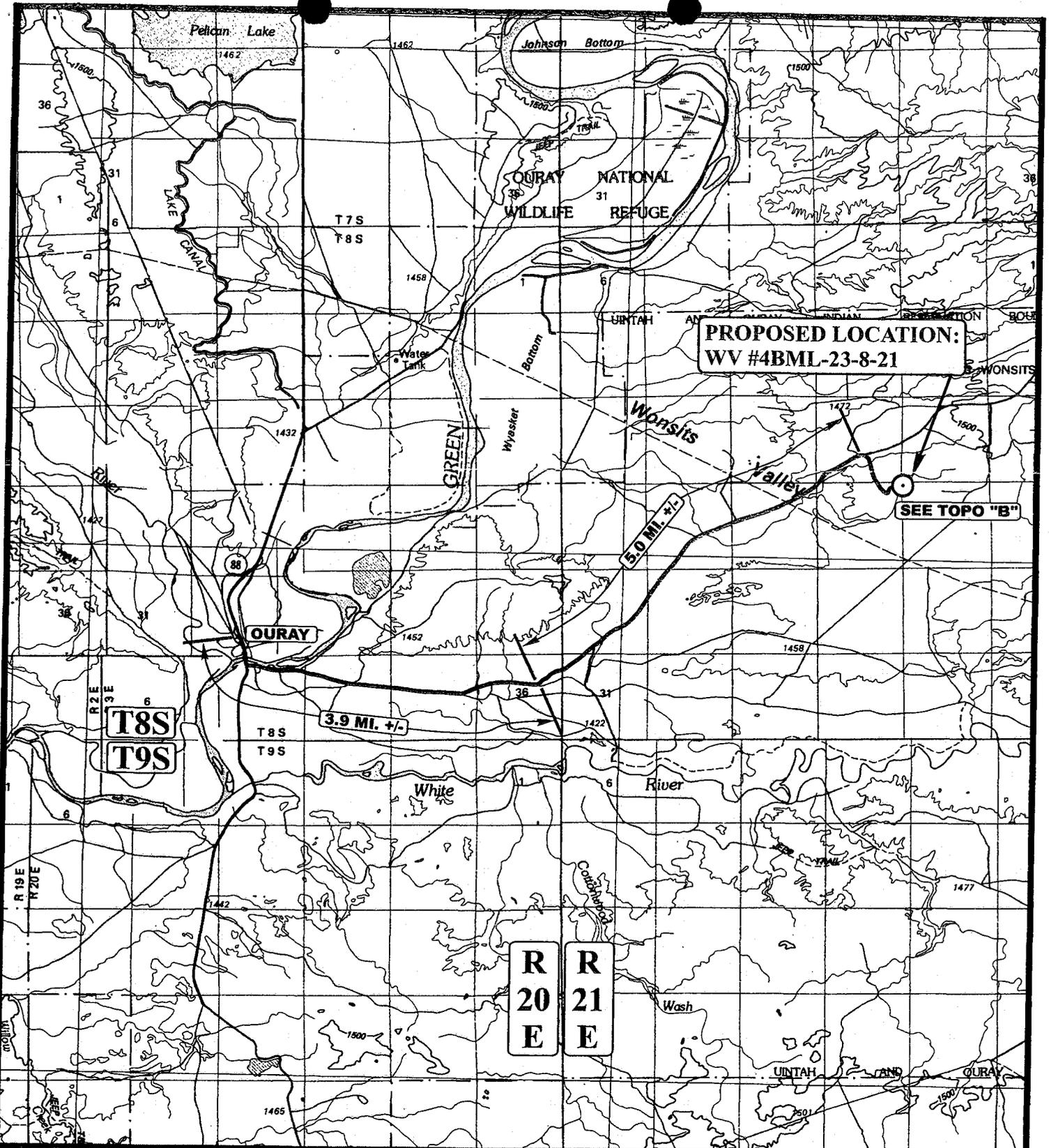
189' FNL 101' FWL



SCALE: 1" = 50'  
DATE: 10-16-06  
Drawn By: S.L.



 INTERIM RECLAMATION



**PROPOSED LOCATION:  
WV #4BML-23-8-21**

**SEE TOPO "B"**

**T8S  
T9S**

**R  
20  
E**   **R  
21  
E**

**LEGEND:**

⊙ PROPOSED LOCATION



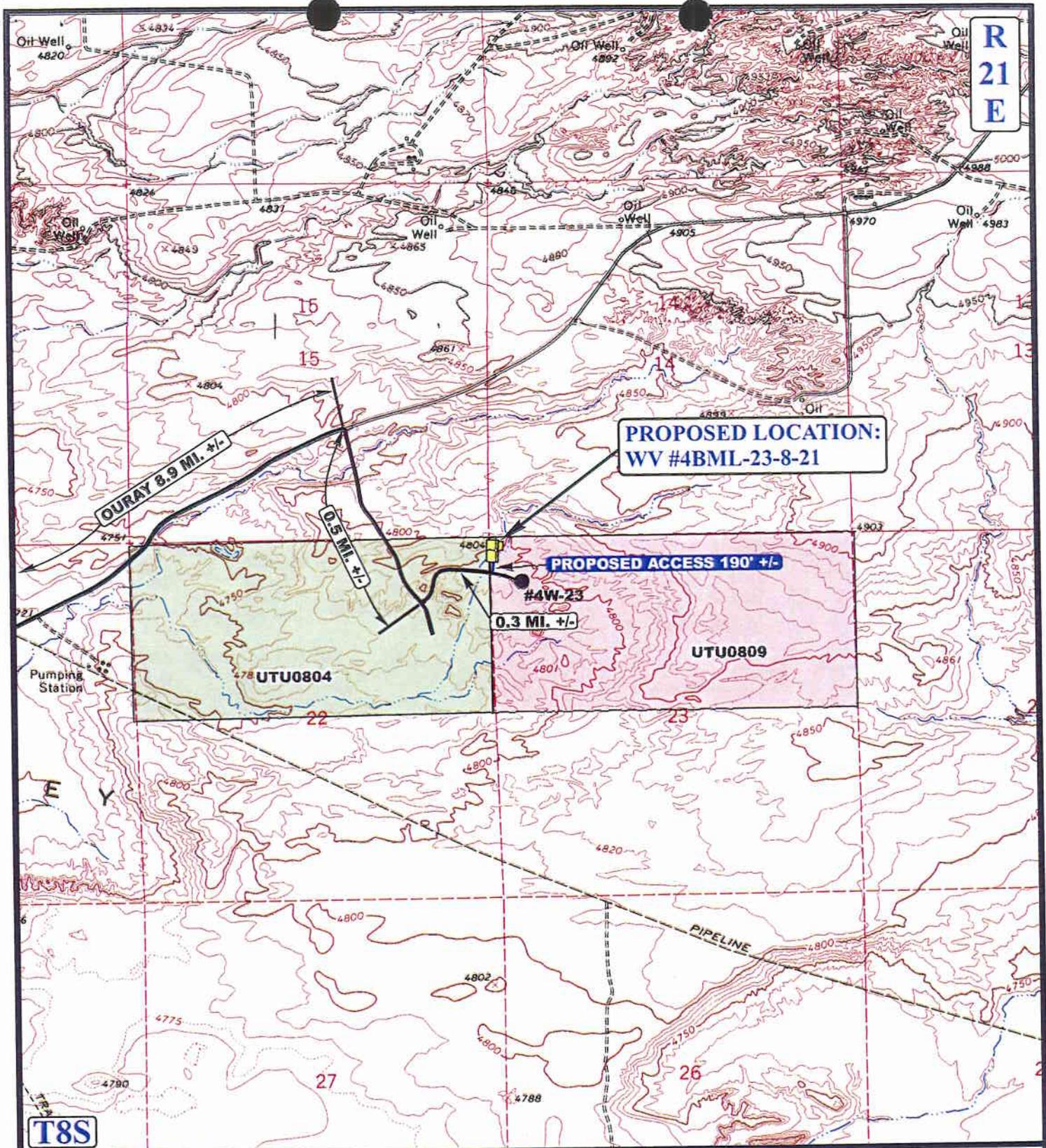
**QUESTAR EXPLR. & PROD.**

**WV #4BML-23-8-21  
SECTION 23, T8S, R21E, S.L.B.&M.  
189' FNL 101' FWL**



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

<b>TOPOGRAPHIC</b>	<b>10</b>	<b>19</b>	<b>06</b>	<b>A</b>
<b>MAP</b>	MONTH	DAY	YEAR	
SCALE: 1: 100,000	DRAWN BY: L.K.		REVISED: 00-00-00	<b>TOPO</b>



**PROPOSED LOCATION:  
WV #4BML-23-8-21**

**PROPOSED ACCESS 190' +/-**

**#4W-23  
0.3 MI. +/-**

**UTU0804**

**UTU0809**

**PIPELINE**

**T8S**

**R 21 E**

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING ROAD



**QUESTAR EXPLR. & PROD.**

**WV #4BML-23-8-21  
SECTION 23, T8S, R21E, S.L.B.&M.  
189' FNL 101' FWL**



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

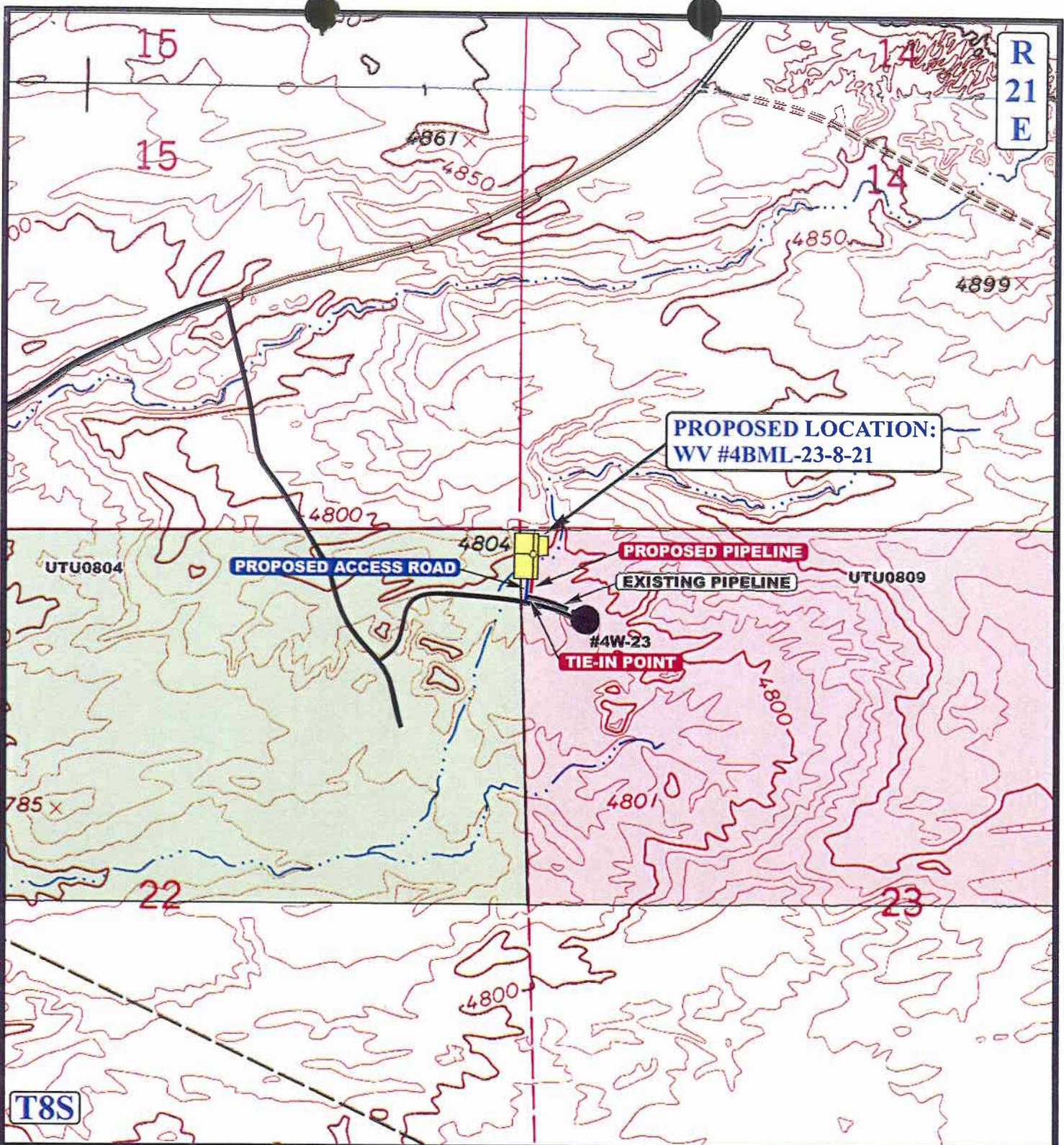
**TOPOGRAPHIC  
MAP**

**10 19 06**  
MONTH DAY YEAR



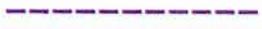
SCALE: 1" = 2000' DRAWN BY: L.K. REVISED: 00-00-00





APPROXIMATE TOTAL PIPELINE DISTANCE = 160' +/-

**LEGEND:**

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE
-  PROPOSED PIPELINE (SERVICING OTHER WELLS)



**QUESTAR EXPLR. & PROD.**

WV #4BML-23-8-21  
SECTION 23, T8S, R21E, S.L.B.&M.  
189' FNL 101' FWL



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

**TOPOGRAPHIC** 10 19 06  
**MAP** MONTH DAY YEAR

SCALE: 1" = 1000' DRAWN BY: L.K. REVISED: 00-00-00



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 02/05/2007

API NO. ASSIGNED: 43-047-39041
--------------------------------

WELL NAME: WV 4BML-23-8-21  
 OPERATOR: QUESTAR EXPLORATION & ( N5085 )  
 CONTACT: JAN NELSON

PHONE NUMBER: 435-781-4032

PROPOSED LOCATION:

NWNW 23 080S 210E  
 SURFACE: 0189 FNL 0101 FWL  
 BOTTOM: 0189 FNL 0101 FWL  
 COUNTY: UINTAH  
 LATITUDE: 40.11581 LONGITUDE: -109.5301  
 UTM SURF EASTINGS: 625266 NORTHINGS: 4441436  
 FIELD NAME: WONSITS VALLEY ( 710 )

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

LEASE TYPE: 1 - Federal  
 LEASE NUMBER: UTU-0809  
 SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: MVRD  
 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:

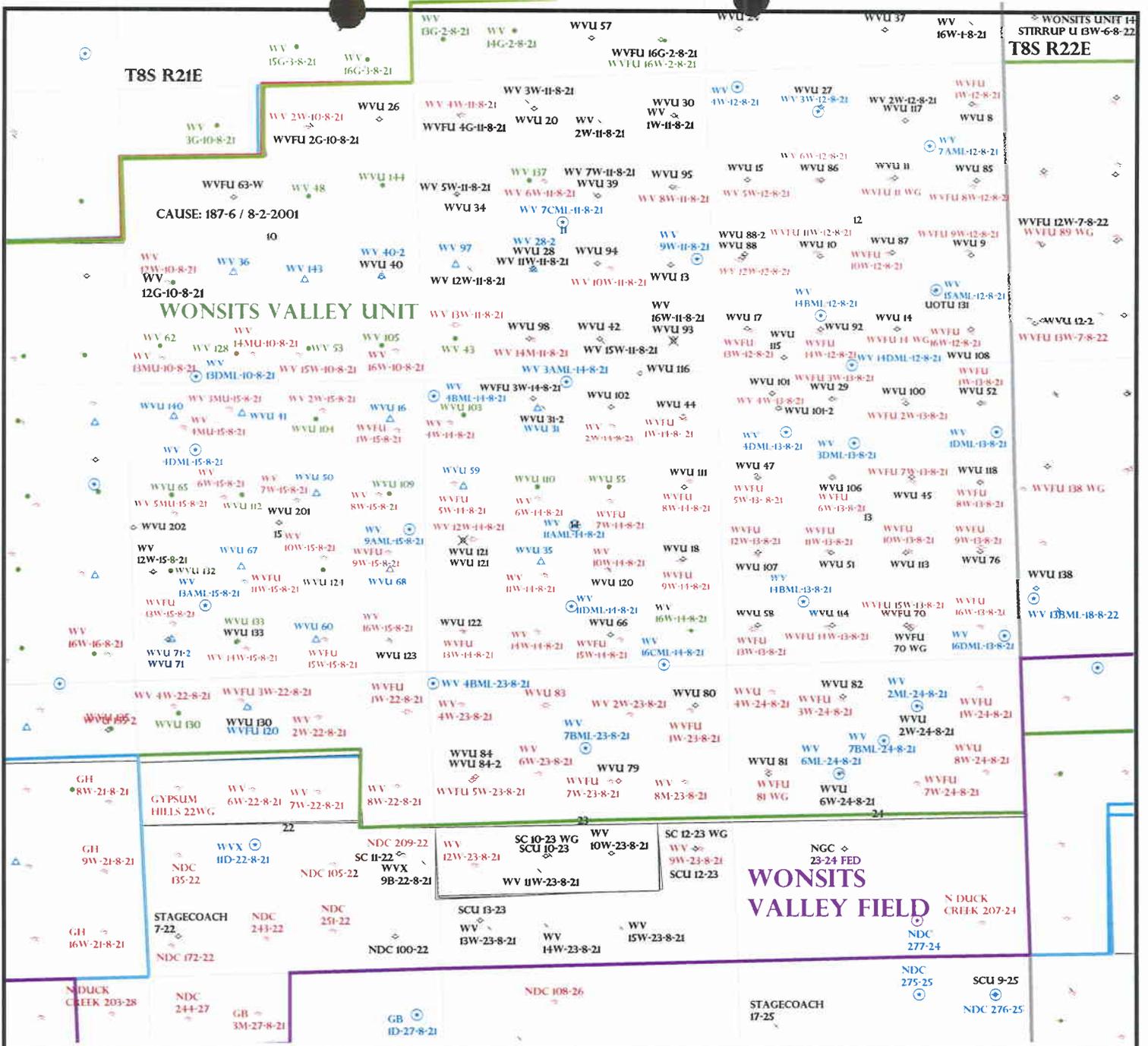
- \_\_\_ R649-2-3.
- Unit: WONSITS VALLEY
- \_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- \_\_\_ R649-3-3. Exception
- Drilling Unit  
Board Cause No: 187-06  
Eff Date: 8-2-2007  
Siting: Subsided General Siting
- \_\_\_ R649-3-11. Directional Drill

COMMENTS:

See Separate File

STIPULATIONS:

1- Federal Approval



OPERATOR: QUESTAR EXPL & PROD (N5085)

SEC: 11,12,13,14,15,23 T.8S R. 21E

FIELD: WONSITS VALLEY (710)

COUNTY: Uintah

CAUSE: 187-6 / 8-2-2001

- 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



PREPARED BY: DIANA MASON  
DATE: 8-FEBRUARY-2007

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

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

IN REPLY REFER TO:  
3160  
(UT-922)

February 8, 2007

### Memorandum

To: Assistant District Manager Minerals, Vernal District  
From: Michael Coulthard, Petroleum Engineer  
Subject: 2007 Plan of Development Wonsits Valley Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2007 within the Wonsits Valley Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ MesaVerde)		
43-047-39042	WV 07CML-11-8-21	Sec. 11 T. 8S R. 21E 2608 FNL 2629 FEL
43-047-39035	WV 07AML-12-8-21	Sec. 12 T. 8S R. 21E 1446 FNL 1368 FEL
43-047-39036	WV 14BML-12-8-21	Sec. 12 T. 8S R. 21E 0946 FSL 1962 FWL
43-047-39037	WV 14BML-13-8-21	Sec. 13 T. 8S R. 21E 1125 FSL 1464 FWL
43-047-39038	WV 04BML-14-8-21	Sec. 14 T. 8S R. 21E 0300 FNL 0179 FWL
43-047-39039	WV 13AML-15-8-21	Sec. 15 T. 8S R. 21E 1340 FSL 1334 FWL
43-047-39040	WV 09AML-15-8-21	Sec. 15 T. 8S R. 21E 2609 FSL 0289 FEL
43-047-39041	WV 04BML-23-8-21	Sec. 23 T. 8S R. 21E 0189 FNL 0101 FWL
43-047-39044	WV 07BML-23-8-21	Sec. 23 T. 8S R. 21E 1418 FNL 2559 FEL

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

/s/ Michael L. Coulthard



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

February 8, 2007

Questar Exploration & Production, Co.  
1571 E 1700 S  
Vernal, UT 84078

Re: Wonsits Valley 4BML-23-8-21 Well, 189' FNL, 101' FWL, NW NW, Sec. 23,  
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 43-047-39041.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor (via e-mail)  
Bureau of Land Management, Vernal District Office

Operator: Questar Exploration & Production, Co.  
Well Name & Number Wonsits Valley 4BML-23-8-21  
API Number: 43-047-39041  
Lease: UTU-0809

Location: NW NW                      Sec. 23                      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 with 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 Dustin Doucet at (801) 538-5281 office  
(801) 733-0983 home

#### 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.

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>UTU-0809</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>UTE INDIAN TRIBE</b>
		7. UNIT or CA AGREEMENT NAME: <b>WONSITS VALLEY UNIT</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____	8. WELL NAME and NUMBER: <b>WV 4BML-23-8-21</b>	
2. NAME OF OPERATOR: <b>QUESTAR EXPLORATION &amp; PRODUCTION CO.</b>		9. API NUMBER: <b>4304739041</b>
3. ADDRESS OF OPERATOR: <b>11002 E. 17500 S.</b> CITY <b>VERNAL</b> STATE <b>UT</b> ZIP <b>84078</b>	PHONE NUMBER: <b>(435) 781-4331</b>	10. FIELD AND POOL, OR WILDCAT: <b>WONSITS VALLEY</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>189' FNL 101' FWL</b>		COUNTY: <b>UINTAH</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWNW 23 8S 21E</b>		STATE: <b>UTAH</b>

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> 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><b>APD EXTENSION</b></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.

Please be advised that the state APD for the above captioned well will expired on February 8, 2008. Questar Exploration and Production Company respectfully requests a one year extension.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 02-07-08  
By: [Signature]

**COPY SENT TO OPERATOR**  
Date: 2-7-2008  
Initials: KS

NAME (PLEASE PRINT) <u>Laura Bills</u>	TITLE <u>Regulatory Affairs</u>
SIGNATURE <u>[Signature]</u>	DATE <u>2/4/2008</u>

(This space for State use only)

**RECEIVED**  
**FEB 05 2008** **CONFIDENTIAL**  
DIV. OF OIL, GAS & MINING

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

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

**API:** 43-047-39041  
**Well Name:** WV 4BML-23-8-21  
**Location:** 189' FNL 101' FWL, NWNW, SEC. 23, T8S, R21E  
**Company Permit Issued to:** Questar Exploration & Production Co.  
**Date Original Permit Issued:** 2/8/2007

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

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

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

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

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

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

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

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

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

  
Signature

2/4/2008  
Date

Title: REGULATORY AFFAIRS

Representing: Questar Exploration & Production Co.

**RECEIVED**  
**FEB 05 2008**  
DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.

UTU-0809

6. If Indian, Allottee or Tribe Name

UTE TRIBE

7. If Unit or CA/Agreement, Name and/or No.

WONSITS VALLEY UNIT

8. Well Name and No.

WW 4BD-23-8-21

9. API Well No.

43-047-39041

10. Field and Pool, or Exploratory Area

WONSITS VALLEY

11. County or Parish, State

UINTAH, UTAH

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator

Questar Exploration & Production Co.

Contact: Rick Canterbury

3a. Address

11002 East 17500 South, Vernal, UT 84078

3b. Phone No. (include area code)

435-781-4362

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

189' FNL 101' FWL, NWNW, SECTION 23, T8S, R21E

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Request for variance from Onshore Order # 2
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

**A variance is requested from 43 CFR 3160 Onshore Oil and Gas Order # 2, Section III Requirements,**

Subsection E Special Drilling Operations for air drilling and setting surface casing with a Truck Mounted Rig on the subject well.

Hydrocarbons or high pressures are not anticipated. The following changes are proposed for each specific requirements of Section E.

**Properly lubricated and maintained rotating head**-Properly lubricated & maintained diverted bowl substituted for rotating head.

**Bloolie line discharge 100' from well bore and securely anchored**-The bloolie line discharge for this operation will be located 50 to 70 feet of the wellhead. The reduced length is necessary due to the smaller location size to minimize surface disturbance.

**Automatic ignitor or continuous pilot light on the bloolie line**-Water will be injected into the compressed air during drilling operations will eliminate the need for a continuous pilot or automatic igniter.

**Dust Abatement**-Water injected into the compressed air during drilling operations will eliminate the need for dust suppression equipment

**Compressors located in the opposite direction from the bloolie line a minimum of 100' from the well bore**-Compressors are truck mounted W/ 50 feet of the well bore on the opposite side from bloolie line. Rig has a (1) kill switch on the driller's console (2) Pressure

valve on the compressor (3) Spark arrestors on the motors. Main Compressor is 1250 CFM 350 psi w/2000 psi booster. Secondary compressor is 1070 CFM 350 psi w/ 2000 psi booster.

COPY SENT TO OPERATOR

Date: 5-1-2008

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Laura Bills

Signature

*Laura Bills*

Title

Associate Regulatory Affairs Analyst

Date

April 23, 2008

Initials: KS

**THIS SPACE FOR FEDERAL OR STATE USE**

Approved by

Title

Date

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

Office

Title 18 U.S.C. Section 1001, 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.

**RECEIVED**

(Instructions on reverse)

APR 24 2008

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.

UTU-0809

6. If Indian, Allottee or Tribe Name

UTE INDIAN TRIBE

7. If Unit or CA/Agreement, Name and/or No.

WONSITS VALLEY UNIT

8. Well Name and No.

WV 4BML-23-8-21

9. API Well No.

43-047-39041

10. Field and Pool, or Exploratory Area

WONSITS VALLEY

11. County or Parish, State

UINTAH

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator

QUESTAR EXPLORATION & PRODUCTION, CO. Contact: Jan Nelson

3a. Address

11002 E. 17500 S. VERNAL, UT 84078

3b. Phone No. (include area code)

435-781-4331

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

189' FNL 101' FWL, NWNW, SECTION 23, T8S, R21E

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

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<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair <input type="checkbox"/> New Construction <input type="checkbox"/> Recomplete <input checked="" type="checkbox"/> Other NAME CHANGE
	<input checked="" type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> Water Disposal

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

QUESTAR EXPLORATION AND PRODUCTION COMPANY (QEP) REQUEST PERMISSION TO CHANGE THE DRILLING PLANS, INCREASE TOTAL DEPTH FROM 11,475' TO 16,700' FOR THIS WELL AND TO USE OIL BASE MUD FOR THE DRILLING OF THE FINAL SECTION OF THIS WELL TO IMPROVE DRILLING EFFICIENCY, WELLBORE STABILITY AND TO PROMOTE A GOOD CEMENT JOB OF THE PRODUCTION CASING. ATTACHED IS A DRILLING PLAN, WELLBORE DIAGRAM, DRILLING FLUID PROPOSAL AND A PROPOSAL FOR PROCESSING AND DISPOSAL OF THE OIL BASE MUD.

QEP IS REQUESTING TO CHANGE THE WELL NAME FROM WV 4BML-23-8-21 TO WV 4BD-23-8-21.

QUESTAR EXPLORATION & PRODUCTION COMPANY (QEP) WILL PROVIDE THE PROPER PAPER WORK TO THE BUREAU OF INDIAN AFFAIRS AND UTE TRIBE.

COPY SENT TO OPERATOR

Date: 5-1-2008

Initials: KB

FOR TECHNICAL QUESTIONS, PLEASE CONTACT JIM DAVIDSON, CHIEF DRILLING ENGINEER FOR QEP, AT (303) 308-3090.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Laura Bills

Title

Associate Regulatory Affairs Analyst

Signature

*Laura Bills*

Date

April 24, 2008

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

*Bradley G. Hill*

Title

BRADLEY G. HILL  
ENVIRONMENTAL MANAGER

Date

04-29-08

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

Office

Title 18 U.S.C. Section 1001, 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.

RECEIVED

(Instructions on reverse)

Federal Approval of this  
Action is Necessary

APR 24 2008

CONFIDENTIAL

DIV. OF OIL, GAS & MINING

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:

<u>Formation</u>	<u>Depth</u>
Uinta	Surface
Green River	2,595'
Wasatch	5,935'
Mesaverde	9,020'
Sego	11,395'
Castlegate	11,520'
Blackhawk	11,835'
Mancos Shale	12,285'
Mancos B	12,720'
Frontier	15,450'
Dakota Silt	16,295'
Dakota	16,500'
TD	16,700'

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:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Gas	Wasatch	5,935'
Gas	Mesaverde	9,020'
Gas	Blackhawk	11,835'
Gas	Mancos Shale	12,285'
Gas	Mancos B	12,720'
Gas	Dakota	16,500'

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.

## DRILLING PROGRAM

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

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

- A. 13-5/8" 5M psi BOP (schematic included) after setting 13 3/8" casing to 9-5/8" casing point.
- B. 11" or 13-5/8" 10,000 psi double gate, 10,000 psi single gate, 10,000 psi annular BOP (schematic included) after setting 9-5/8" casing to total depth. The choice of BOP stacks is based on the drilling contractor's availability.
- C. Functional test daily
- D. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- E. 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 10M system and individual components shall be operable as designed.

DRILLING PROGRAM

4. **Casing Design:**

Hole Size	Csg. Size	Top (MD)	Bottom (MD)	Wt.	Grade	Thread	Cond.
26"	20"	sfc	40-60'	Steel	Cond.	None	Used
17-1/2"	13-3/8"	sfc	500'	54.5	K-55	STC	New
12-1/4"	9-5/8"	sfc	5,300'	47.0	HCP-110	Flush Jt **	New
8-1/2"	7"	sfc'	9,000'	26	HCP-110	LTC	New
8-1/2"	7"	9,000'	12,335'	29* SDrift	HCP-110	LTC	New
6-1/8"	4-1/2"	sfc	13,000'	15.1	P-110	LTC	New
6-1/8"	4-1/2"	13,000'	15,000'	15.1	Q-125	LTC	New
6-1/8"	4-1/2"	15,000'	16,700'	17.1	Q-125	LTC	New

Casing Strengths:				Collapse	Burst	Tensile (minimum)
13-3/8"	54.5 lb.	K-55	STC	1,130 psi	2,730 psi	547,000 lb.
9-5/8"	47.0 lb.	HCP-110	LTC	7,100 psi	9,440 psi	1,213,000 lb.
7"	26 lb.	HCP-110	LTC	7,800 psi	9,950 psi	693,000 lb.
7"	29 lb.*	HCP-110	LTC	9,200 psi	11,220 psi	797,000 lb.
4-1/2"	15.1 lb.	P-110	LTC	14,350 psi***	14,420 psi	406,000 lb.
4-1/2"	15.1 lb.	Q-125	LTC	15,840 psi***	16,380 psi	438,000 lb.
4-1/2"	17.1 lb.	Q-125	LTC	19,010 psi***	18,180 psi	493,000 lb.

\* Special Drift

\*\* Flush Joint – VAM SLIJ II or LT&C based on availability

## DRILLING PROGRAM

### MINIMUM DESIGN FACTORS:

COLLAPSE: 1.125 (1.30 for 4 ½" casing\*\*\*)  
BURST: 1.10  
TENSION: 1.80  
Area Fracture Gradient: 0.9 psi/foot  
Maximum anticipated mud weight: 15.4 ppg  
Maximum surface treating pressure: 12,500 psi

### 5. Auxiliary Equipment

- A. Kelly Cock – yes
- B. Float at the bit – yes
- 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:
  - 1. The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.
  - 2. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500').
  - 3. Compressor shall be tied directly to the blooie line through a manifold.
  - 4. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

Surface will be drilled with air, mist, or mud depending on hole conditions. Drilling the 1<sup>st</sup> & 2<sup>nd</sup> intermediate holes below surface casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. The 1<sup>st</sup> intermediate will utilize KCL in the water. No chromates will be used. It is intended to use oil base mud in the production hole. Max anticipated mud weight is 15.4 ppg. This density is required more for hole stability & not necessarily pore pressure. See attached mud program.

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.

DRILLING PROGRAM

6. **Testing, logging and coring program**

- A. Cores – none anticipated
- B. DST – none anticipated
- C. Logging – Mud logging – 500' to TD  
GR-SP-Induction, Neutron Density (Triple Combo or equivalent)
- D. Formation and Completion Interval: Final determination of completion interval(s) will be made by analysis of logs.  
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

7. **Cementing Program**

**20" Conductor:**

Cement to surface with construction cement.

**13-3/8" Surface Casing: sfc – 500' (MD)**

Slurry: 0' – 500'. 610 sxs (731 cu ft) Premium cement + 0.25 lbs/sk Flocele + 2% CaCl<sub>2</sub>.

Weight: 15.6 ppg, slurry yield: 1.20 ft<sup>3</sup>/sx, slurry volume: 17-1/2" hole + 100% excess.

**9-5/8" Intermediate Casing: sfc – 5,300' (MD)**

**See attached cementing program:**

**7" Intermediate Casing: sfc - 12,335' (MD)**

**See attached cementing program:**

**4-1/2" Production Casing: sfc – 16,700' (MD)**

**See attached cementing program:**

Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface on the intermediate strings and to 5,000' on the production string. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

DRILLING PROGRAM

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

No H<sub>2</sub>S 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 10,000 psi to 11,000 psi based on pressure transient work on the GB 9D-27-8-21. Maximum anticipated bottom hole temperature is 300° - 310° F.

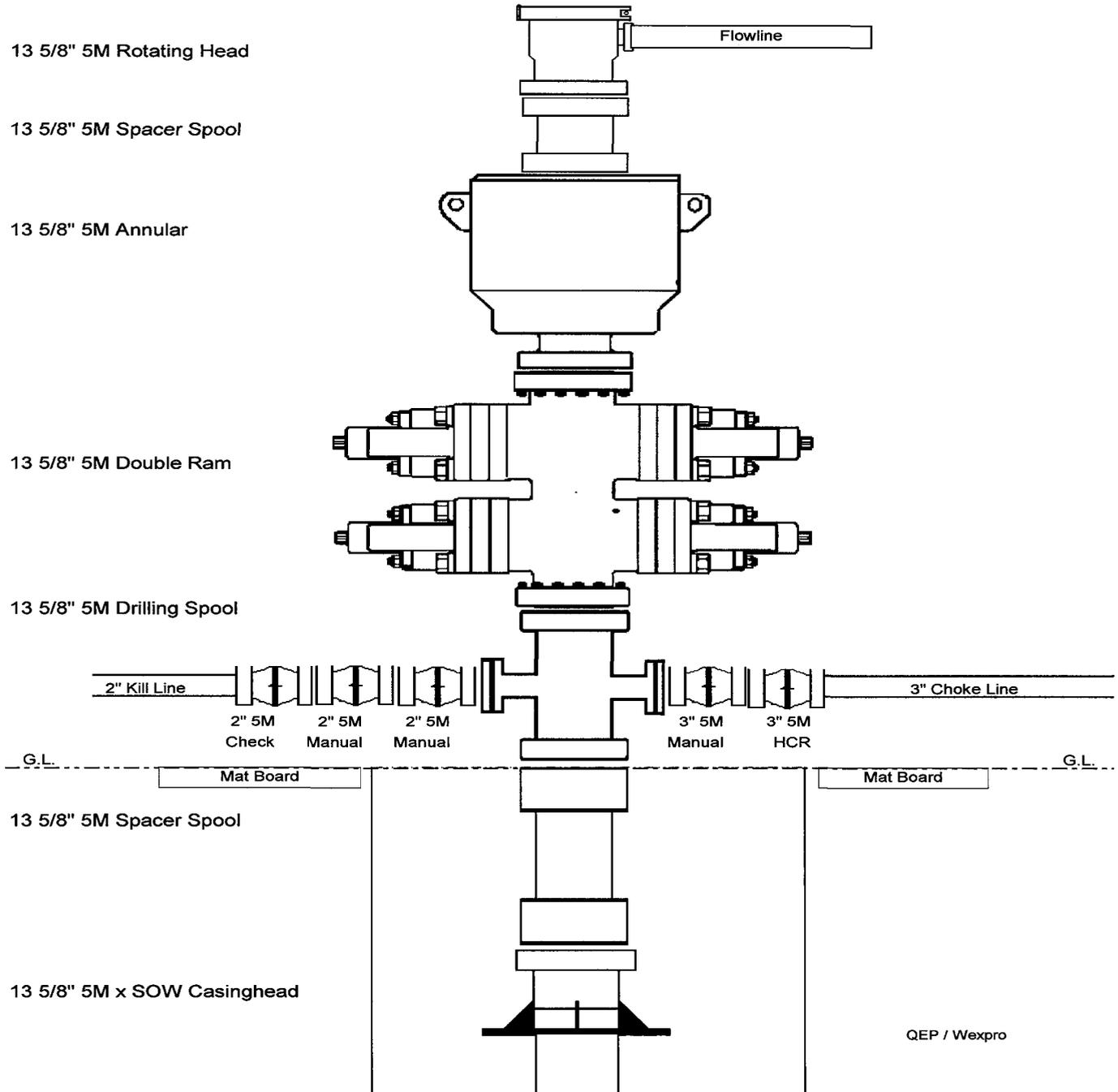
9. **ADDITIONAL INFORMATION FOR OIL BASE MUD**

- A. See attached diagram of well pad layout. A reserve pit will be constructed for this location. This pit will be constructed so that a minimum of two vertical feet of freeboard exists above the top of the pit at all times and at least one-half of the holding capacity will be below ground level. The pit will be lined with a synthetic reinforced liner, 30 millimeters thick, with sufficient bedding used to cover any rocks prior to putting any fluids into the pit. The pad will be designed so that runoff from adjacent slopes does not flow into the reserve pit. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. At the beginning of drilling operations this reserve pit will have an open-ended dike placed in the pit that allows the fluids to migrate from one side of the pit to the other during the drilling of the surface and intermediate hole using water based mud. At the time that operations begin to drill the production hole with oil base mud, this dike will be extended, dividing the pit into two distinct, isolated halves allowing no migration of fluids from one side to the other. At that time all fluids will be removed from the end of the pit to be used as a cuttings pit. This cuttings pit will be used for oil based cuttings generated during drilling of the production hole.
- B. Oil-base mud will be mixed in the closed circulating system and transferred to four 500-bbl tanks on location for storage prior to and after drilling operations. Drip pans will be installed below the rotary beams on the substructure and can be viewed on site from the cellar area. As the production section of the hole is drilled, the cuttings transported to the surface with the drilling fluid will be mechanically separated from the drilling fluid as waste by two shale-shakers and then cleaned/dried via a mud cleaner and/or centrifuge. These separated cuttings will be collected in a steel catch tank once they leave the closed circulating system and transported and placed into the cuttings half of the reserve pit.

DRILLING PROGRAM

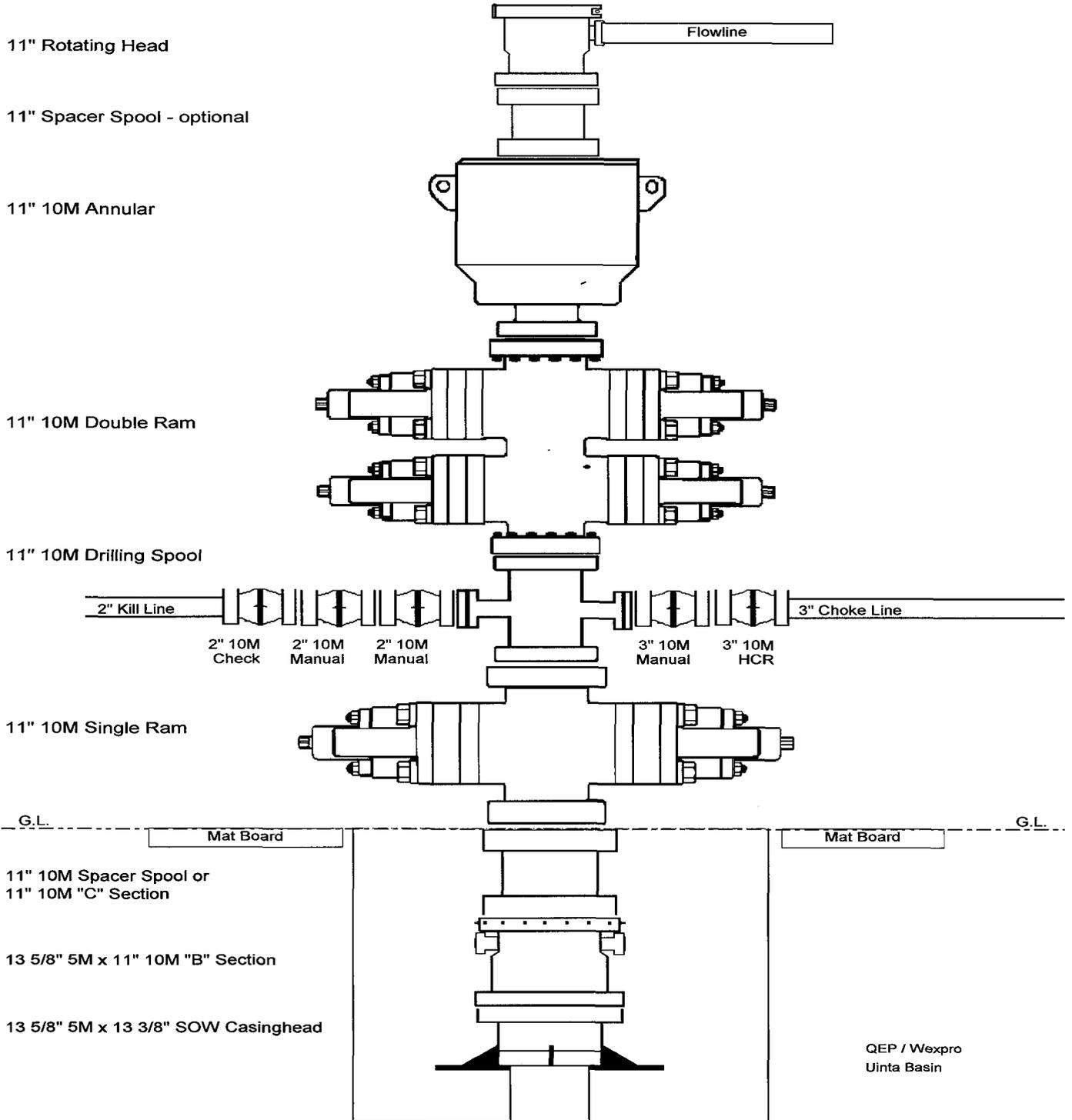
- C.** Plastic material will underlay the rig, oil base mud/diesel storage tanks and mud pits. All tanks on location will be placed inside of berms. Any oily waste fluids and sediments generated at the work site during drilling operations or when cleaning the fluid containment system after drilling will also be placed into the cuttings half of the pit.
- D.** All rig ditches will be lined and directed to a lined sump for fluid recovery. A drip pan will be installed on the BOP stack, a mud bucket will be utilized as needed on connections and a vacuum system will be used on the rig floor for fluid recovery in those areas.
- E.** Once all waste has been placed in the cuttings portion of the pit and all necessary approvals obtained, the oilfield waste management consultant Soli-Bond or a similar company will mobilize equipment and personnel to the site to perform the cement based solidification/stabilization process in-situ for encapsulation. Soil will be backfilled over the processed material used on the cuttings side of the pit and that portion of the pit area will be returned to the existing grade bordering the pit. Please see the attached Soli-Bond Proposal for Processing and Disposal of Drilling Waste for specific details. The half of the reserve pit containing water base materials will be left to evaporate and will be closed and reclaimed at the time that portion of the pit is dry.

DRILLING PROGRAM



DRILLING PROGRAM

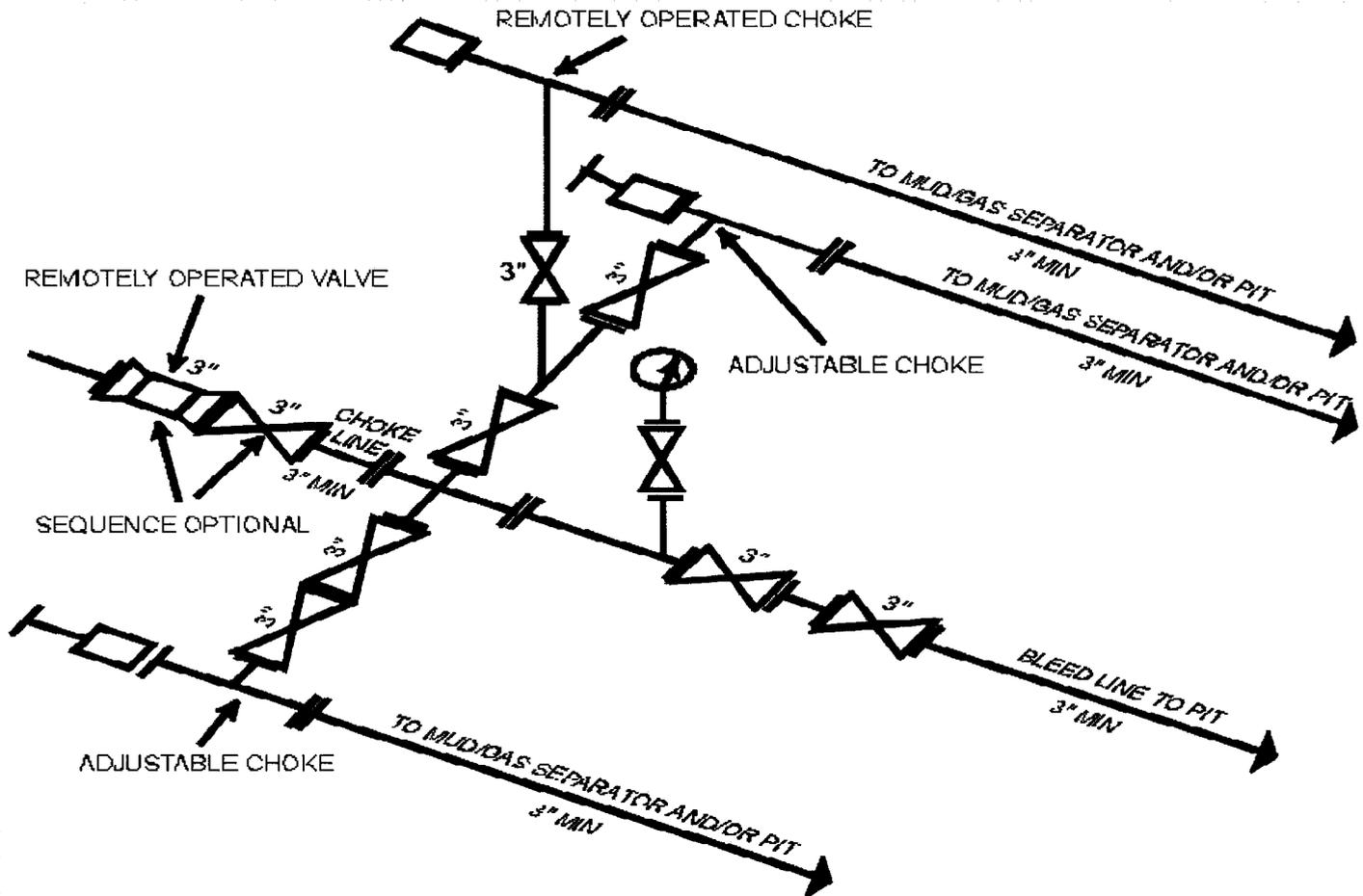
QUESTAR / WEXPRO  
 5M BOPE  
 Minimum Requirements



DRILLING PROGRAM

QUESTAR / WEXPRO  
10M BOP x 10M Annular for Deep Uinta Basin  
Minimum Requirements

Attachment I. Diagrams of Choke Manifold Equipment



I-4 10M and 15M Choke Manifold Equipment -- Configuration of chokes may vary

[54 FR 39528, Sept. 27, 1989]

Last Updated March 25, 1997 by John Broderick

QUESTAR / WEXPRO  
TYPICAL 10M CHOKE MANIFOLD

ONSHORE OIL & GAS ORDER NO. 1  
QUESTAR EXPLORATION & PRODUCTION CO.  
WV 4BD-23-8-21

DRILLING PROGRAM

**SOLI-BOND®**

**OILFIELD WASTE MANAGEMENT PROPOSAL**

**For**

**Questar Market Resources**

**SOLI-BOND® Processing and Disposal of Drilling Waste**

Batch Treatment

Wells: WV 4BD-23-8-21

Section 23

T8S – R21E

**Uintah County, Utah**

Prepared For:

Questar Market Resources  
1050 17<sup>th</sup> Street, Suite 500  
Denver, Colorado 80265  
(303) 672-6927

Prepared By: Robert J. Wilson  
Technical Sales Representative  
Soli-Bond, Inc.  
(303) 579-9800

**CONFIDENTIALITY NOTICE:**

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## DRILLING PROGRAM

### OVERVIEW

Soli-Bond, Inc. (SBI) proposes to utilize the SOLI-BOND® Process for the treatment of **Drilling Waste** on the **WV 4BD-23-8-21** in Uintah County, Utah, which will be followed by onsite disposal of the processed material.

This proposal will serve to delineate the specifications and criteria for achieving the project objectives as required by **Questar Market Resources** (Client) and the appropriate regulatory entities.

### GENERAL DESCRIPTION OF THE SOLI-BOND® PROCESS

The SOLI-BOND® Process involves the controlled addition of a non-toxic, chemically reactive, portland-cement-based reagent or reagents to a waste, followed by the mixing of the reagent with the waste to form homogeneous slurry similar to viscous mortar. Oily substances that may be present in the waste are broken up into small droplets or particles and dispersed throughout the reagent/waste mixture during the mixing phase of the process. After the mixing phase, an irreversible chemical reaction begins to occur between the reagent and water present (or added) in the waste, ultimately causing the reagent/waste mixture to be transformed into a solid granular material with a “soil-like” consistency, typically within 48 hours after processing. Any dispersed particles of oily substances within the processed material are *physically* locked in place or “micro-encapsulated” in their isolated state inside the reacted cementitious matrix, preventing them from re-coalescing and suddenly being released to the environment at significant rates. The same irreversible reaction *chemically* stabilizes various metals that may be present in the waste, primarily by transforming them into less soluble metal hydroxides and other chemical species, thus greatly reducing their mobility and availability to the surrounding environment as well. In summary The SOLI-BOND® Process reduces the leaching rate of target constituents of concern from a waste form to such a degree that they can no longer cause harm to health or the environment. The SOLI-BOND® Process is a waste treatment method more generally known as Solidification/Stabilization (S/S). S/S has been recognized and prescribed by the United States Environmental Protection Agency for many years as an effective technology for the treatment of waste containing various metals as well as non-volatile and semi-volatile organic substances.

### INNOCUOUS WASTE APPLICATIONS

The SOLI-BOND® Process can also be applied to solidify innocuous oilfield wastes such as spent water based drilling fluids and physically unstable water based drill cuttings to avoid the increased difficulties typically associated with the disposal of liquid or semi-solid wastes. Irreversibly transforming the physical properties of an innocuous waste, from a liquid or semi-solid state that’s structurally unstable, into a solid, granular material with load bearing capability, can be the sole reason for using The SOLI-BOND® Process. In addition, the chemically driven transformation into a dry solid occurs quickly, with minimal volume addition and the process can accommodate waste with high fluid content. For oilfield waste pit applications, the process provides more rapid solidification of the pit contents, more room for the prescribed depth of soil cover and can greatly reduce the waiting period for the pit contents to dry sufficiently for pit closure as opposed to that required for conventional closure methods.

DRILLING PROGRAM

*SITE AND APPLICATION DESCRIPTION*

The subject work site is an area constructed for the drilling and production of the gas well covered in this proposal. The well plan contemplates the use of an oilbase drilling fluid during the drilling of the production section of the well. As this section of the well is drilled, cuttings will be generated, transported to the surface within the drilling fluid, and then mechanically separated from the drilling fluid as waste. These separated cuttings are expected to contain elevated levels of adhered/absorbed hydrocarbons due to their prior contact with the oilbase drilling fluid. These "oilbase cuttings" will be collected in steel catch tanks provided by the Client as drilling progresses and then placed in the separate oil base cuttings pit.

In addition to the "oilbase cuttings" described above, oily waste fluids and sediments may be generated at the work site during drilling operations and after drilling is completed the drilling fluid containment system will be cleaned thus generating some oily cleaning waste as well. It is these oilbase cuttings, waste fluids and sediments and cleaning waste that comprise all the waste to be treated and disposed of under this proposal.

Based on Client information and allowing for well bore washout, decompression/expansion of the drilled cuttings and the adhered/absorbed drilling fluids ("WEF"), the total volume of waste to treat was estimated as follows:

<b><u>WV 4BD-23-8-21</u></b>	
<b>4,500 feet of 6.125 inch diameter hole x WEF factor of 3:</b>	<b>500</b>
<b>Estimated additional sediments and cleaning waste:</b>	<b><u>10,500</u></b>
<b>Total Estimated Barrels of Waste to Treat:</b>	<b>11,000</b>

SBI proposes to apply the SOLI-BOND® Process to the oilbase cuttings and other indicated waste from the well during drilling operations to achieve the following objectives:

- Permanently reduce the leaching rate of target constituents of concern from the treated material to within prescribed limits.
- Irreversibly solidify the physically unstable waste to allow onsite disposal and support of soil cover without subsidence.
- Accomplish treatment with minimal volume addition to minimize disposal cell size and facilitate required minimum space for soil cover.
- Achieve rapid solidification of the waste to allow prompt final disposal.

**PRELIMINARY ACTIVITIES**

SBI personnel collected a sample of waste similar in characteristics to the waste to be generated on the subject project. The waste sample was used to conduct bench scale SOLI-BOND® processing, which has been carried out to determine effective reagent formulations, reagent/waste mix ratios, pricing and other aspects of this proposal.

## DRILLING PROGRAM

### OPERATIONAL PLAN

SBI jobsite operations will be conducted as follows:

- After drilling the oilbase section of the well, SBI will install the SOLI-BOND® Waste Processing System at the well site. The “oilbase cuttings” will be treated “in-situ” in the existing lined pit.
- SBI will mobilize personnel to the jobsite to process the waste that has accumulated in the lined oil base cuttings pit.
- Upon arrival at the jobsite, the SBI Site Foreman will conduct a Jobsite Safety Assessment with SBI crew, discussing all potential jobsite safety hazards, required personal safety gear and accident avoidance and conduct safety meetings with SBI crew prior to each day’s work throughout the project.
- SBI and Client Representative will verify the volume of waste to treat in each batch prior to process operations.
- SBI crew will then process the waste with the SOLI-BOND® Waste Processing System.
- Waste processing will be preformed during eight (8) hour daylight shifts. After daily onsite process operations are completed SBI personnel will prepare a SBI field ticket for Client Representative signature, indicating the volume of waste processed (in barrels).
- Components of The SOLI-BOND® Waste Processing System may remain at the jobsite until all waste to treat has been processed.
- After all waste is processed from the well, a composite sample of the processed material will be collected for laboratory analysis to verify that it complies with criteria under the section herein entitled “Performance Criteria.”
- SBI will utilize the existing lined pit as an on-site disposal cell sized to accommodate the processed oilbase cuttings and four (4) feet of soil cover after final reclamation of the drill site. Client has provided a plastic liner for the disposal cell, including installation. After achievement of performance criteria is verified, SBI will backfill the cell to the adjacent surface elevation thus constituting final disposal of the processed material. SBI will then de-mobilize equipment and personnel thus concluding SBI’s onsite operations.
- A SBI Waste Treatment and Disposal Report suitable for submittal to the appropriate regulatory agencies will then be prepared documenting all pertinent aspects of the project and will be submitted to the Client.

### PERFORMANCE CRITERIA

The treated waste will comply with the following criteria:

1. Leachable Oil and Grease less than 10 mg/L.
2. Leachable Total Dissolved Solids to be less than 5000 mg/L and/or leachable salts below acceptable site-specific guidelines.

Compliance with the performance criteria will be certified by an accredited testing laboratory utilizing the appropriate tests as prescribed and will be documented in a final report submitted to Client and the appropriate regulatory agencies as required.

DRILLING PROGRAM

**SCHEDULE** (All time/days are estimates and may change due to jobsite conditions)

<i>ITEM / SERVICE</i> (Based on estimated 11,000 total barrels of waste to process)	<i>ESTIMATED DAYS</i>
<b>Mobilization And Setup</b>	1
Estimated SOLI-BOND® PWD Waste Processing System Rental Days	15
Process Material, Backfill Cell	12
Takedown and Demobilization	1

ITEMS FURNISHED with SOLI-BOND® PWD Waste Processing System Equipment

- SB-2-7 Processor
- SOLI-BOND® Reagent Storage Silo w/ Discharge Auger
- Back Hoe Loader
- Ancillary Equipment
- First Aid and Safety Equipment
- SBI Crew Transportation

Personnel

- SBI Site Foreman
- SBI Operator Material
- Fuel necessary to operate Soli-Bond's motorized equipment.

Miscellaneous

- SBI Equipment Cleaning.
- One Laboratory Analysis of Processed Material. (for parameters indicated herein)
- SBI Waste Treatment and Disposal Report.

CLIENT RESPONSIBILITY

- Client will provide SBI with a written work order or other Client recognized document to contract SBI to perform the work as described herein.
- Client will provide SBI with a list of any Client requirements related to performing and being compensated for the work described herein.
- Client will provide "all weather" ingress and egress to the site.
- Client will provide process add-mix water.
- Client agrees that delays or interruptions in SBI's work described herein caused by "Acts of Nature" or events under the responsibility of the Client or Client contractors (excluding SBI and its contractors) may result in additional charges to Client.

# HALLIBURTON

## **Q E P E-bill**

**1050 17th Street, Ste 500-do Not Ma  
Denver, Colorado 80265**

WV 4BD 23-8-21  
Red Wash Field  
Uintah County, Utah  
United States of America

## **Multiple String Cement Recommendation**

Prepared for: Mr. John Owen  
April 17, 2008  
Version: 161599-1

Submitted by:  
Aaron James  
Halliburton  
1125 17th St Suite 1900  
Denver, Colorado 80202  
303-899-4717

**HALLIBURTON**

# HALLIBURTON

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## Job Information

## 9 5/8" Intermediate Casing

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WV 4BD 23-8-21

13 3/8" Surface Casing	0 - 500 ft (MD)
Outer Diameter	13.375 in
Inner Diameter	12.615 in
Linear Weight	54.50 lbm/ft
Casing Grade	K-55

12-1/4" Intermediate Open Hole	500 - 5300 ft (MD)
Inner Diameter	12.250 in
Job Excess	40 %

9 5/8" Intermediate Casing	0 - 5300 ft (MD)
Outer Diameter	9.625 in
Inner Diameter	8.681 in
Linear Weight	47 lbm/ft
Casing Grade	HCP110

Mud Type	KCl/Polymer
Mud Weight	9.50 lbm/gal
BHCT	95 degF

# HALLIBURTON

## Job Recommendation

## 9 5/8" Intermediate Casing

### Fluid Instructions

Fluid 1: Water Based Spacer

Gel Water Ahead

Fluid Density: 8.40 lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Reactive Spacer

Super Flush

Fluid Density: 9.20 lbm/gal

Fluid Volume: 20 bbl

Fluid 3: Water Spacer

Fresh Water Behind

Fluid Density: 8.34 lbm/gal

Fluid Volume: 10 bbl

Fluid 4: Foamed Lead Cement

50/50 Poz Premium

0.1 % HALAD-766 (Low Fluid Loss Control)

5 lbm/sk Silicalite Compacted (Light Weight Additive)

20 % SSA-1 (Heavy Weight Additive)

0.1 % Versaset (Thixotropic Additive)

1.5 % FDP-C760-04 (Foamer)

Fluid Weight 14.30 lbm/gal

Slurry Yield: 1.47 ft<sup>3</sup>/sk

Total Mixing Fluid: 6.40 Gal/sk

Top of Fluid: 0 ft

Calculated Fill: 3000 ft

Volume: 227.53 bbl

Calculated Sacks: 563.48 sks

Proposed Sacks: 565 sks

Fluid 5: Foamed Tail Cement

50/50 Poz Premium

0.1 % HALAD-766 (Low Fluid Loss Control)

5 lbm/sk Silicalite Compacted (Light Weight Additive)

20 % SSA-1 (Heavy Weight Additive)

0.1 % Versaset (Thixotropic Additive)

1.5 % FDP-C760-04 (Foamer)

Fluid Weight 14.30 lbm/gal

Slurry Yield: 1.47 ft<sup>3</sup>/sk

Total Mixing Fluid: 6.40 Gal/sk

Top of Fluid: 3000 ft

Calculated Fill: 1800 ft

Volume: 140.57 bbl

Calculated Sacks: 399.68 sks

Proposed Sacks: 400 sks

Fluid 6: Tail Cement

50/50 Poz Premium

0.1 % HALAD-766 (Low Fluid Loss Control)

5 lbm/sk Silicalite Compacted (Light Weight Additive)

20 % SSA-1 (Heavy Weight Additive)

0.1 % Versaset (Thixotropic Additive)

1.5 % FDP-C760-04 (Foamer)

Fluid Weight 14.30 lbm/gal

Slurry Yield: 1.47 ft<sup>3</sup>/sk

Total Mixing Fluid: 6.40 Gal/sk

Top of Fluid: 4800 ft

Calculated Fill: 500 ft

Volume: 42.12 bbl

Calculated Sacks: 160.99 sks

Proposed Sacks: 165 sks

# HALLIBURTON

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## Fluid 7: Water Spacer

Displacement

Fluid Density: 8.34 lbm/gal

Fluid Volume: 384.92 bbl

## Fluid 8: Top Out Cement

Premium Cement

94 lbm/sk Premium Cement (Cement)

12 % Cal-Seal 60 (Accelerator)

3 % Calcium Chloride (Accelerator)

Fluid Weight 14.60 lbm/gal

Slurry Yield: 1.55 ft<sup>3</sup>/sk

Total Mixing Fluid: 7.35 Gal/sk

Proposed Sacks: 200 sks

# HALLIBURTON

**Job Procedure**

**9 5/8" Intermediate Casing**

## Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Gel Water Ahead	8.4	5.0	20 bbl
2	Spacer	Super Flush	9.2	5.0	20 bbl
3	Spacer	Fresh Water Behind	8.3	5.0	10 bbl
4	Cement	Foamed Lead	14.3	5.0	565 sks
5	Cement	Foamed Tail	14.3	5.0	400 sks
6	Cement	Unfoamed Tail	14.3	5.0	165 sks
7	Spacer	Displacement	8.3	7.0	384.92 bbl
8	Cement	12/3/ Thixo	14.6	1.5	200 sks

## Foam Output Parameter Summary:

Fluid #	Fluid Name	Unfoamed Liquid Volume	Beginning Density lbm/gal	Ending Density lbm/gal	Beginning Rate scf/bbl	Ending Rate scf/bbl
<b>Stage 1</b>						
4	Foamed Lead	147.43bbl	9.5	9.5	51.0	362.6
5	Foamed Tail	104.57bbl	11.0	11.0	212.1	342.7

## Foam Design Specifications:

Foam Calculation Method: Constant Density  
Backpressure: 250 psig  
Bottom Hole Circulating Temp: 95 degF  
Mud Outlet Temperature: 80 degF

Calculated Gas = 59409.3 scf  
Additional Gas = 40000 scf  
Total Gas = 99409.3 scf

# HALLIBURTON

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## Job Information

## 7" Intermediate Casing

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WV 4BD 23-8-21

9 5/8" Intermediate Casing	0 - 5300 ft (MD)
Outer Diameter	9.625 in
Inner Diameter	8.681 in
Linear Weight	47 lbm/ft
Casing Grade	HCP110

8 1/2" Intermediate Open Hole	5300 - 12335 ft (MD)
Inner Diameter	8.500 in
Job Excess	25 %

7" Intermediate Casing	0 - 12335 ft (MD)
Outer Diameter	7.000 in
Inner Diameter	6.184 in
Linear Weight	29 lbm/ft
Casing Grade	HCP110

Mud Type	Polymer
Mud Weight	10.50 lbm/gal
BHCT	150 degF

# HALLIBURTON

## Job Recommendation

## 7" Intermediate Casing

### Fluid Instructions

Fluid 1: Water Based Spacer

Gel Water Ahead

Fluid Density: 8.40 lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Reactive Spacer

Super Flush

Fluid Density: 9.20 lbm/gal

Fluid Volume: 20 bbl

Fluid 3: Water Spacer

Fresh Water Behind

Fluid Density: 8.34 lbm/gal

Fluid Volume: 10 bbl

Fluid 4: Foamed Lead Cement

50/50 Poz Premium

0.1 % HALAD-766 (Low Fluid Loss Control)

5 lbm/sk Silicalite Compacted (Light Weight Additive)

20 % SSA-1 (Heavy Weight Additive)

0.1 % Versaset (Thixotropic Additive)

1.5 % FDP-C760-04 (Foamer)

Fluid Weight 14.30 lbm/gal

Slurry Yield: 1.47 ft<sup>3</sup>/sk

Total Mixing Fluid: 6.40 Gal/sk

Top of Fluid: 0 ft

Calculated Fill: 11835 ft

Volume: 320.21 bbl

Calculated Sacks: 896.73 sks

Proposed Sacks: 900 sks

Fluid 5: Tail Cement

50/50 Poz Premium

0.1 % HALAD-766 (Low Fluid Loss Control)

5 lbm/sk Silicalite Compacted (Light Weight Additive)

20 % SSA-1 (Heavy Weight Additive)

0.1 % Versaset (Thixotropic Additive)

1.5 % FDP-C760-04 (Foamer)

Fluid Weight 14.30 lbm/gal

Slurry Yield: 1.47 ft<sup>3</sup>/sk

Total Mixing Fluid: 6.40 Gal/sk

Top of Fluid: 11835 ft

Calculated Fill: 500 ft

Volume: 14.12 bbl

Calculated Sacks: 53.95 sks

Proposed Sacks: 55 sks

Fluid 6: Water Based Spacer

Mud Displacement

Fluid Density: 13 lbm/gal

Fluid Volume: 458.23 bbl

Fluid 7: Top Out Cement

Premium Cement

94 lbm/sk Premium Cement (Cement)

12 % Cal-Seal 60 (Accelerator)

3 % Calcium Chloride (Accelerator)

Fluid Weight 14.60 lbm/gal

Slurry Yield: 1.55 ft<sup>3</sup>/sk

Total Mixing Fluid: 7.35 Gal/sk

Proposed Sacks: 200 sks

# HALLIBURTON

**Job Procedure**

**7" Intermediate Casing**

## Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Gel Water Ahead	8.4		20 bbl
2	Spacer	Super Flush	9.2		20 bbl
3	Spacer	Fresh Water Behind	8.3		10 bbl
4	Cement	50/50 Poz Premium - Foamed	14.3		900 sks
5	Cement	50/50 Poz Premium - Unfoamed	14.3		55 sks
6	Spacer	Mud Displacement	13.0		458.23 bbl
7	Cement	Cap Cement	14.6		200 sks

## Foam Output Parameter Summary:

Fluid #	Fluid Name	Unfoamed Liquid Volume	Beginning Density lbm/gal	Ending Density lbm/gal	Beginning Rate scf/bbl	Ending Rate scf/bbl
<b>Stage 1</b>						
4	50/50 Poz Premium - Foamed	234.62bb 1	11.0	11.0	27.5	759.6

## Foam Design Specifications:

Foam Calculation Method: Constant Density  
Backpressure: 250 psig  
Bottom Hole Circulating Temp: 150 degF  
Mud Outlet Temperature: 130 degF

Calculated Gas = 95376.7 scf  
Additional Gas = 40000 scf  
Total Gas = 135376.7 scf

# HALLIBURTON

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## **Job Information**

## **4 1/2" Production Casing**

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WV 4BD 23-8-21

7" Intermediate Casing	0 - 12335 ft (MD)
Outer Diameter	7.000 in
Inner Diameter	6.184 in
Linear Weight	29 lbm/ft
Casing Grade	HCP110
6 1/8" Open Hole	12335 - 16700 ft (MD)
Inner Diameter	6.125 in
Job Excess	35 %
4 1/2" Production Casing	0 - 16700 ft (MD)
Outer Diameter	4.500 in
Inner Diameter	3.826 in
Linear Weight	15.10 lbm/ft
Casing Grade	P-110
Mud Type	Oil Based
Mud Weight	15 lbm/gal

# HALLIBURTON

## Job Recommendation

## 4 1/2" Production Casing

### Fluid Instructions

#### Fluid 1: Reactive Spacer

##### Tuned Spacer

0.5 gal/bbl Pen-5M (Surfactant)  
379 lbm/bbl Barite (Heavy Weight Additive)  
0.5 gal/bbl Musol(R) A (Additive Material)  
0.5 gal/bbl SEM-7 (Additive Material)

Fluid Density: 15.50 lbm/gal  
Fluid Volume: 30 bbl

#### Fluid 2: Primary Cement

##### Premium Cement

94 lbm/sk Premium Cement (Cement)  
17.5 % SSA-1 (Cement Material)  
0.5 % HR-601 (Cement Material)  
0.2 % Halad(R)-344 (Low Fluid Loss Control)  
0.5 % Halad(R)-413 (Low Fluid Loss Control)  
0.3 % CFR-3 (Cement Material)  
0.2 % HR-25 (Retarder)  
0.2 % Super CBL (Expander)  
0.2 % Suspend HT (Cement Material)  
17.5 % Common White-100 Mesh, SSA-2 (Additive Material)  
0.3 % D-AIR 3000 (Defoamer)

Fluid Weight 16.20 lbm/gal  
Slurry Yield: 1.45 ft<sup>3</sup>/sk  
Total Mixing Fluid: 5.64 Gal/sk  
Top of Fluid: 5000 ft  
Calculated Fill: 11700 ft  
Volume: 227.63 bbl  
Calculated Sacks: 879.60 sks  
Proposed Sacks: 880 sks

#### Fluid 3: Water Spacer

##### Water Displacement

Fluid Density: 8.34 lbm/gal  
Fluid Volume: 236.88 bbl

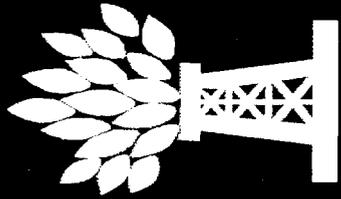
# HALLIBURTON

**Job Procedure**

**4 1/2" Production Casing**

## Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Tuned Spacer	15.5		30 bbl
2	Cement	Premium Cement	16.2		880 sks
3	Spacer	Water Displacement	8.3		236.88 bbl



**NEWPARK**

**DRILLING FLUIDS, LLC**

**Questar  
Exploration &  
Production Company**

***WV 4BD-23-8-21***

***Sec 23-T8S-R21E  
Uintah County, Utah***

***Drilling Fluids Program***

***410 17<sup>th</sup> Street, Suite 460 Denver, CO 80202  
(303) 623-2205 (720) 904-7970 Fax***



# Newpark Drilling Fluids, LP

410 17<sup>th</sup> Street, Suite 460

■ Denver, Colorado 80202

■ (303) 623-2205

■ FAX (720) 904-7970

April 21, 2008

Mr. John Owen  
Questar Exploration & Production  
1331 17th Street, Suite 800  
Denver, Colorado 80202

RE: WV 4BD-23-8-21  
Sec 23-T8S-R21E  
Uintah Co, Utah

Mr. Owen:

Newpark Drilling Fluids, LP is pleased to present the enclosed revised recommended drilling fluids program for the WV 4BD-23-8-21 well to be drilled in Uintah County, Utah. This program is for drilling with KCL Water/FlexFirm in the 1st intermediate to 5300 ft, a polymer fluid system in the 2nd intermediate interval to 12,335 ft, then to T.D. at 16,7000 ft with OBM.

The Surface Interval will be pre-set at a depth of 500 ft.

For the 1st intermediate Interval, a light KCL /Flex Firm drilling fluid is planned. Mud up before drilling into the Trona/ Water flood area.

Brine kill pills may be needed for trips, logs, and casing operations, depending on pressure encountered while drilling. Trona water flows in this area may require a mud weight of 9.5-9.8 ppg to control. A mud-up will be needed before the Trona Water at 5100'. Mud-up to a NewPHPA/Polymer system. Required mud weight at interval T.D. at 5,300' is expected to be in the 9.3-9.5 ppg range.

In the 2nd intermediate interval, drill out with the KCL water from the previous interval . Mud weight in this interval is expected to be in the 11.5-12.0 ppg range at the 12,335 ft liner interval T.D. Extreme loses have been encountered in this interval on offset wells.

In the Production interval, displace to a 12.0-12.5 ppg OptiDrill OBM system. Maintain fluid density as low as possible to increase penetration rates and reduce the possibility of lost circulation. Use high weight pills for well control during; trips, logs, and casing operations. Mud weight at T.D. is expected to be at +/-15.5 ppg.

The projected drilling time for this project is 65-70 days with an estimated material and engineering cost of \$500,000.00 assuming no unusual delays or problems are encountered. The estimate is based on minimal losses and a 15.0 ppg mud weight at TD. Costs will increase dramatically if severe losses are encountered.

All sack material and bulk barite will be furnished from our Grand Junction, Colorado and Myton, UT facilities with OBM supplied from Newpark's Boulder, WY facility.

If you have any questions following your review of this proposal, please call.

Regards,

Estes Ward  
Operations Manager  
Newpark Drilling Fluids, LP

# Project Summary

**Questar**  
**Exploration & Production**  
WV 4BD-23-8-21  
**Sec 23-T8S-R21E**  
**Uintah, County Utah**

Depth (ft)	Formations	Interval Comments	Mud Weight (ppg)	Mud Properties
500'	Uinta Surface T.D.	Hole size: 17 1/2" / Casing: 13 3/8"  AIR DRILLED	NA	NA
2,595' 3,340' 5,300'	Green River Mahogeny  Intermediate T.D.	<p><b>KCL/FlexFirm</b> Hole size: 12-1/4" / Casing: 9 5/8"</p> <p>Drill out with KCL water. Maintain K silicate with 1-3 sks per 100 ft. Pump pre-hydrated NewGel or Flowzan /New Gel sweeps for increased hole cleaning and for any tight hole and/or torque. For trips, spot heavy brine if needed for trona flow, and at intermediate T.D. check hole conditions and spot high viscosity mud if needed. If hole conditions dictate a mud-up, convert the system to a KCL/Polymer system.</p> <p>Mud weight required at T.D. is expected to be in the 9.3-9.5ppg range</p>	8.4-8.8       9.3-10.0	Vis (sec/qt): 27-36 PV (cp): 0-8 YP (#s/100ft <sup>2</sup> ): 0-10 FL (ml/30 min): NC-20 LGS %: < 1%-3% pH: 10.5-10.8 Cl (mg/l): 15-20K KCL: 3%
5,935' 9,020' 11,395' 11,520' 11,835' 12,285' 12,335'+/-	Wasatch Mesa Verde Sego Bucktongue Castlegate Blackhawk Mancos Inter. 2 T.D.	<p><b>NewPHPA/Polymer</b> Hole size: 8.5" / Liner: 7"</p> <p>Mud up as hole conditions dictate to a NewPHPA/Polymer system. Maintain properties as outlined increasing the PHPA concentration to 1 ppb. Lost circulation may be a problem in this interval. If lost circulation is encountered, pump LCM pills as needed. If LCM pills will not control losses, by-pass the shakers and increase the LCM concentration in the system as needed. If severe lost circulation is encountered, consider a DynaPlug squeeze. Hole instability may be encountered in the Mesa Verde. Monitor torque, pump pressure, connection fill, and trip conditions for indications of hole instability and consider adding Asphalt if hole conditions dictate.</p>	9.8  10.0  11.0  11.2 11.5 11.8	Vis (sec/qt): 40-45 PV (cp) : 12-20 YP (#s/100ft <sup>2</sup> ) : 10-12 FL (ml/30 min): 6-8 LGS %: 3-5 pH: 10.0-10.5 Cl (mg/l): 11-15K PHPA: 1.0 ppb
12,720'  15,450' 16,295' 16,500'  16,700'	Mancos B  Frontier equiv. Dakota Silt Dakota  Total Depth	<p><b>OptiDrill OBM</b> Hole size: 6-1/8" / Casing: 4-1/2"</p> <p>Drill out with the <b>OptiDrill</b> system, treating cement contamination as needed with <b>OptiWet</b> to prevent shaker blinding. Maintain hole cleaning during high ROP's with high viscosity sweeps. Use a 1:1 ratio of <b>OptiVis RM</b> and <b>OptiVis</b>. CO<sub>2</sub> in the gas stream while drilling under balanced will require additional Lime, emulsifiers and wetting agent.</p> <p>Maintain mud weight as needed for well control. Spot high weight ECD pills for trips, logs, and casing operations.</p>	12.0  15.0  15.5	PV (cp): 15-25 YP (lbs/100ft <sup>2</sup> ): 8-10 HPHT (mls/30 min.) : <20 O/W : 80:20 - 85:15 ES: 500+ Lime: 2-4 ppb LGS %: < 6



**Newpark Drilling Fluids, LP**

410 17th Street, Suite 460  
 Denver, CO. 80202  
 (303) 623-2205 FAX (720) 904-7970

# Project Summary

Questar  
 Exploration & Production  
 WV 4BD-23-8-21  
 Sec 23-T8S-R21E  
 Uintah, County Utah

## DRILLING FLUID PROPERTIES

### Surface Hole: Air Drilled

Hole Size (in)	TVD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	API Fluid Loss (ml/30min)	Total Solids (%)
17-1/2"	0-500'	NA	NA	NA	NA	NA

### 1st Intermediate Hole: KCL/FlexFirm

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	API Fluid Loss (ml/30min)	Chloride Mg/l (x1000)	LGS Solids (%)
12-1/4"	500'-5,000'	8.6-8.8	2-8	0-4	NC-20	15-20	1-3%
12-1/4"	5,000'-5,300'	9.3-9.8	8-12	8-10	10-12	15-20	3-5%

### 2nd Intermediate Interval: NewPHPA/Polymer

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	API Fluid Loss (ml/30min)	pH	LGS Solids (%)
8-1/2"	5,300'-10,000'	9.3-9.8	6-12	6-10	8-10	10.0-11.0	3-6%
8-1/2"	10,000'-12,335'	10.8-11.8	12-18	12-15	6-8	10.0-11.0	3-6%

### Production Interval: OptiDrill OBM

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	O/W Ratio (%)	HPHT Fluid Loss (ml/30min)	CaCL (mg/l) X 10,000	Electrical Stability (mv)	LGS Solids (%)
6-1/8"	12,335'-16,700'	15.0-15.5	20-30	8-10	85/15	12-15	250-350	500 +	3-6

- Drilling fluid properties are guidelines only.
- Mud weights for guidelines only, allow hole conditions to dictate actual mud weights.
- Hole conditions should be closely monitored and product mix adjusted accordingly.



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# 1st Intermediate Interval

## 12-1/4" Hole (500' - 5,300')

**Questar**  
**Exploration & Production**  
**WV 4BD-23-8-21**  
**Sec 23-T8S-R21E**  
**Uintah, County Utah**

### 1st Intermediate Interval Drilling Fluid Properties

Depth Interval (TVD)	Mud Weight (ppg)	Viscosity (sec/qt)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	pH	API Fluid Loss (ml/30min)	KCL (%)	Low Gravity Solids	Chlorides Mg/l (x1000)
500'-5,300'+/-	9.0-9.5	28-36	2-10	0-8	10.0-11.0	NC-20	3.0	<1.0	15-20

- Drill out with KCL water maintaining KCL % at 3.0.
- Mix FlexFirm at 3 sks per 100 ft drilled for hole stability and reduced bit balling.
- If a water flow is encountered, treat as needed for carbonates.
- Pump pre-hydrated NewGel and/or Flowzan/SaltGel sweeps for increased hole cleaning, along with LCM sweeps for seepage (Paper LCM while drilling with water)
- If water flows are encountered, spot heavy brine pills for trips, logs and casing operations.
- If hole conditions dictate a mud-up, convert the KCL water to a KCL/Polymer system.
- **Offset information indicates the 1st major loss zone to be at +/- 3600 ft.**
- **Shallow gas/overpressure was encountered on some offsets in the area at 3,700-4,000'. A 9.5-9.9 ppg fluid was needed to control pressure.**

<i>Challenges:</i>	<i>Strategies:</i>
Gravel/Unconsolidated formation	If encountered, pump sweeps of pre-hydrated NewGel with a viscosity of 150 -300 sec/qt.
Water Flows (Trona)	If water flows become excessive, control hydrostatic as needed with air additions and fluid density.
Lost Circulation	While drilling with water, pump LCM sweeps consisting of paper. If drilling with mud, pump mixed LCM pills in the 20-30% LCM range.
Hole Cleaning	Pump sweeps on a regular basis and for any indications of insufficient hole cleaning. Circulate and pump sweeps before connections and for any anticipated down time.
Increase ROP with PDC Bits	Pump 20-40 bbl. Sweeps with NewEase 203, New100N, DynaDet, and SAPP. (FlexDrill Sweeps)
Hole Instability/Sloughing Shale	Consider a mud-up and Asphalt additions.



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# 1st Intermediate Interval

## 12-1/4" Hole (500'- 5,300')

Questar  
Exploration & Production  
WV 4BD-23-8-21  
Sec 23-T8S-R21E  
Uintah, County Utah

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### Offset Data:

- Wells in this area have encountered major losses at +/- 3600 ft.
- Gravel/unconsolidated formation has been encountered at 1380 ft.
- Gas/overpressure has been encountered at 3,700'-4,000'.

### Fluid Recommendations:

- Drill out cement, float collar and new formation. Test the integrity of the casing seat and squeeze if necessary.
- Drill out with Saltwater, aerating as needed to maintain circulation.
- If water is encountered, control flow with reduced air and fluid density.
- If a Trona Water flow is encountered additions of **Lime** and/or **Calcium Chloride** should be used to adjust alkalinities as needed.
- The use of a premix tank is highly recommended. Pre-Hydrate **NewGel** for use as sweeps and for viscosity when a mud up is needed. Fill premix tank with fresh water. Treat out hardness with **SodaAsh** as needed. Add 0.25-0.5 ppb **Caustic Soda** for a 10.0-10.5 pH. Begin additions of 20-25 ppb **NewGel** allow sufficient circulating time for maximum hydration. Add 1.0-2.0 ppb **CFL II**. Then mix additional **NewGel** (30-40 ppb total) or a 120+ funnel viscosity. The pre-hydrated bentonite can be pumped from the premix to the pill tank and pumped downhole for sweeps or can be added slowly to the **Saltwater** for viscosity and rheology control.
- If penetration rates slow sweeps with **New 100N**, **NewEase 203**, **SAPP**, and **DynaDet** should be considered. (1% **New 100N**, 1% **NewEase 203**, 0.5-0.75 ppb **SAPP**, 0.2 % **DynaDet**). "**Flex Sweeps**"
- For trips, an increase in mud weight may be necessary to kill water flows. 9.8-10.0 ppg brine should be considered for this operation.
- Seepage and/or lost circulation may become a problem. For seepage while drilling with water, pump 20-30 bbl pills containing Paper LCM.
- If losses become severe, consider a mud up and LCM sweeps of **Cedar Fiber** and **FiberSeal** should be pumped and incorporated into the system as needed. If losses continue, increase coarse LCM in active system to 15-20%. If losses continue the use of a **New X-Prima Squeeze** is strongly recommended.
- At TD increase funnel viscosity for logs and casing operations as hole conditions dictate. Suggest funnel viscosity be increased to 45-50 sec/qt, before logging operations be attempted.
- At 5,300' ( intermediate T.D.) short trip, check hole conditions. If hole conditions dictate, add pre-hydrated **New-Gel** from the premix tank to the active system to increase funnel viscosity to 45-50 sec/qt and spot in the open hole for logs and casing operations

**DRILL STRING PACK-OFF:** Rapid penetration rate during fast drilling often deteriorates to pack-off, a situation which can lead to lost circulation and/or stuck pipe. Pack-off is typically self-induced by exceeding the maximum rate of penetration for a given annular flow rate. The solution to this is to control the penetration rate to a level that the pumps can adequately clean the hole while maintaining rheological properties in line with existing hydraulic parameters.

**SOLIDS CONTROL:** It is of the utmost importance that the shale shakers and flow line cleaners be equipped with the finest screens possible, and yet handle the flow rate. The desander and desilter units should be evaluated periodically and serviced to maximize performance.



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# 2nd Intermediate Interval

## 8-1/2" Hole (5,300'-12,335')

**Questar**  
**Exploration & Production**  
**WV 4BD-23-8-21**  
**Sec 23-T8S-R21E**  
**Uintah, County Utah**

2nd Intermediate Interval Drilling Fluid Properties								
Depth Interval (TVD)	Mud Weight (ppg)	Viscosity (sec/qt)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	pH	API Fluid Loss (ml/30min)	Hardness (Mg/l)	Low Gravity Solids
5,300'-10,000'	9.0-9.5	32-36	6-12	6-10	10.0-11.0	8-10	100+	4-6
10,000'-12,335'	10.5-11.4	45-50	10-18	12-14	10.0-11.0	6-8	100+	4-6

- Drill out with water and or mud as hole conditions dictate. After mud-up , allow the system to revert to a fresh water polymer system.
- As mud weight is increased, seepage losses can become severe. Treat with LCM pills as needed. If pill treatments will not contain the losses at reasonable levels, by-pass the shakers, retaining the pills and allowing the LCM concentration to increase as needed.
- Hole instability can occur in the Mesa Verde in this area. If encountered, consider adding Asphalt, building to a 4-6 ppb concentration.
- High pressure may be encountered in the Castlegate/Blackhawk. Monitor closely for increased pressure while drilling and use caution on trips to minimize possible swabbing.
- Mud weight at Liner Interval T.D. is expected to be in the 11.2-11.4 ppg range.

<i>Challenges:</i>	<i>Strategies:</i>
Hole Instability/Sloughing Shale	Consider 4-6 ppb Asphalt
Increase in Formation pressure	Monitor well conditions and increase density as needed with <b>NewBar</b> as needed.
Seepage/Lost Circulation	As mud weight is increased (10.0ppg +) seepage and losses may become a problem. For seepage pump 50 bbl sweeps with 5-10 ppb <b>DynaFiber</b> and 10-20 ppb <b>NewCarb</b> as needed. For partial or total losses pump sweeps with 10-15 ppb <b>FiberSeal</b> and <b>Cedar Fiber</b> . Severity of losses will determine size and quantity of LCM added. If losses are not controlled with sweeps consider 10-15% LCM in active system. For severe losses the use of a <b>New X-Prima</b> squeeze should be considered.
Differential Sticking	Maintain mud weight as low as possible. Control Low Gravity Solids below 6%, and control fluid loss at 8-10 mls/30 min.
Increase ROP with PDC Bits	Pump 20-40 bbl. Sweeps with NewEase 203, New100N, DynaDet, and SAPP. (FlexDrill Sweeps)



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## 2nd Intermediate Interval

8-1/2" Hole (5,300'-12,335')

Questar  
Exploration & Production  
WV 4BD-23-8-21  
Sec 23-T8S-R21E  
Uintah, County Utah

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### Offset Data:

Wells in this area have experienced losses as mud weights are increased to control formation pressure. LCM sweeps are strongly recommended for this reason. Mud weights should be kept as low as practical but increases to 11.2 ppg may be required by 2nd Intermediate TD at 12,335'.

- Loss zones on offset wells were at 9200 ft and 9500 ft.

### Fluid Recommendations:

- Drill out cement, float collar and new formation with the system from the previous interval. Test the integrity of the casing seat and squeeze if necessary.
- Drill out with water and or mud. If drilling out with water consider a mud up by +/- 7500 ft or as hole conditions dictate.
- Begin additions of 0.5-1.0 ppb **NewPHPA** and maintain throughout the interval.
- Maintain viscosity with PreHydrated **NewGel** until chlorides have dropped below 5000-7000 mg/l. After chlorides have dropped **NewGel** will not need to be pre-hydrated and can be added directly to the system.
- Begin additions of **NewPHPA**. Concentration of **NewPHPA** should be maintained at 0.5-1.0 ppb throughout the interval. As mud weight increases additions of **PHPA** should be switched from **NewPHPA DLMW** to the shorter chain **NewPHPA DSL**.
- If hole conditions dictate, consider 4-6 ppb Asphalt.
- If penetration rates slow sweeps with **New 100N**, **NewEase 203**, **SAPP**, and **DynaDet** should be considered. (1% **New 100N**, 1% **NewEase 203**, 0.5-0.75 ppb **SAPP**, 0.2 % **DynaDet**). "**Flex Sweeps**"
- Increase mud weight as needed to control formation pressures as needed. Mud weights should be maintained as low as practical to reduce chance of losses and differential sticking. Increase mud weight as needed with **NewBar**.
- As density increases additions of **NewEdge** and/or **DrillThin** should be added for rheology control.
- As bottom hole temperatures increase and additional fluid loss control is desired supplement the **AquaBlock** with **NewPac** for fluid loss control Lower API filtrate to 6-8 cc's with additions of **NewPAC** and **AquaBlock**.
- As mud weight is increased seepage and/or lost circulation may become a problem. For seepage pump 20-30 bbl pills containing a combination of **NewCarb** and **DynaFiber** mixed at a 2:1 ratio. If partial or total returns are encountered, LCM sweeps with a varied size distribution including **Cedar Fiber** and **Fiber Seal**, **PhenoSeal** and other assorted sizes should be considered and incorporated into the system as needed. 20-25% LCM in the active system may be required. The type, size and quantity of LCM used will depend on the severity of losses. If losses are severe a **New X-Prima** squeeze should be considered.
- At TD increase funnel viscosity for logs and casing operations as hole conditions dictate. Suggest funnel viscosity be increased to 50-55 sec/qt, before logging or casing operations be attempted.
- While circulating casing it is recommended to reduce Yield Points for cementing operations.



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# Production Interval

## 6-1/8" Hole (12,335'-16,700')

**Questar**  
**Exploration & Production**  
WV 4BD-23-8-21  
Sec 23-T8S-R21E  
**Uintah, County Utah**

### Production Interval Drilling Fluid Properties

Depth Interval (TVD)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft <sup>2</sup> )	O/W Ratio %	HPHT Fluid Loss (ml/30min)	Excess Lime (PPB)	Electrical Stability (MV)	Low Gravity Solids	CaCl Mg/l Water
12,335'-16,700'	15.0-15.5	25-35	8-10	85:15	10-20	2-4	500+	< 6	300K

#### Drilling Fluid Recommendations: (12,335'-16,700')

- Displace to a OptiDrill OBM after finishing the casing job at 12,335'.
- After displacement, maintain the OptiDrill system within the parameters outlined above.
- Offsets in the area have encountered high rates of seepage in this interval. If indications of seepage are observed, sweeps of **NewCarb C**, **Dynafiber C & M**, **NewSeal**, and **CyberSeal** are recommended. Mixing ratios are recommended to be at 5:1 **NewCarb M** to **DynaFiber**, **NewSeal**, and **CyberSeal**. If losses continue to be a problem, consider trying different sizes and combinations until seepage is slowed.
- Maintain rheology low to reduce ECD values and reduce surge and swab during connections and trips.
- Drill as underbalanced as possible to help prevent losses and increase penetration rates.
- For pressure control, spot high weight pills with an equivalent mud weight to drilling ECD's. On trips in, stage these pills out and divert to storage for further use. High weight pills in excess of the drilling ECD should be avoided due to possible lost circulation.

Challenges	Strategies
Displacement	<ul style="list-style-type: none"> <li>• Have 1200-1300 bbls of OBM volume on location along with a pump capable of keeping up with displacement rates.</li> <li>• Pump a 10-20 bbl viscosified OBM spacer ahead of the OptiDrill (enough for 500 ft + separation)</li> <li>• A steady pump rate for either turbulent or plug flow should be used. Reciprocate and rotate to assist in minimizing channeling.</li> <li>• Do not shut down once displacement commences.</li> <li>• Should any contamination occur, isolate the contaminated fluid for reconditioning.</li> </ul>
Seepage/lost Circulation.	Pump LCM sweeps when seepage and/or losses are indicated. Sweeps should be a mixture of , NewCarb, DynaFiber, NewSeal, and CyberSeal. If lost returns are encountered, consider a Diaseal M or cross linked polymer squeeze.
Maintaining Oil wet solids	For every 1.0 ppg mud weight increase, mix 0.02 gal/bbl OptiWet
Pressure control	<ul style="list-style-type: none"> <li>• Spot weighted pills calculated to give a bottom hole pressure equal to drilling ECD.</li> <li>• Do not exceed drilling bottom hole pressure with the ECD pill. Lost circulation has been a problem on offset wells.</li> <li>• Stage weighted pills out of the hole and recover for future use.</li> </ul>



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# Production Interval

6-1/8" Hole (12,335'-16,700')

Questar  
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WV 4BD-23-8-21  
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Uintah, County Utah

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## Maintenance Procedure:

**HPHT** - Maintain HPHT values within programmed parameters. Additions of **OptiMul** and **OptiPlus**, at recommended concentrations should maintain the HTHP at recommended levels. If hole conditions indicate a need for lower HPHT values, **Opti G** at 2-4 ppb is recommended.

**Electrical Stability**— Electrical stability should be used as a guide not as an absolute in determining maintenance requirements. Actual values are not critical but should be observed for trends or changes. Decreases in electrical stability should be noted along with other mud properties to determine treatments. To increase electrical stability add emulsifiers and wetting agents **OptiMul** and **OptiPlus** or decrease water content.

**Oil/Water Ratio** - Maintain the oil/water ratio in the 90:10-80:20 range depending on mud weight and condition.. Higher water content will decrease the amount of **OptiVis** needed for rheology.

**Mud weight** - Maintain minimum fluid densities with solids equipment. Monitor hole conditions and all drilling parameters closely for indications of increases in formation pressures and adjust fluid densities accordingly. Drilling with a minimum amount of overbalance will reduce the possibility of losing returns and/or of differentially sticking the drill string. Mud weight on offset wells was in the 15.0-15.5 ppg range at T.D.

**Rheology** - Maintain solids as low as possible. Increase rheology as needed for hole cleaning with a combination of **OptiVis (Bentone 910)** and **Opti Vis RM or Opti Vis PS** and water content.

**Lime** - Maintain the excess Lime at 2-3 ppb excess.

**Hole cleaning** - Calculate rheology requirements based on ROP, pump rates and hole conditions. Adjust as needed .

**Mud losses downhole**—Monitor ECD's with Hy-Calc, maintaining the lowest values possible. If losses are encountered; sweeps containing **NewCarb, DynaFiber, Opti-G, and NewSeal** should be circulated to aid in the prevention of losses. If seepage losses continue and/or become severe, consider spotting a pill with **Magma Fiber (Fine & Regular)** and the above formulation. Keep the hole full at all times, and avoid excessive swabbing and/or surge actions when tripping.

**Solids Control** - Maintain low gravity solids at 4-6 % by volume. The high performance shakers should be equipped with the finest mesh screens that will handle the circulating volume and not cut barite out.

**Water Contamination**— Keep all water sources off the mud pits. If contamination occurs, treat with emulsifiers and Calcium Chloride as needed.



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**Production Interval**  
**6-1/8" Hole (12,335'-16,700')**

**Questar**  
**Exploration & Production**  
WV 4BD-23-8-21  
**Sec 23-T8S-R21E**  
**Uintah, County Utah**

**Recommended materials for relaxed filtrate OptiDrill system :**  
**( 85:15 Oil/Water Ratio)**

<b>Product</b>	<b>Function</b>	<b>Concentration</b>
<b>NewBar</b>	Weighting material	As needed
<b>OptiVis</b>	Organophilic Clay / Viscosifier	2-4 ppb
<b>OptiMul</b>	Primary Emulsifier	2.0 ppb
<b>OptiPlus</b>	Secondary Emulsifier	4.0 gal/bbl.
<b>OptiVis RM</b>	Low End Rheology Modifier	0.1-0.2 ppb
<b>Calcium Chloride Water</b>	Internal Phase	10.0%-20.0 % by volume
<b>Calcium Chloride</b>	Salinity/Activity	300,000 - 350,000 mg/l
<b>OptiG</b>	Fluid Loss control Additive	1.0-4.0 ppb
<b>Lime</b>	Alkalinity Additive	5 ppb
<b>NewCarb M</b>	Loss Circulation Material	10.0 ppb
<b>NewCarb F</b>	Loss Circulation Material	As required
<b>DynaFiber</b>	Loss Circulation Material	As required



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**CONFIDENTIAL**

**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company: Questar Exploration & Production Company

Well Name: WV 4BD-23-8-21

API No: 43-047-39041 Lease Type: Federal/Indian

Section 23 Township 08S Range 21E County Uintah

Drilling Contractor Pete Martin Rig # Rathole

**SPUDDED:**

Date 6-28-08

Time 4:00 PM

How Dry

**Drilling will Commence:** \_\_\_\_\_

Reported by Kerry Sails

Telephone # 307-212-4627

Date 7-01-08 Signed RM

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

***SUBMIT IN TRIPLICATE***

1. Type of Well

Oil Gas  
 Well  Well  Other

2. Name of Operator

**QUESTAR EXPLORATION & PRODUCTION CO.**

3. Address and Telephone No.

**11002 EAST 17500 SOUTH - VERNAL, UT 84078**

Contact: **Dahn.Caldwell@questar.com**

**435-781-4342 Fax 435-781-4357**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**189' FNL, 101' FWL, NWNW, SEC 23-T8S-R21E**

5. Lease Designation and Serial No.

**UTU-0809**

6. If Indian, Allottee or Tribe Name

**UTE TRIBE**

7. If Unit or CA, Agreement Designation

**WONSITS VALLEY UNIT**

8. Well Name and No.

**WV 4BD 23 8 21**

9. API Well No.

**43-047-39041**

10. Field and Pool, or Exploratory Area

**WONSITS VALLEY**

11. County or Parish, State

**UINTAH**

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 6/28/08 - Drilled 90' of 30" conductor hole. Set 90' of 20" conductor pipe. Cmtd w/ Ready Mix.**

**RECEIVED**

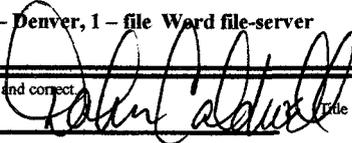
**JUL 07 2008**

**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**



**Office Administrator II**

Date

**7/01/08**

(This space for Federal or State office use)

Approved by:

Title

Date

Conditions of approval, if any

**CONFIDENTIAL**

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

OPERATOR: **Questar Exploration & Production Co.**  
ADDRESS: **11002 East 17500 South**  
**Vernal, Utah 84078 (435)781-4342**

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
A	99999	16958	43-047-39041	WV 4BD 23 8 21	NWNW	23	8S	21	Uintah	6/28/08	7/14/08

WELL 1 COMMENTS:

DKTA

**CONFIDENTIAL**

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)

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

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

(3/89)

  
Signature

**RECEIVED**

**JUL 07 2008**

DIV. OF OIL, GAS & MINING

Office Administrator II      7/01/08  
Title      Date

Phone No. **(435)781-4342**

**CONFIDENTIAL**

## QUESTAR

Page 1 of 8

## Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/4/2008	06:00 - 10:00	4.00				DRILL 30" HOLE 88 FT. DEEP AND SET 20" PIPE AND CEMENT WITH READY MIX
	10:00 - 00:00	14.00				DRILL 17 1/2" HOLE FROM 88 FT. TO 548 FT. 460 FT. AND BLOW DOWN HOLE
	00:00 - 02:00	2.00				LAY DOWN DRILL PIPE & BHA
	02:00 - 04:00	2.00				RAN 12 JTS OF 13 3/8", J-55, 54.5 #, ST&C WITH SHOE AT 509', FLOAT COLLAR AT 466', 3 BOW SPRING CENTRALIZERS, 1 AT 489' AND 445' AND 403, AND 1 AT 125'.
	04:00 - 06:00	2.00				CEMENT CASING WITH PRO-PETRO, PUMPED 70 BBL'S WATER, 20 BBL'S GEL WATER, 500 SKS CLASS G 50/50 POZ AT 102.4 BBL'S CEMENT AT 15.8 PPG, YEILD 1.15, 5 GAL/STK, BUMP PLUG TO 600 PSI CHECK FLOATS, HELD OK, HAD GOOD RETURNS THROUGHOUT JOB WITH 15 BB'S CEMENT BACK TO PIT.
	06:00 -					NOTIFY JAMIE SPARGER WITH THE BLM AT 1340 HRS ON 7/02/2008 LEFT MESSAGE ABOUT DRILLING OUT FROM CONDUCTOR TO SET 13 3/8" CASING AND CEMENT ON 7/04/2008 AT 0200 HRS.
						CALLED CAROL DANIELS WITH UTAH REGULATORY, NO ANSWER AND COULD NOT LEAVE MESSAGE ON 7/02/2008 AT 1330 HRS.
						NOTIFY JAN NELSON WITH QUESTAR IN RED WASH ON DRILLING AND SETTING SURFACE AT WV 23-8-21 ON 7/03/2008 AT 0830 HRS.
7/28/2008	06:00 - 06:00	24.00	LOC	4	RDMO	RIG DOWN FLOOR, PITS, PUMPS, MOVE OUT PRAGMA CAT WALK, L/D TOP DRIVE, LOWER DERRICK @ 20:30 HRS & UNSTRING BLOCKS--BLEEDING OFF GAS FROM CSG ANN--F/2100 PSI TO 1800 PSI ABOUT EVERY 30 MIN.-DRY GAS
						30% RIGGED DOWN 0% MOVED 0% RIGGED UP
7/29/2008	06:00 - 18:00	12.00	LOC	4	RDMO	R/D & MOVE MUD TANKS, DOG HOUSES, BACK YARD, VFD HOUSE
						65% RIGGED DOWN 40% MOVED 10% RIGGED UP
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHT
7/30/2008	06:00 - 18:00	12.00	LOC	4	MIRU	SET OFF DRAWWORKS, SET DERRICK OFF FLOOR, R/D SUB BASES & MOVE TO NEW LOCATION, MOVE MATTING BOARDS
						RIGGED DOWN 100% MOVED 70% RIGGED UP 10%
	18:00 - 06:00	12.00	LOC	4	MIRU	WAIT ON DAYLIGHT
7/31/2008	06:00 - 18:00	12.00	LOC	4	MIRU	SET SET MATS, STACK SUBBASE, MUD TANKS, & BACK YARD, N/D BOP & SET TREE ON WV 7BD & TEST
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
8/1/2008	06:00 - 18:00	12.00	LOC	4	MIRU	SET IN SPREADERS, DOG HOUSE, FLOOR PLATES, SET TANK FARM, PIN DERRICK TO FLOOR
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
8/2/2008	06:00 - 18:00	12.00	LOC	4	MIRU	STRING UP, RAISE DERRICK, SET IN BAR HOPPERS, GAS BUSTER, R/U FLOOR, BRIDLE DOWN, P/U TOP DRIVE & SET CATWALK
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT

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### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/3/2008	06:00 - 18:00	12.00	LOC	4	MIRU	R/U TOP DRIVE, CHANGE OUT LINERS IN PUMPS, R/U SOLID CONTROL EQUIPMENT, N/U BOP, CHOKE LINE, & FLOW LINE
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
8/4/2008	06:00 - 12:00	6.00	ISP	1	DRLIN1	REMOVE & INSPECT QUIL & VALVE ON TOP DRIVE
	12:00 - 14:30	2.50	BOP	2	DRLIN1	TEST TOP DRIVE VALVES 250 LOW 5000 HI & SUFRACE LINES 250 LOW 3000 HI
	14:30 - 19:00	4.50	RIG	2	DRLIN1	TROUBLE SHOOT KOOMEY UNIT & LINES
	19:00 - 23:00	4.00	BOP	2	DRLIN1	TEST HYDRIL 250 LOW 3500 HI, PIPE, BLIND & CHOKE 250 LOW, 5000 HI, CASING 1500 PSI
	23:00 - 23:30	0.50	OTH		DRLIN1	CENTER TOP DRIVE
	23:30 - 00:00	0.50	OTH		DRLIN1	INSTALL WEAR BUSHING
	00:00 - 02:30	2.50	TRP	1	DRLIN1	STRAP BHA
	02:30 - 06:00	3.50	TRP	1	DRLIN1	P/U 12 1/4 BHA
8/5/2008	06:00 - 06:30	0.50	RIG	2	DRLIN1	RIG REPAIR SHAKER RESET SWITCH
	06:30 - 09:00	2.50	DRL	4	DRLIN1	DRLG FLOAT EQUIPMENT, CMT & POCKET
	09:00 - 09:30	0.50	DRL	1	DRLIN1	DRLG F/548 TO 558
	09:30 - 10:30	1.00	EQT	2	DRLIN1	CIR & FIT TO 10.5 PPG, 64 PSI, MW 8.4
	10:30 - 13:30	3.00	DRL	1	DRLIN1	DRLG F/558 TO 850 (292 FT 97.33 FPH) WOB 5-10, RPM 50, GPM 905
	13:30 - 19:00	5.50	RIG	2	DRLIN1	RIG REPAIR SHAKER MOTOR, POP OFF ON #1 MUD PUMP
	19:00 - 19:30	0.50	SUR	1	DRLIN1	CIR SWEEP & SURVEY @710 .4 DEG AZ 350.2 TVD 709.99
	19:30 - 01:00	5.50	DRL	1	DRLIN1	DRLG F/850 TO 1363 (513 FT 93.27 FPH) WOB 5-10, RPM 50, GPM 905
	01:00 - 01:30	0.50	SUR	1	DRLIN1	SURVEY@ 1271 .1 DEG AZ 111.4 TVD 1270.99
	01:30 - 06:00	4.50	RIG	2	DRLIN1	RIG REPAIR CLAMP ON TOP DRIVE BETWEEN LOWER VALVE & THROUGH AWAY SUB, NOT HOLDING, BREAKING OUT ON TOP OF THROUGH AWAY SUB
8/6/2008	06:00 - 07:30	1.50	DRL	1	DRLIN1	DRLG F/1363 TO 1482 (119 FT 79.33 FPH)
	07:30 - 11:00	3.50	RIG	2	DRLIN1	RIG REPAIR, TROUBLE SHOOT TD COMM FAILURE
	11:00 - 16:30	5.50	RIG	2	DRLIN1	TOH HOLE PACKED OFF @1377, WORK FREE, CONT PUMP OUT OF HOLE TO SHOE
	16:30 - 22:00	5.50	RIG	2	DRLIN1	CHANGE OUT COM LINE ON TD, INSTALL THROUGH AWAY SUB
	22:00 - 23:00	1.00	RIG	2	DRLIN1	WASH DOWN 2 STAND, TD OK, 2" BLEED OFF VALVE ON #1 MUD PUMP LEAKING, PULL BACK IN SHOE
	23:00 - 00:00	1.00	RIG	2	DRLIN1	CHANGE OUT GATE ON #1 PUMP BLEED OFF VALVE
	00:00 - 02:30	2.50	RIG	2	DRLIN1	TIH, WASH & REAM F/SHOE TO TD
	02:30 - 04:00	1.50	DRL	1	DRLIN1	DRLG F/1482 TO 1580
	04:00 - 04:30	0.50	RIG	4	DRLIN1	INSTALL ROTATING RUBBER
	04:30 - 05:30	1.00	FISH	6	DRLIN1	WORK TIGHT HOLE @1560
	05:30 - 06:00	0.50	DRL	1	DRLIN1	DRLG F/1580 TO 1612
8/7/2008	06:00 - 09:30	3.50	DRL	1	DRLIN1	DRLG F/1612 TO 1899 (287 FT 82 FPH) WOB 8-12 RPM 167 GPM 905
	09:30 - 10:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	10:00 - 10:30	0.50	SUR	1	DRLIN1	SURVEY @1807 .5 DEG AZ 152.9 TVD 1806.98
	10:30 - 14:30	4.00	DRL	1	DRLIN1	DRLG F/1899 TO 2185 (286 FT 71.5 FPH) WOB 12-14 RPM 164 GPM 880
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:00 - 20:30	5.50	DRL	1	DRLIN1	DRLG F/2185 TO 2471 (286 FT 52 FPH) WOB 15-18 RPM 164 GMP 880
	20:30 - 21:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	21:00 - 21:30	0.50	SUR	1	DRLIN1	SURVEY@2379 .9 DEG AZ 60.0 TVD 2378.95, FLOW CHECK ON SURVEY FLOWING 64 BBL HR
	21:30 - 05:00	7.50	DRL	1	DRLIN1	DRLG F/2471 TO 2609

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/7/2008	05:00 - 05:30	0.50	CIRC	1	DRLIN1	CIR BTM UP
	05:30 - 06:00	0.50	REAM	1	DRLIN1	BACK REAM OUT TO 2471
8/8/2008	06:00 - 14:30	8.50	RIG	2	DRLIN1	CIR & TROUBLE SHOOT POWER PROBLEMS, W/O/ELECTRICIAN & WELDER
	14:30 - 18:00	3.50	TRP	2	DRLIN1	PUMP OUT HOLE TO SHOE
	18:00 - 02:30	8.50	RIG	2	DRLIN1	FLOW CHECK-NO FLOW, REPAIR ST-80, REPLACE UNION ON STANDPIPE & TEST TO 3600 PSI, CUT VENTS ON PUMP HOUSE, REPAIR #2 ENGINE
8/9/2008	02:30 - 05:00	2.50	TRP	10	DRLIN1	TOH
	05:00 - 06:00	1.00	TRP	1	DRLIN1	CHANGE OUT MOTOR & BIT
	06:00 - 07:00	1.00	TRP	1	DRLIN1	P/U MOTOR & BIT
	07:00 - 10:00	3.00	RIG	2	DRLIN1	RIG REPAIR, LOCK ON ROTARY TABLE
	10:00 - 12:30	2.50	TRP	2	DRLIN1	TIH W/BIT #2 , HIT BRIDGE AT 1327'
	12:30 - 13:00	0.50	REAM	1	DRLIN1	WASH & REAM F/ 1327' TO 1423'
	13:00 - 13:30	0.50	TRP	2	DRLIN1	TIH TO 2470' HIT BRIDGE
	13:30 - 14:00	0.50	REAM	1	DRLIN1	WASH & REAM F/ 2470' TO 2609'
	14:00 - 16:00	2.00	DRL	1	DRLIN1	DRILG F/ 2609' TO 2656' (47' @ 23.5 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	16:00 - 16:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	16:30 - 20:00	3.50	DRL	1	DRLIN1	DRILG F/ 2656' TO 2752' (106.5' @ 30.4 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	20:00 - 21:00	1.00	RIG	2	DRLIN1	CHANGE OUT LINER & SWAB #2 PUMP
	21:00 - 23:00	2.00	DRL	1	DRLIN1	DRILG F/ 2752' TO 2794' (42' @ 21.0 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
8/10/2008	23:00 - 23:30	0.50	RIG	2	DRLIN1	CHANGE SWAB #1 PUMP
	23:30 - 06:00	6.50	DRL	1	DRLIN1	DRILG F/ 2794' TO 2925' (131' @ 20.01FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	06:00 - 06:30	0.50	DRL	1	DRLIN1	DRLG F/2925 TO 2942
	06:30 - 07:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	07:00 - 07:30	0.50	SUR	1	DRLIN1	SURVEY@2857 .3 DEG AZ 171.0 TVD 2856.93
	07:30 - 08:30	1.00	DRL	1	DRLIN1	DRLG F/2942 TO 2972
	08:30 - 09:00	0.50	RIG	2	DRLIN1	CHANGE SWAB IN #1PUMP
	09:00 - 14:00	5.00	DRL	1	DRLIN1	DRLG. F/ 2972' TO 3133' (161' @ 32.2 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
	14:00 - 14:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	14:30 - 22:30	8.00	DRL	1	DRLIN1	DRLG. F/ 3133' TO 3420' (287' @ 35.8 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
8/11/2008	22:30 - 23:30	1.00	SUR	1	DRLIN1	SURVEY @ 3332' INC.1.10 , AZM 170.60 TVD 3331.89
	23:30 - 03:30	4.00	DRL	1	DRLIN1	DRLG. F/ 3420' TO 3462' (42' @ 10.5 FPH) WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
	03:30 - 04:30	1.00	CIRC	1	DRLIN1	CIR & BUILD TRIP SLUG, FLOW CHECK 1" STREAM
	04:30 - 05:00	0.50	TRP	10	DRLIN1	TOH F/BIT-3462 FT
	05:00 - 05:30	0.50	OTH		DRLIN1	FLOW CHECK FLOWING 30 BBL HR
	05:30 - 06:00	0.50	TRP	10	DRLIN1	TOH
	06:00 - 07:30	1.50	CIRC	1	DRLIN1	CIR BTM'S UP & SPOT 150 BB ECD PILL, 9.1 PPG
	07:30 - 09:00	1.50	TRP	10	DRLIN1	TOH F/BIT
	09:00 - 10:30	1.50	TRP	2	DRLIN1	TIH TO SHOE
	10:30 - 11:30	1.00	RIG	6	DRLIN1	SLIP & CUT DRLG LINE
	11:30 - 13:00	1.50	TRP	2	DRLIN1	TIH TO 3420 FT
	13:00 - 13:30	0.50	REAM	1	DRLIN1	WASH & REAM 42 FT TO BTM
	13:30 - 15:30	2.00	DRL	1	DRLIN1	DRLG F/3462 TO 3512'(50' @ 25.0 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
15:30 - 16:00	0.50	RIG	1	DRLIN1	RIG SERVICE	

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/11/2008	16:00 - 22:00	6.00	DRL	1	DRLIN1	DRLG F/3512' TO 3684'(172' @ 28.6 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
	22:00 - 23:00	1.00	RIG	2	DRLIN1	CHANGE SWAB IN #2 PUMP
	23:00 - 06:00	7.00	DRL	1	DRLIN1	DRLG F/3684' TO 3799'(115' @ 16.42 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
8/12/2008	06:00 - 14:30	8.50	DRL	1	DRLIN1	DRLG F/3799 TO 3987 (188 FT 22.11 FPH) WOB 15-18 RPM 144 GPM 854
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:00 - 15:30	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	15:30 - 16:00	0.50	SUR	1	DRLIN1	SURVEY@3905 1.1 DEG AZ 163.2 TVD 3904.79
	16:00 - 17:30	1.50	DRL	1	DRLIN1	DRLG F/ 3987' TO 3997'
	17:30 - 19:00	1.50	RIG	2	DRLIN1	CHANGE OUT 2 SWABS & LINER #1 PUMP
	19:00 - 20:00	1.00	DRL	1	DRLIN1	DRLG F/ 3997' TO 4009'
	20:00 - 23:00	3.00	TRP	2	DRLIN1	PUMP PILL & TRIP OUT
	23:00 - 00:30	1.50	TRP	1	DRLIN1	CHANGE OUT MUD MTR'S & BITS
	00:30 - 01:30	1.00	OTH	1	DRLIN1	CENTER UP TOP DRIVE
	01:30 - 03:30	2.00	TRP	2	DRLIN1	T.I.H W/ BIT #4
	03:30 - 04:00	0.50	REAM	1	DRLIN1	WASH & REAM F/3885' TO 4009'
	04:00 - 06:00	2.00	DRL	1	DRLIN1	DRLG F/ 4009' TO 4050' (41' @ 20.5 FPH) WOB 10,RPM 45, SPM 102X102 AT 3150 PSI AT 854 GPM
8/13/2008	06:00 - 07:00	1.00	RIG	2	DRLIN1	ROD CLAMP & SWAB # 1 PUMP
	07:00 - 09:00	2.00	DRL	1	DRLIN1	DRLG. F/ 4050' TO 4080' (30' @ 15.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	09:00 - 10:00	1.00	RIG	2	DRLIN1	CHANGE SWAB #2 PUMP
	10:00 - 12:00	2.00	DRL	1	DRLIN1	DRLG. F/ 4080' TO 4115' (35' @ 17.5 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	12:00 - 13:00	1.00	RIG	2	DRLIN1	CHANGE SWAB # 2 PUMP
	13:00 - 15:00	2.00	DRL	1	DRLIN1	DRLG. F/ 4115' TO 4175' (60' @ 30.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	15:00 - 15:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:30 - 01:00	9.50	DRL	1	DRLIN1	DRLG. F/ 4175' TO 4365' (190' @20.0 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	01:00 - 01:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	01:30 - 06:00	4.50	DRL	1	DRLIN1	DRLG. F/ 4365' TO 4457' (92' @20.4 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
8/14/2008	06:00 - 07:00	1.00	DRL	1	DRLIN1	DRILLING F/4457 T/4464 7' 7"/HR PUMP HIGH VIS SWEEP AND CIRC. BOTTOMS UP
	07:00 - 07:30	0.50	SUR	1	DRLIN1	SURVEY @ 4379****1.3 DEG***146.2 AZ
	07:30 - 16:00	8.50	DRL	1	DRLIN1	DRILLING F/4464 T/4725 261' 30.7"/HR WOB 16, 45 RPM, 2X102 SPM, 854 GPM
	16:00 - 17:30	1.50	RIG	8	DRLIN1	REPAIR #2 PUMP SWAB
	17:30 - 18:00	0.50	DRL	1	DRLIN1	DRILLING F/4725 T/4759 34' 68"/HR
	18:00 - 18:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	18:30 - 19:00	0.50	OTH	1	DRLIN1	CHANGE OUT CORRISION RING IN TOP DRIVE
	19:00 - 00:00	5.00	DRL	1	DRLIN1	DRILLING F/4759 T/4876 117' 23.4"/HR
	00:00 - 00:30	0.50	RIG	8	DRLIN1	REPAIR #2 PUMP SWAB
	00:30 - 04:30	4.00	DRL	1	DRLIN1	DRILLING F/4876 T/4938 62' 15.5"/HR
8/15/2008	04:30 - 05:30	1.00	RIG	8	DRLIN1	REPAIR #1 PUMP SWAB
	05:30 - 06:00	0.50	DRL	1	DRLIN1	DRILLING F/4938 T/4941' 3' 6"/HR
	06:00 - 12:00	6.00	DRL	1	DRLIN1	DRILLING F/4941 T/5015 74' 12.3"/HR
	12:00 - 12:30	0.50	SUR	1	DRLIN1	DROP SURVEY(CHECK FLOW) AND PUMP TRIP SLUG
	12:30 - 15:30	3.00	TRP	10	DRLIN1	TRIP OUT OF HOLE FOR BIT
	15:30 - 16:00	0.50	TRP	10	DRLIN1	PULL SURVEY, CHANGE OUT BIT AND CHECK MOTOR

Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
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 Contractor Name: SST Energy  
 Rig Name: SST  
 Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66  
 Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations	
8/15/2008	16:00 - 18:30	2.50	TRP	10	DRLIN1	TRIP IN HOLE WITH BIT #5	
	18:30 - 19:00	0.50	REAM	1	DRLIN1	WASH 75' TO BOTTOM, NO FILL	
	19:00 - 06:00	11.00	DRL	1	DRLIN1	DRILLING F/5015 T/5145 130' 11.8'/HR WOB 15/20 RPM 40/55 SPM 2X100 PSI 3400	
8/16/2008	06:00 - 14:30	8.50	DRL	1	DRLIN1	DRILLING F/5145 T/5225 80' 9.4'/HR	
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE	
	15:00 - 22:00	7.00	DRL	1	DRLIN1	DRILLING F/5225 T/5325 100' 14.2'/HR WOB 18/20 RPM 60 SPM 2X102 GPM 854	
	22:00 - 23:00	1.00	CIRC	1	DRLIN1	CIRCULATE AND CONDITION HOLE FOR SHORT TRIP, PUMP HIGH VIS SWEEP	
	23:00 - 00:00	1.00	TRP	14	DRLIN1	SHORT TRIP 10 SANDS, WASH 90' TO BOTTOM- NO FILL	
	00:00 - 01:00	1.00	CIRC	1	DRLIN1	CIRCULATE AND CONDITION HOLE FOR CASING	
	01:00 - 01:30	0.50	SUR	1	DRLIN1	CHECK FOR FLOW,DROP SURVEY AND PUMP TRIP SLUG	
	01:30 - 06:00	4.50	TRP	2	DRLIN1	TRIP OUT OF HOLE FOR CASING, SLM=0.89' DIFFERENCE, NO CORRECTION LAY DOWN 8" BHA	
	8/17/2008	06:00 - 07:00	1.00	OTH		CSGIN1	PULL WEAR BUSHING
		07:00 - 10:00	3.00	CSG	1	CSGIN1	HOLD SAFETY MEETING, RIG UP CASING CREW AND FILL UP TOOL
10:00 - 16:00		6.00	CSG	2	CSGIN1	RUN 124 JTS OF 9 5/8", 47.0#,HCP 110,LT&C CASING	
16:00 - 17:30		1.50	CIRC	1	CSGIN1	CIRCULATE AND CONDITION HOLE, RIG DOWN CSERS ANDPULL DRILLING NIPPLE	
17:30 - 20:00		2.50	CSG	7	CSGIN1	LAND CASING HANGER,RIG DOWN FILL UP TOOL AND RIG UP CEMENT HEAD 185,000K STRING WEIGHT ON HANGER	
20:00 - 21:30		1.50	CIRC	1	CSGIN1	CIRCULTE AND CONDITION HOLE FOR CEMENT, HOLD SAFETY MEETING	
21:30 - 01:30		4.00	CMT	2	CSGIN1	PUMP CEMENT-30 BBLs MUD FLUSH, 30 BBL CEMENT SCAVENGER. LEAD 1, 610 SACKS 50/50 POZ AND 40.1% N2. LEAD 2, 770 SACKS 50/50 POZ WITH23.1% N2. TAIL 230 SACKS 50/50 POZ. DISPLACED WITH 382 BBLs. 55.1 BBLs OF 50/50 POZ CAP PUMPED DOWN BACK SIDE.WATER.GOOD RETURNS THROUGH JOB, RETURNED 175 BBLs OF CEMENT TO SURFACE. PLUG BUMPED AND FLOATS HELD.	
01:30 - 02:00		0.50	OTH		CSGIN1	TEST CASING TO 1500 PSI FOR 30 MIN.	
02:00 - 03:30		1.50	CMT	1	CSGIN1	RIG DOWN HALLIBURTON, PULL LANDING JOINT	
03:30 - 06:00		2.50	BOP	1	CSGIN1	NIPPLE DOWN BOP	
8/18/2008	06:00 - 08:00	2.00	BOP	1	DRLIN2	NIPPLE DOWN 13 5/8" BOP	
	08:00 - 11:00	3.00	WHD	1	DRLIN2	NIPPLUP B SECTION AND TEST TO 5000 PSI	
	11:00 - 19:00	8.00	BOP	1	DRLIN2	NIPPLE UP 11" BOP	
	19:00 - 23:30	4.50	BOP	2	DRLIN2	TEST BOP, ALL RAMS,IBOP , FLOOR VALVES, CHOKE MANIFLOD AND AND HCR VALVE 10,000 PSI HIGH 250 LOW. ANNULAR 5,000 HIGH 250 LOW. FUNTION TEST KOOMEY	
	23:30 - 00:00	0.50	OTH		DRLIN2	SET WEAR BUSHING	
	00:00 - 00:30	0.50	OTH		DRLIN2	RIG UP FLOOR AND TOP DRIVE AND CENTER OVER HOLE	
	00:30 - 04:00	3.50	TRP	2	DRLIN2	PICK UP BIT #6. MOTOR AND MONEL AND TRIP IN HOLE- INSTALL ROTATING RUBBER	
	04:00 - 06:00	2.00	DRL	4	DRLIN2	DRILL CEMENT AND FLOAT EQUIPMENT AND 10' OF NEW HOLE F/5201 T/5335'. CIRCULATE FOR FIT TEST	
	8/19/2008	06:00 - 06:30	0.50	EQT	2	DRLIN2	FIT TEST TO 1220 PSI- 13.5 EQMW
		06:30 - 16:00	9.50	DRL	1	DRLIN2	DRILLING F/5335 T/5640 305' 32.1'/HR WOB 15/16 RPM 50 SPM 100 GPM 418
16:00 - 16:30		0.50	RIG	1	DRLIN2	RIG SERVICE	

Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST  
 Start: 6/28/2008  
 Rig Release: Group:  
 Rig Number: 66  
 Spud Date: 6/28/2008

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations	
8/19/2008	16:30 - 00:00	7.50	DRL	1	DRLIN2	DRILLING F/5640 T/5927 287' 38.3'/HR WOB 17/18 RPM 50 SPM 100 GPM 418	
	00:00 - 01:00	1.00	SUR	1	DRLIN2	SURVEY @ 5842****1.2 DEG***161.5 AZ	
	01:00 - 06:00	5.00	DRL	1	DRLIN2	DRILLING F/5927 T/6005 78' 15.6'/HR WOB 17/18 RPM 50 SPM 100 GPM 418	
8/20/2008	06:00 - 12:30	6.50	DRL	1	DRLIN2	DRILLING F/6005 T/6308 303' 46.6'/HR WOG 17/18 RPM 55 SPM 100 GPM 418	
	12:30 - 13:00	0.50	RIG	1	DRLIN2	RIG SERVICE	
	13:00 - 17:30	4.50	DRL	1	DRLIN2	DRILLING F/6308 T/6499 191' 42.4'/HR	
	17:30 - 18:30	1.00	SUR	1	DRLIN2	SURVEY @ 6414****1.0 DEG***169.7 AZ	
	18:30 - 22:30	4.00	DRL	1	DRLIN2	DRILLING F/6499 T/6532	
	22:30 - 23:00	0.50	CIRC	1	DRLIN2	FLOW CHECK AND PUMP TRIP SLUG	
	23:00 - 02:30	3.50	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT	
	02:30 - 03:00	0.50	TRP	10	DRLIN2	CHANGE OUT BITAND CHECK MOTOR	
8/21/2008	03:00 - 06:00	3.00	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #7	
	06:00 - 06:30	0.50	REAM	1	DRLIN2	WASH 45' TO BOTTOM, 3' OF FILL	
	06:30 - 15:00	8.50	DRL	1	DRLIN2	DRILLING F/6532 T/6999 467' 54.9'/HR	
	15:00 - 16:00	1.00	CIRC	1	DRLIN2	CIRCULATE, BUILD AND PUMP TRIP SLUG	
	16:00 - 19:00	3.00	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT	
	19:00 - 19:30	0.50	TRP	10	DRLIN2	CHANGE OUT MOTOR AND PICK UP BIT #8	
	19:30 - 22:00	2.50	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT # 8 TO SHOE	
	22:00 - 23:30	1.50	RIG	6	DRLIN2	CUT DRILLING LINE, CENTER TOP DRIVE	
	23:30 - 00:00	0.50	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #8	
	00:00 - 00:30	0.50	REAM	1	DRLIN2	WSH 30' TO BOTTOM, NO FILL- LOST 120 BBLS OF MUD ON TRIP	
	00:30 - 03:30	3.00	DRL	1	DRLIN2	DRILLING F/6999 T/7237 238' 79.3'/HR WOB 14 RPM 55 SPM 100 GPM 419	
8/22/2008	03:30 - 06:00	2.50	CIRC	2	DRLIN2	LOST CIRCULATION @ 7237' LOST APPROXIMATELY 220 BBLS , SPOT LCM SWEEPS ON BOTTOM WHILE MIXING ANOTHER HAVE PARTIAL RUTURNS @ THIS TIME	
	06:00 - 08:30	2.50	DRL	1	DRLIN2	DRILLING F/7237 T/7320 83' 33.2'/HR DRILLING WITH SLOWER PUMP RATE AND LOW BIT WEIGHT TRYING TO HEAL UP LOSSES	
	08:30 - 11:30	3.00	DRL	1	DRLIN2	WOB 6/8 RPM 40 SPM 75 GPM 320 DRILLING F/7320 T/7548 228' 76.0'/HR WOB 14 RPM 50 SPM 100 GPM 418	
	11:30 - 12:00	0.50	RIG	1	DRLIN2	RIG SERVICE	
	12:00 - 13:00	1.00	DRL	1	DRLIN2	DRILLING F/7548 T/7644 96' 96'/HR	
	13:00 - 14:00	1.00	SUR	1	DRLIN2	CIRC. AND SURVEY @ 7559****1.3 DEG***166.1 AZ	
	14:00 - 06:00	16.00	DRL	1	DRLIN2	DRILLING F/7644 T/8220 576' 36.0'/HR WOB 16 RPM 55 SPM 100 GPM 419	
	8/23/2008	06:00 - 14:00	8.00	DRL	1	DRLIN2	DRILLING F/8220 T/8499 279' 34.9'/HR WOB 22/20 DHRPM 155 SPM 100 GPM 419
		14:00 - 14:30	0.50	RIG	1	DRLIN2	RIG SERVICE
		14:30 - 22:30	8.00	DRL	1	DRLIN2	DRILLING F/8499 T/8784 285' 35.6'/HR
22:30 - 23:30		1.00	SUR	1	DRLIN2	SURVEY @ 8699****1.1 DEG***147.7 AZ	
8/24/2008	23:30 - 06:00	6.50	DRL	1	DRLIN2	DRILLING F/8784 T/9015 231' 35.5'/HR	
	06:00 - 13:30	7.50	DRL	1	DRLIN2	DRILLING F/9015 T/9357 342' 45.6'/HR WOB 20/25 DHRPM 150 SPM 100 GPM 419	
	13:30 - 14:00	0.50	RIG	1	DRLIN2	RIG SERVICE, FUNTION PIPE RAMS	
8/25/2008	14:00 - 06:00	16.00	DRL	1	DRLIN2	DRILLING F/9357 T/9919 562' 35.1'/HR	
	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRILLING F/9919 T/10119 200' 33.3'/HR WOB 22/25 DHRPM 150 SPM 100 GPM 419	
	12:00 - 12:30	0.50	RIG	1	DRLIN2	RIG SERVICE	
	12:30 - 06:00	17.50	DRL	1	DRLIN2	DRILLING F/10119 T/10570 451' 25.8'/HR	

Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/25/2008	12:30 - 06:00	17.50	DRL	1	DRLIN2	SAME PARAMETERS
8/26/2008	06:00 - 08:30	2.50	DRL	1	DRLIN2	DRILLING F/10570 T/10589 19' 7.6'/HR WOB 25 DHRPM 150 SPM 100 GPM 419
	08:30 - 09:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP
	09:30 - 10:00	0.50	SUR	1	DRLIN2	CHECK FLOW, DROP SURVEY AND PUMP TRIP SLUG
	10:00 - 14:00	4.00	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT
	14:00 - 20:30	6.50	TRP	10	DRLIN2	INSPECT BHA, CHANGE OUT JARS AND LAY DOWN 3 DRILL COLLARS, WASHED FACE
	20:30 - 21:30	1.00	TRP	10	DRLIN2	CHANGE OUT MOTOR, PULL SURVEY, MAKE UP BIT AND PICK UP 3 NEW DRILL COLLARS
	21:30 - 22:30	1.00	OTH		DRLIN2	CHANGE OUT CORRISION RING
	22:30 - 04:30	6.00	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #9
	04:30 - 05:00	0.50	REAM	1	DRLIN2	WASH 85' TO BOTTM, 10' OF OUT OF GAUGE HOLE
	05:00 - 06:00	1.00	DRL	1	DRLIN2	DRILLING F/10589 T/10600 11' 11'/HR WOB 12 DHRPM 100 SPM 100 GPM 419
8/27/2008	06:00 - 14:00	8.00	DRL	1	DRLIN2	BOTTOMS UP GAS 7800 UNITS AND 20'-25' FLAIR 10 BBL GAIN DRILLING F/10600 T/10786 186' 23.25'/HE WOB 18 DHPRM 110 SPM 100 GPM 419
	14:00 - 14:30	0.50	RIG	1	DRLIN2	RIG SERVICE
8/28/2008	14:30 - 06:00	15.50	DRL	1	DRLIN2	DRILLING F/10786 T/11070 284' 18.3' HR
	06:00 - 11:30	5.50	DRL	1	DRLIN2	DRLG F/11070 TO 11167 (97 FT 17.63 FPH) WOB 18 GPM 419 RPM 118
	11:30 - 12:00	0.50	RIG	1	DRLIN2	RIG SERVICE
	12:00 - 06:00	18.00	DRL	1	DRLIN2	DRLG F/11167 TO 11,520' (353 FT. 19.6 FPH) WOB 19 GPM 419 RPM 113
8/29/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRLG F/11520 TO 11612 (92 FT 20.44 FPH) WOB 18-20 RPM 113 GPM 419
	10:30 - 11:30	1.00	CIRC	1	DRLIN2	CIR & BUILD ECD PILL
	11:30 - 12:00	0.50	SUR	1	DRLIN2	FLOW CHECK & DROP SURVEY
	12:00 - 13:00	1.00	CIRC	1	DRLIN2	SPOT ECD PILL & PUMP DRY JOB
	13:00 - 18:30	5.50	TRP	10	DRLIN2	TOH F/BIT
	18:30 - 19:30	1.00	TRP	1	DRLIN2	CHANGE OUT BIT & MOTOR
	19:30 - 02:00	6.50	TRP	2	DRLIN2	TIH, FILL PIPE @BHA, 5500, 9500
	02:00 - 02:30	0.50	REAM	1	DRLIN2	WASH & REAM 60 FT TO BTM, 15 FT FILL
	02:30 - 06:00	3.50	DRL	1	DRLIN2	DRLG F/11612 TO 11695 (83 FT 23.71 FPH) WOB 15 RPM 104 GPM 419
8/30/2008	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRLG F/11695 TO 11809, LOSSES @11713 FT 230 BBL TOTAL
	12:00 - 13:30	1.50	CIRC	5	DRLIN2	CIR F/SAMPLES
	13:30 - 14:00	0.50	TRP	14	DRLIN2	SHORT TRIP 5 STD
	14:00 - 17:00	3.00	CIRC	1	DRLIN2	CIR BTM'S UP & SPOT 100 BBL ECD PILL, PUMP DRY JOB
	17:00 - 00:30	7.50	TRP	2	DRLIN2	TOH F/LOGS, L/D MONEL & MOTOR, SLM,
	00:30 - 01:30	1.00	LOG	1	EVAL 2	S/M & R/U LOGGERS
	01:30 - 06:00	4.50	LOG	1	EVAL 2	LOG W/TRIPLE COMBO, LOGGERS DEPTH 11812, STRAP 11808, TALLEY 11809.95
8/31/2008	06:00 - 06:30	0.50	LOG	1	EVAL 2	CONT LOG OUT W/PLATFORM EXPRESS
	06:30 - 07:30	1.00	LOG	1	EVAL 2	R/D LOGGERS
	07:30 - 08:00	0.50	RIG	1	EVAL 2	SERVICE RIG
	08:00 - 08:30	0.50	TRP	1	EVAL 2	P/U MOTOR & TEST
	08:30 - 10:00	1.50	TRP	2	EVAL 2	TIH W/BHA
	10:00 - 10:30	0.50	CIRC	1	EVAL 2	FILL PIPE & FLUSH LCM F/PUMPS
	10:30 - 12:30	2.00	TRP	2	EVAL 2	TIH TO 5300 FT
	12:30 - 14:00	1.50	RIG	6	EVAL 2	SLIP & CUT DRLG LINE
	14:00 - 18:30	4.50	TRP	2	EVAL 2	TIH FILL PIPE @ 5300, 9500 FT

### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release:  
 Rig Number: 66

Spud Date: 6/28/2008  
 End:  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/31/2008	18:30 - 21:00	2.50	CIRC	1	EVAL 2	CIR & CONDITION MUD, SPOT 100 BBL ECD PILL
	21:00 - 06:00	9.00	TRP	3	EVAL 2	LAY DOWN DRILL PIPE
9/1/2008	06:00 - 10:30	4.50	TRP	3	EVAL 2	L/D DRILL PIPE & BHA, FLOW CHECK @BHA
	10:30 - 11:00	0.50	OTH		EVAL 2	PULL WEAR BUSHING
	11:00 - 13:00	2.00	CSG	1	CSGIN2	R/U CASING CREW & FILL TOOL
	13:00 - 22:30	9.50	CSG	2	CSGIN2	RUN 7" CASING BREAK CIR EVERY 2000 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	22:30 - 23:00	0.50	CIRC	1	CSGIN2	CIR @7100 FT
	23:00 - 01:00	2.00	CSG	2	CSGIN2	RUN CASING TO 9600 FT
	01:00 - 02:30	1.50	CIRC	1	CSGIN2	CIR @9600 FT
	02:30 - 05:00	2.50	CSG	2	CSGIN2	RUN CASING TO 11773 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	05:00 - 06:00	1.00			CSGIN2	CIR BTM'S UP THROUGH CHOKE, R/U RETURN LINE OFF B-SECTION, TOTAL LOSSES 250 BBL
9/2/2008	06:00 - 07:00	1.00	CIRC	1	CSGIN2	CIR & R/U HALLIBURTON LINE F/B-SECTION
	07:00 - 07:30	0.50	CSG	2	CSGIN2	LAND CASING @11798 & ENGUAGE TIE DOWN BOLTS
	07:30 - 08:30	1.00	CSG	1	CSGIN2	R/D CASING CREW
	08:30 - 11:30	3.00	CIRC	1	CSGIN2	CIR & SHAKE OUT LCM
	11:30 - 12:00	0.50	CMT	2	CSGIN2	S/M & R/U HALLIBURTON
	12:00 - 18:00	6.00	CMT	2	CSGIN2	PRESS TEST CEMENT LINES TO 6000 PSI, NO2 LINES TO 8000 PSI AND CEMENT PUMP 10 BBL FRESH WATER AHEAD, 30 BBL SUPERFLUSH, 10 BBL FRESH WATER BEHIND, PUMP FOAM SCAVENGER 115 SKS. @ 7.0 PPG, PUMP 1ST. LEAD 475 SKS. @ 9.0 PPG, PUMPED 2ND. FOAMED LEAD 1375 SKS @ 11.0 PPG PUMP UNFOAMED TAIL 195 SKS. @ 14.3 PPG, DISPLACED W/ 445 BBL. FRESH WATER, BUMP PLUG AND TEST CSG TO 2600 PSI F/30 MIN. FLOATS HELD, 240 BBL CMT RETURNS, PUMP CAP CEMENT 55 SKS @ 14.6 PPG-PRESSURE INCREASED TO 1000 PSI
	18:00 - 19:00	1.00	CMT	1	CSGIN2	R/D CEMENTERS & L/D LANDING JT
	19:00 - 00:30	5.50	BOP	1	DRLPRO	N/D BOP, CHANGE OUT BTM RAMS TO 4"
	00:30 - 02:00	1.50	WHD	1	DRLPRO	N/U C-SECTION, INSTALL PACKING, PACKING LEAKING PAST NECK SEALS ON HANGER
	02:00 - 04:30	2.50	WHD	1	DRLPRO	N/D C-SECTION, CHANGE OUT SEALS ON HANGER
	04:30 - 06:00	1.50	WHD	1	DRLPRO	N/U C-SECTION, INSTALL PACKING
9/3/2008	06:00 - 13:00	7.00	BOP	1	DRLPRO	NIPPLE UP BOP, ORBIT VALVE, FLOW LINE
	13:00 - 16:30	3.50	OTH		DRLPRO	R/U TOP DRIVE F/4" PIPE
	16:30 - 17:30	1.00	BOP	2	DRLPRO	R/U TESTER
	17:30 - 23:30	6.00	BOP	2	DRLPRO	TEST BOP & CHOKE 250 LOW, 10000 HI, HYDRIL 250 LOW, 5000 HI, SURFACE LINES 250 LOW 3500 HI
	23:30 - 03:00	3.50	TRP	1	DRLPRO	STRAP BHA, DRILL PIPE & INSTALL DRIP PAN
	03:00 - 04:30	1.50	OTH		DRLPRO	INSTALL WEAR BUSHING & BEARING PACK
	04:30 - 06:00	1.50	TRP	1	DRLPRO	P/U BIT & BHA

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

5. Lease Serial No.

UTU-0809

6. If Indian, Allottee or Tribe Name

UTE TRIBE

7. If Unit or CA/Agreement, Name and/or No.

WONSITS VALLEY UNIT

8. Well Name and No.

WV 4BD-23-8-21

9. API Well No.

43-047-39041

10. Field and Pool, or Exploratory Area

WONSITS VALLEY

11. County or Parish, State

UINTAH

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator

Questar Exploration & Production Co.

Contact: Jan Nelson

3a. Address

11002 East 17500 South Vernal, Utah 84078

3b. Phone No. (include area code)

435-781-4331

3

189' FNL 101' FWL, NWNW, SECTION 23, T8S, R21E

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

**TYPE OF SUBMISSION**

**TYPE OF ACTION**

Notice of Intent

Acidize

Deepen

Production (Start/Resume)

Water Shut-Off

Subsequent Report

Alter Casing

Fracture Treat

Reclamation

Well Integrity

Final Abandonment Notice

Casing Repair

New Construction

Recomplete

Other

Change Plans

Plug and Abandon

Temporarily Abandon

CASING DEPTH

Convert to Injection

Plug Back

Water Disposal

CHANGE

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

Questar Exploration & Production Company is requesting permission to change the currently approved 7" casing depth of 12,335' to 11,865' due to lost circulation issues.

**COPY SENT TO OPERATOR**

All technical questions can be addressed to John Owens, Drilling Engineer, at (303) 308-3054.

Date: 9.23.2008

Initials: KS

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Laura Bills

Title

Associate Regulatory Affairs Analyst

Signature

*Laura Bills*

Date

August 29, 2008

**THIS SPACE FOR FEDERAL OR STATE USE**

Approved by

*D. M. Met*

Title

*Pet. Eng.*

Date

*9/17/08*

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

Office

*DOG M*

Federal Approval Of This Action Is Necessary

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.

(Instructions on reverse)

**RECEIVED**

SEP 04 2008

DIV. OF OIL, GAS & MINING

**CONFIDENTIAL**

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST  
 Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66  
 Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/4/2008	06:00 - 10:00	4.00				DRILL 30" HOLE 88 FT. DEEP AND SET 20" PIPE AND CEMENT WITH READY MIX
	10:00 - 00:00	14.00				DRILL 17 1/2" HOLE FROM 88 FT. TO 548 FT. 460 FT. AND BLOW DOWN HOLE
	00:00 - 02:00	2.00				LAY DOWN DRILL PIPE & BHA
	02:00 - 04:00	2.00				RAN 12 JTS OF 13 3/8", J-55, 54.5 #, ST&C WITH SHOE AT 509', FLOAT COLLAR AT 466', 3 BOW SPRING CENTRALIZERS, 1 AT 489' AND 445' AND 403, AND 1 AT 125'.
	04:00 - 06:00	2.00				CEMENT CASING WITH PRO-PETRO, PUMPED 70 BBL'S WATER, 20 BBL'S GEL WATER, 500 SKS CLASS G 50/50 POZ AT 102.4 BBL'S CEMENT AT 15.8 PPG, YEILD 1.15, 5 GAL/STK, BUMP PLUG TO 600 PSI CHECK FLOATS, HELD OK, HAD GOOD RETURNS THROUGHOUT JOB WITH 15 BB'S CEMENT BACK TO PIT.
7/4/2008	06:00 -					NOTIFY JAMIE SPARGER WITH THE BLM AT 1340 HRS ON 7/02/2008 LEFT MESSAGE ABOUT DRILLING OUT FROM CONDUCTOR TO SET 13 3/8" CASING AND CEMENT ON 7/04/2008 AT 0200 HRS.  CALLED CAROL DANIELS WITH UTAH REGULATORY, NO ANSWER AND COULD NOT LEAVE MESSAGE ON 7/02/2008 AT 1330 HRS.  NOTIFY JAN NELSON WITH QUESTAR IN RED WASH ON DRILLING AND SETTING SURFACE AT WV 23-8-21 ON 7/03/2008 AT 0830 HRS.
7/28/2008	06:00 - 06:00	24.00	LOC	4	RDMO	RIG DOWN FLOOR, PITS, PUMPS, MOVE OUT PRAGMA CAT WALK, L/D TOP DRIVE, LOWER DERRICK @ 20:30 HRS & UNSTRING BLOCKS--BLEEDING OFF GAS FROM CSG ANN--F/2100 PSI TO 1800 PSI ABOUT EVERY 30 MIN.-DRY GAS  30% RIGGED DOWN 0% MOVED 0% RIGGED UP
7/29/2008	06:00 - 18:00	12.00	LOC	4	RDMO	R/D & MOVE MUD TANKS, DOG HOUSES, BACK YARD, VFD HOUSE 65% RIGGED DOWN 40% MOVED 10% RIGGED UP
7/30/2008	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHT
	06:00 - 18:00	12.00	LOC	4	MIRU	SET OFF DRAWWORKS, SET DERRICK OFF FLOOR, R/D SUB BASES & MOVE TO NEW LOCATION, MOVE MATTING BOARDS RIGGED DOWN 100% MOVED 70% RIGGED UP 10%
7/31/2008	18:00 - 06:00	12.00	LOC	4	MIRU	WAIT ON DAYLIGHT
	06:00 - 18:00	12.00	LOC	4	MIRU	SET SET MATS, STACK SUBBASE, MUD TANKS, & BACK YARD, N/D BOP & SET TREE ON WV 7BD & TEST
8/1/2008	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
	06:00 - 18:00	12.00	LOC	4	MIRU	SET IN SPREADERS, DOG HOUSE, FLOOR PLATES, SET TANK FARM, PIN DERRICK TO FLOOR
8/2/2008	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
	06:00 - 18:00	12.00	LOC	4	MIRU	STRING UP, RAISE DERRICK, SET IN BAR HOPPERS, GAS BUSTER, R/U FLOOR, BRIDLE DOWN, P/U TOP DRIVE & SET CATWALK
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/3/2008	06:00 - 18:00	12.00	LOC	4	MIRU	R/U TOP DRIVE, CHANGE OUT LINERS IN PUMPS, R/U SOLID CONTROL EQUIPMENT, N/U BOP, CHOKE LINE, & FLOW LINE
	18:00 - 06:00	12.00	LOC	4	MIRU	W/O/DAYLIGHT
8/4/2008	06:00 - 12:00	6.00	ISP	1	DRLIN1	REMOVE & INSPECT QUIL & VALVE ON TOP DRIVE
	12:00 - 14:30	2.50	BOP	2	DRLIN1	TEST TOP DRIVE VALVES 250 LOW 5000 HI & SUFRACE LINES 250 LOW 3000 HI
	14:30 - 19:00	4.50	RIG	2	DRLIN1	TROUBLE SHOOT KOOMEY UNIT & LINES
	19:00 - 23:00	4.00	BOP	2	DRLIN1	TEST HYDRIL 250 LOW 3500 HI, PIPE, BLIND & CHOKE 250 LOW, 5000 HI, CASING 1500 PSI
	23:00 - 23:30	0.50	OTH		DRLIN1	CENTER TOP DRIVE
	23:30 - 00:00	0.50	OTH		DRLIN1	INSTALL WEAR BUSHING
	00:00 - 02:30	2.50	TRP	1	DRLIN1	STRAP BHA
	02:30 - 06:00	3.50	TRP	1	DRLIN1	P/U 12 1/4 BHA
8/5/2008	06:00 - 06:30	0.50	RIG	2	DRLIN1	RIG REPAIR SHAKER RESET SWITCH
	06:30 - 09:00	2.50	DRL	4	DRLIN1	DRLG FLOAT EQUIPMENT, CMT & POCKET
	09:00 - 09:30	0.50	DRL	1	DRLIN1	DRLG F/548 TO 558
	09:30 - 10:30	1.00	EQT	2	DRLIN1	CIR & FIT TO 10.5 PPG, 64 PSI, MW 8.4
	10:30 - 13:30	3.00	DRL	1	DRLIN1	DRLG F/558 TO 850 (292 FT 97.33 FPH) WOB 5-10, RPM 50, GPM 905
	13:30 - 19:00	5.50	RIG	2	DRLIN1	RIG REPAIR SHAKER MOTOR, POP OFF ON #1 MUD PUMP
	19:00 - 19:30	0.50	SUR	1	DRLIN1	CIR SWEEP & SURVEY @710 .4 DEG AZ 350.2 TVD 709.99
	19:30 - 01:00	5.50	DRL	1	DRLIN1	DRLG F/850 TO 1363 (513 FT 93.27 FPH) WOB 5-10, RPM 50, GPM 905
	01:00 - 01:30	0.50	SUR	1	DRLIN1	SURVEY@ 1271 .1 DEG AZ 111.4 TVD 1270.99
	01:30 - 06:00	4.50	RIG	2	DRLIN1	RIG REPAIR CLAMP ON TOP DRIVE BETWEEN LOWER VALVE & THROUGH AWAY SUB, NOT HOLDING, BREAKING OUT ON TOP OF THROUGH AWAY SUB
8/6/2008	06:00 - 07:30	1.50	DRL	1	DRLIN1	DRLG F/1363 TO 1482 (119 FT 79.33 FPH)
	07:30 - 11:00	3.50	RIG	2	DRLIN1	RIG REPAIR, TROUBLE SHOOT TD COMM FAILURE
	11:00 - 16:30	5.50	RIG	2	DRLIN1	TOH HOLE PACKED OFF @1377, WORK FREE, CONT PUMP OUT OF HOLE TO SHOE
	16:30 - 22:00	5.50	RIG	2	DRLIN1	CHANGE OUT COM LINE ON TD, INSTALL THROUGH AWAY SUB
	22:00 - 23:00	1.00	RIG	2	DRLIN1	WASH DOWN 2 STAND, TD OK, 2" BLEED OFF VALVE ON #1 MUD PUMP LEAKING, PULL BACK IN SHOE
	23:00 - 00:00	1.00	RIG	2	DRLIN1	CHANGE OUT GATE ON #1 PUMP BLEED OFF VALVE
	00:00 - 02:30	2.50	RIG	2	DRLIN1	TIH, WASH & REAM F/SHOE TO TD
	02:30 - 04:00	1.50	DRL	1	DRLIN1	DRLG F/1482 TO 1580
	04:00 - 04:30	0.50	RIG	4	DRLIN1	INSTALL ROTATING RUBBER
	04:30 - 05:30	1.00	FISH	6	DRLIN1	WORK TIGHT HOLE @1560
	05:30 - 06:00	0.50	DRL	1	DRLIN1	DRLG F/1580 TO 1612
8/7/2008	06:00 - 09:30	3.50	DRL	1	DRLIN1	DRLG F/1612 TO 1899 (287 FT 82 FPH) WOB 8-12 RPM 167 GPM 905
	09:30 - 10:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	10:00 - 10:30	0.50	SUR	1	DRLIN1	SURVEY @1807 .5 DEG AZ 152.9 TVD 1806.98
	10:30 - 14:30	4.00	DRL	1	DRLIN1	DRLG F/1899 TO 2185 (286 FT 71.5 FPH) WOB 12-14 RPM 164 GPM 880
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:00 - 20:30	5.50	DRL	1	DRLIN1	DRLG F/2185 TO 2471 (286 FT 52 FPH) WOB 15-18 RPM 164 GMP 880
	20:30 - 21:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	21:00 - 21:30	0.50	SUR	1	DRLIN1	SURVEY@2379 .9 DEG AZ 60.0 TVD 2378.95, FLOW CHECK ON SURVEY FLOWING 64 BBL HR
	21:30 - 05:00	7.50	DRL	1	DRLIN1	DRLG F/2471 TO 2609

## Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/7/2008	05:00 - 05:30	0.50	CIRC	1	DRLIN1	CIR BTM UP
	05:30 - 06:00	0.50	REAM	1	DRLIN1	BACK REAM OUT TO 2471
8/8/2008	06:00 - 14:30	8.50	RIG	2	DRLIN1	CIR & TROUBLE SHOOT POWER PROBLEMS, W/O/ELECTRICIAN & WELDER
	14:30 - 18:00	3.50	TRP	2	DRLIN1	PUMP OUT HOLE TO SHOE
	18:00 - 02:30	8.50	RIG	2	DRLIN1	FLOW CHECK-NO FLOW, REPAIR ST-80, REPLACE UNION ON STANDPIPE & TEST TO 3600 PSI, CUT VENTS ON PUMP HOUSE, REPAIR #2 ENGINE
	02:30 - 05:00	2.50	TRP	10	DRLIN1	TOH
	05:00 - 06:00	1.00	TRP	1	DRLIN1	CHANGE OUT MOTOR & BIT
8/9/2008	06:00 - 07:00	1.00	TRP	1	DRLIN1	P/U MOTOR & BIT
	07:00 - 10:00	3.00	RIG	2	DRLIN1	RIG REPAIR, LOCK ON ROTARY TABLE
	10:00 - 12:30	2.50	TRP	2	DRLIN1	TIH W/BIT #2 , HIT BRIDGE AT 1327'
	12:30 - 13:00	0.50	REAM	1	DRLIN1	WASH & REAM F/ 1327' TO 1423'
	13:00 - 13:30	0.50	TRP	2	DRLIN1	TIH TO 2470' HIT BRIDGE
	13:30 - 14:00	0.50	REAM	1	DRLIN1	WASH & REAM F/ 2470' TO 2609'
	14:00 - 16:00	2.00	DRL	1	DRLIN1	DRILG F/ 2609' TO 2656' (47' @ 23.5 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	16:00 - 16:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	16:30 - 20:00	3.50	DRL	1	DRLIN1	DRILG F/ 2656' TO 2752' (106.5' @ 30.4 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	20:00 - 21:00	1.00	RIG	2	DRLIN1	CHANGE OUT LINER & SWAB #2 PUMP
	21:00 - 23:00	2.00	DRL	1	DRLIN1	DRILG F/ 2752' TO 2794' (42' @ 21.0 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
	23:00 - 23:30	0.50	RIG	2	DRLIN1	CHANGE SWAB #1 PUMP
	23:30 - 06:00	6.50	DRL	1	DRLIN1	DRILG F/ 2794' TO 2925' (131' @ 20.01FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM
8/10/2008	06:00 - 06:30	0.50	DRL	1	DRLIN1	DRLG F/2925 TO 2942
	06:30 - 07:00	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	07:00 - 07:30	0.50	SUR	1	DRLIN1	SURVEY@2857 .3 DEG AZ 171.0 TVD 2856.93
	07:30 - 08:30	1.00	DRL	1	DRLIN1	DRLG F/2942 TO 2972
	08:30 - 09:00	0.50	RIG	2	DRLIN1	CHANGE SWAB IN #1PUMP
	09:00 - 14:00	5.00	DRL	1	DRLIN1	DRLG. F/ 2972' TO 3133' (161' @ 32.2 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
	14:00 - 14:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	14:30 - 22:30	8.00	DRL	1	DRLIN1	DRLG. F/ 3133' TO 3420' (287' @ 35.8 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
	22:30 - 23:30	1.00	SUR	1	DRLIN1	SURVEY @ 3332' INC.1.10 , AZM 170.60 TVD 3331.89
	23:30 - 03:30	4.00	DRL	1	DRLIN1	DRLG. F/ 3420' TO 3462' (42' @ 10.5 FPH) WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM
	03:30 - 04:30	1.00	CIRC	1	DRLIN1	CIR & BUILD TRIP SLUG, FLOW CHECK 1" STREAM
	04:30 - 05:00	0.50	TRP	10	DRLIN1	TOH F/BIT-3462 FT
	05:00 - 05:30	0.50	OTH		DRLIN1	FLOW CHECK FLOWING 30 BBL HR
	05:30 - 06:00	0.50	TRP	10	DRLIN1	TOH
8/11/2008	06:00 - 07:30	1.50	CIRC	1	DRLIN1	CIR BTM'S UP & SPOT 150 BB ECD PILL, 9.1 PPG
	07:30 - 09:00	1.50	TRP	10	DRLIN1	TOH F/BIT
	09:00 - 10:30	1.50	TRP	2	DRLIN1	TIH TO SHOE
	10:30 - 11:30	1.00	RIG	6	DRLIN1	SLIP & CUT DRLG LINE
	11:30 - 13:00	1.50	TRP	2	DRLIN1	TIH TO 3420 FT
	13:00 - 13:30	0.50	REAM	1	DRLIN1	WASH & REAM 42 FT TO BTM
	13:30 - 15:30	2.00	DRL	1	DRLIN1	DRLG F/3462 TO 3512'(50' @ 25.0 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
	15:30 - 16:00	0.50	RIG	1	DRLIN1	RIG SERVICE

### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/11/2008	16:00 - 22:00	6.00	DRL	1	DRLIN1	DRLG F/3512' TO 3684'(172' @ 28.6 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
	22:00 - 23:00	1.00	RIG	2	DRLIN1	CHANGE SWAB IN #2 PUMP
	23:00 - 06:00	7.00	DRL	1	DRLIN1	DRLG F/3684' TO 3799'(115' @ 16.42 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM
8/12/2008	06:00 - 14:30	8.50	DRL	1	DRLIN1	DRLG F/3799 TO 3987 (188 FT 22.11 FPH) WOB 15-18 RPM 144 GPM 854
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:00 - 15:30	0.50	CIRC	1	DRLIN1	CIR F/SURVEY
	15:30 - 16:00	0.50	SUR	1	DRLIN1	SURVEY@3905 1.1 DEG AZ 163.2 TVD 3904.79
	16:00 - 17:30	1.50	DRL	1	DRLIN1	DRLG F/ 3987' TO 3997'
	17:30 - 19:00	1.50	RIG	2	DRLIN1	CHANGE OUT 2 SWABS & LINER #1 PUMP
	19:00 - 20:00	1.00	DRL	1	DRLIN1	DRLG F/ 3997' TO 4009'
	20:00 - 23:00	3.00	TRP	2	DRLIN1	PUMP PILL & TRIP OUT
	23:00 - 00:30	1.50	TRP	1	DRLIN1	CHANGE OUT MUD MTR'S & BITS
	00:30 - 01:30	1.00	OTH	1	DRLIN1	CENTER UP TOP DRIVE
	01:30 - 03:30	2.00	TRP	2	DRLIN1	T.I.H W/ BIT #4
	03:30 - 04:00	0.50	REAM	1	DRLIN1	WASH & REAM F/3885' TO 4009'
	04:00 - 06:00	2.00	DRL	1	DRLIN1	DRLG F/ 4009' TO 4050' (41' @ 20.5 FPH) WOB 10,RPM 45, SPM 102X102 AT 3150 PSI AT 854 GPM
	8/13/2008	06:00 - 07:00	1.00	RIG	2	DRLIN1
07:00 - 09:00		2.00	DRL	1	DRLIN1	DRLG. F/ 4050' TO 4080' (30' @ 15.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
09:00 - 10:00		1.00	RIG	2	DRLIN1	CHANGE SWAB #2 PUMP
10:00 - 12:00		2.00	DRL	1	DRLIN1	DRLG. F/ 4080' TO 4115' (35' @ 17.5 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
12:00 - 13:00		1.00	RIG	2	DRLIN1	CHANGE SWAB # 2 PUMP
13:00 - 15:00		2.00	DRL	1	DRLIN1	DRLG. F/ 4115' TO 4175' (60' @ 30.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
15:00 - 15:30		0.50	RIG	1	DRLIN1	RIG SERVICE
15:30 - 01:00		9.50	DRL	1	DRLIN1	DRLG. F/ 4175' TO 4365' (190' @20.0 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
01:00 - 01:30		0.50	RIG	1	DRLIN1	RIG SERVICE
01:30 - 06:00		4.50			DRLIN1	DRLG. F/ 4365' TO 4457' (92' @20.4 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
8/14/2008	06:00 - 07:00	1.00	DRL	1	DRLIN1	DRILLING F/4457 T/4464 7' 7"/HR PUMP HIGH VIS SWEEP AND CIRC. BOTTOMS UP
	07:00 - 07:30	0.50	SUR	1	DRLIN1	SURVEY @ 4379****1.3 DEG***146.2 AZ
	07:30 - 16:00	8.50	DRL	1	DRLIN1	DRILLING F/4464 T/4725 261' 30.7"/HR WOB 16, 45 RPM, 2X102 SPM, 854 GPM
	16:00 - 17:30	1.50	RIG	8	DRLIN1	REPAIR #2 PUMP SWAB
	17:30 - 18:00	0.50	DRL	1	DRLIN1	DRILLING F/4725 T/4759 34' 68"/HR
	18:00 - 18:30	0.50	RIG	1	DRLIN1	RIG SERVICE
	18:30 - 19:00	0.50	OTH	1	DRLIN1	CHANGE OUT CORRISION RING IN TOP DRIVE
	19:00 - 00:00	5.00	DRL	1	DRLIN1	DRILLING F/4759 T/4876 117' 23.4"/HR
	00:00 - 00:30	0.50	RIG	8	DRLIN1	REPAIR #2 PUMP SWAB
	00:30 - 04:30	4.00	DRL	1	DRLIN1	DRILLING F/4876 T/4938 62' 15.5"/HR
8/15/2008	04:30 - 05:30	1.00	RIG	8	DRLIN1	REPAIR #1 PUMP SWAB
	05:30 - 06:00	0.50	DRL	1	DRLIN1	DRILLING F/4938 T/4941' 3' 6"/HR
	06:00 - 12:00	6.00	DRL	1	DRLIN1	DRILLING F/4941 T/5015 74' 12.3"/HR
	12:00 - 12:30	0.50	SUR	1	DRLIN1	DROP SURVEY(CHECK FLOW) AND PUMP TRIP SLUG
	12:30 - 15:30	3.00	TRP	10	DRLIN1	TRIP OUT OF HOLE FOR BIT
	15:30 - 16:00	0.50	TRP	10	DRLIN1	PULL SURVEY, CHANGE OUT BIT AND CHECK MOTOR

### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/15/2008	16:00 - 18:30	2.50	TRP	10	DRLIN1	TRIP IN HOLE WITH BIT #5
	18:30 - 19:00	0.50	REAM	1	DRLIN1	WASH 75' TO BOTTOM, NO FILL
	19:00 - 06:00	11.00	DRL	1	DRLIN1	DRILLING F/5015 T/5145 130' 11.8'/HR WOB 15/20 RPM 40/55 SPM 2X100 PSI 3400
8/16/2008	06:00 - 14:30	8.50	DRL	1	DRLIN1	DRILLING F/5145 T/5225 80' 9.4'/HR
	14:30 - 15:00	0.50	RIG	1	DRLIN1	RIG SERVICE
	15:00 - 22:00	7.00	DRL	1	DRLIN1	DRILLING F/5225 T/5325 100' 14.2'/HR WOB 18/20 RPM 60 SPM 2X102 GPM 854
	22:00 - 23:00	1.00	CIRC	1	DRLIN1	CIRCULATE AND CONDITION HOLE FOR SHORT TRIP, PUMP HIGH VIS SWEEP
	23:00 - 00:00	1.00	TRP	14	DRLIN1	SHORT TRIP 10 SANDS, WASH 90' TO BOTTOM- NO FILL
	00:00 - 01:00	1.00	CIRC	1	DRLIN1	CIRCULATE AND CONDITION HOLE FOR CASING
	01:00 - 01:30	0.50	SUR	1	DRLIN1	CHECK FOR FLOW,DROP SURVEY AND PUMP TRIP SLUG
01:30 - 06:00	4.50	TRP	2	DRLIN1	TRIP OUT OF HOLE FOR CASING, SLM=0.89' DIFFERENCE, NO CORRECTION LAY DOWN 8" BHA	
8/17/2008	06:00 - 07:00	1.00	OTH		CSGIN1	PULL WEAR BUSHING
	07:00 - 10:00	3.00	CSG	1	CSGIN1	HOLD SAFETY MEETING, RIG UP CASING CREW AND FILL UP TOOL
	10:00 - 16:00	6.00	CSG	2	CSGIN1	RUN 124 JTS OF 9 5/8", 47.0#,HCP 110,LT&C CASING
	16:00 - 17:30	1.50	CIRC	1	CSGIN1	CIRCULATE AND CONDITION HOLE, RIG DOWN CSERS ANDPULL DRILLING NIPPLE
	17:30 - 20:00	2.50	CSG	7	CSGIN1	LAND CASING HANGER,RIG DOWN FILL UP TOOL AND RIG UP CEMENT HEAD 185,000K STRING WEIGHT ON HANGER
	20:00 - 21:30	1.50	CIRC	1	CSGIN1	CIRCULTE AND CONDITION HOLE FOR CEMENT, HOLD SAFETY MEETING
	21:30 - 01:30	4.00	CMT	2	CSGIN1	PUMP CEMENT-30 BBLs MUD FLUSH, 30 BBL CEMENT SCAVENGER. LEAD 1, 610 SACKS 50/50 POZ AND 40.1% N2. LEAD 2, 770 SACKS 50/50 POZ WITH23.1% N2. TAIL 230 SACKS 50/50 POZ. DISPLACED WITH 382 BBLs. 55.1 BBLs OF 50/50 POZ CAP PUMPED DOWN BACK SIDE.WATER.GOOD RETURNS THROUGHT JOB, RETURNED 175 BBLs OF CEMENT TO SURFACE. PLUG BUMPED AND FLOATS HELD.
8/18/2008	01:30 - 02:00	0.50	OTH		CSGIN1	TEST CASING TO 1500 PSI FOR 30 MIN.
	02:00 - 03:30	1.50	CMT	1	CSGIN1	RIG DOWN HALLIBURTON, PULL LANDING JOINT
	03:30 - 06:00	2.50	BOP	1	CSGIN1	NIPPLE DOWN BOP
	06:00 - 08:00	2.00	BOP	1	DRLIN2	NIPPLE DOWN 13 5/8" BOP
	08:00 - 11:00	3.00	WHD	1	DRLIN2	NIPPLUP B SECTION AND TEST TO 5000 PSI
	11:00 - 19:00	8.00	BOP	1	DRLIN2	NIPPLE UP 11" BOP
	19:00 - 23:30	4.50	BOP	2	DRLIN2	TEST BOP, ALL RAMS,IBOP , FLOOR VALVES, CHOKE MANIFLOD AND AND HCR VALVE 10,000 PSI HIGH 250 LOW. ANNULAR 5,000 HIGH 250 LOW. FUNTION TEST KOOMEY
	23:30 - 00:00	0.50	OTH		DRLIN2	SET WEAR BUSHING
	00:00 - 00:30	0.50	OTH		DRLIN2	RIG UP FLOOR AND TOP DRIVE AND CENTER OVER HOLE
	00:30 - 04:00	3.50	TRP	2	DRLIN2	PICK UP BIT #6, MOTOR AND MONEL AND TRIP IN HOLE- INSTALL ROTATING RUBBER
8/19/2008	04:00 - 06:00	2.00	DRL	4	DRLIN2	DRILL CEMENT AND FLOAT EQUIPMENT AND 10' OF NEW HOLE F/5201 T/5335'. CIRCULATE FOR FIT TEST
	06:00 - 06:30	0.50	EQT	2	DRLIN2	FIT TEST TO 1220 PSI- 13.5 EQMW
	06:30 - 16:00	9.50	DRL	1	DRLIN2	DRILLING F/5335 T/5640 305' 32.1'/HR WOB 15/16 RPM 50 SPM 100 GPM 418
	16:00 - 16:30	0.50	RIG	1	DRLIN2	RIG SERVICE

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST  
 Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66  
 Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations	
8/19/2008	16:30 - 00:00	7.50	DRL	1	DRLIN2	DRILLING F/5640 T/5927 287' 38.3'/HR WOB 17/18 RPM 50 SPM 100 GPM 418	
	00:00 - 01:00	1.00	SUR	1	DRLIN2	SURVEY @ 5842****1.2 DEG****161.5 AZ	
	01:00 - 06:00	5.00	DRL	1	DRLIN2	DRILLING F/5927 T/6005 78' 15.6'/HR WOB 17/18 RPM 50 SPM 100 GPM 418	
8/20/2008	06:00 - 12:30	6.50	DRL	1	DRLIN2	DRILLING F/6005 T/6308 303' 46.6'/HR WOG 17/18 RPM 55 SPM 100 GPM 418	
	12:30 - 13:00	0.50	RIG	1	DRLIN2	RIG SERVICE	
	13:00 - 17:30	4.50	DRL	1	DRLIN2	DRILLING F/6308 T/6499 191' 42.4'/HR	
	17:30 - 18:30	1.00	SUR	1	DRLIN2	SURVEY @ 6414****1.0 DEG****169.7 AZ	
	18:30 - 22:30	4.00	DRL	1	DRLIN2	DRILLING F/6499 T/6532	
	22:30 - 23:00	0.50	CIRC	1	DRLIN2	FLOW CHECK AND PUMP TRIP SLUG	
	23:00 - 02:30	3.50	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT	
	02:30 - 03:00	0.50	TRP	10	DRLIN2	CHANGE OUT BITAND CHECK MOTOR	
8/21/2008	03:00 - 06:00	3.00	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #7	
	06:00 - 06:30	0.50	REAM	1	DRLIN2	WASH 45' TO BOTTOM, 3' OF FILL	
	06:30 - 15:00	8.50	DRL	1	DRLIN2	DRILLING F/6532 T/6999 467' 54.9'/HR	
	15:00 - 16:00	1.00	CIRC	1	DRLIN2	CIRCULATE, BUILD AND PUMP TRIP SLUG	
	16:00 - 19:00	3.00	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT	
	19:00 - 19:30	0.50	TRP	10	DRLIN2	CHANGE OUT MOTOR AND PICK UP BIT #8	
	19:30 - 22:00	2.50	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT # 8 TO SHOE	
	22:00 - 23:30	1.50	RIG	6	DRLIN2	CUT DRILLING LINE, CENTER TOP DRIVE	
	23:30 - 00:00	0.50	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #8	
	00:00 - 00:30	0.50	REAM	1	DRLIN2	WSH 30' TO BOTTOM, NO FILL- LOST 120 BBLS OF MUD ON TRIP	
8/22/2008	00:30 - 03:30	3.00	DRL	1	DRLIN2	DRILLING F/6999 T/7237 238' 79.3'/HR WOB 14 RPM 55 SPM 100 GPM 419	
	03:30 - 06:00	2.50	CIRC	2	DRLIN2	LOST CIRCULATION @ 7237' LOST APPROXIMAITLY 220 BBLS , SPOT LCM SWEEPS ON BOTTOM WHILE MIXING ANOTHER HAVE PARTIAL RUETURNS @ THIS TIME	
	06:00 - 08:30	2.50	DRL	1	DRLIN2	DRILLING F/7237 T/7320 83' 33.2'/HR DRILLING WITH SLOWER PUMP RATE AND LOW BIT WEIGHT TRYING TO HEAL UP LOSSES	
	08:30 - 11:30	3.00	DRL	1	DRLIN2	DRILLING F/7320 T/7548 228' 76.0'/HR WOB 14 RPM 50 SPM 100 GPM 418	
	11:30 - 12:00	0.50	RIG	1	DRLIN2	RIG SERVICE	
	12:00 - 13:00	1.00	DRL	1	DRLIN2	DRILLING F/7548 T/7644 96' 96'/HR	
	13:00 - 14:00	1.00	SUR	1	DRLIN2	CIRC. AND SURVEY @ 7559****1.3 DEG****166.1 AZ	
	14:00 - 06:00	16.00	DRL	1	DRLIN2	DRILLING F/7644 T/8220 576' 36.0'/HR WOB 16 RPM 55 SPM 100 GPM 419	
	8/23/2008	06:00 - 14:00	8.00	DRL	1	DRLIN2	DRILLING F/8220 T/8499 279' 34.9'/HR WOB 22/20 DHRPM 155 SPM 100 GPM 419
		14:00 - 14:30	0.50	RIG	1	DRLIN2	RIG SERVICE
14:30 - 22:30		8.00	DRL	1	DRLIN2	DRILLING F/8499 T/8784 285' 35.6'/HR	
22:30 - 23:30		1.00	SUR	1	DRLIN2	SURVEY @ 8699****1.1 DEG****147.7 AZ	
8/24/2008	23:30 - 06:00	6.50	DRL	1	DRLIN2	DRILLING F/8784 T/9015 231' 35.5'/HR	
	06:00 - 13:30	7.50	DRL	1	DRLIN2	DRILLING F/9015 T/9357 342' 45.6'/HR WOB 20/25 DHRPM 150 SPM 100 GPM 419	
8/25/2008	13:30 - 14:00	0.50	RIG	1	DRLIN2	RIG SERVICE, FUNTION PIPE RAMS	
	14:00 - 06:00	16.00	DRL	1	DRLIN2	DRILLING F/9357 T/9919 562' 35.1'/HR	
	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRILLING F/9919 T/10119 200' 33.3'/HR WOB 22/25 DHRPM 150 SPM 100 GPM 419	
	12:00 - 12:30	0.50	RIG	1	DRLIN2	RIG SERVICE	
	12:30 - 06:00	17.50	DRL	1	DRLIN2	DRILLING F/10119 T/10570 451' 25.8'/HR	

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST  
 Spud Date: 6/28/2008  
 Start: 6/28/2008  
 End: 9/23/2008  
 Rig Release: 9/22/2008  
 Group:  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/25/2008	12:30 - 06:00	17.50	DRL	1	DRLIN2	SAME PARAMETERS
8/26/2008	06:00 - 08:30	2.50	DRL	1	DRLIN2	DRILLING F/10570 T/10589 19' 7.6'/HR WOB 25 DHRPM 150 SPM 100 GPM 419
	08:30 - 09:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP
	09:30 - 10:00	0.50	SUR	1	DRLIN2	CHECK FLOW, DROP SURVEY AND PUMP TRIP SLUG
	10:00 - 14:00	4.00	TRP	10	DRLIN2	TRIP OUT OF HOLE FOR BIT
	14:00 - 20:30	6.50	TRP	10	DRLIN2	INSPECT BHA, CHANGE OUT JARS AND LAY DOWN 3 DRILL COLLARS, WASHED FACE
	20:30 - 21:30	1.00	TRP	10	DRLIN2	CHANGE OUT MOTOR, PULL SURVEY, MAKE UP BIT AND PICK UP 3 NEW DRILL COLLARS
	21:30 - 22:30	1.00	OTH		DRLIN2	CHANGE OUT CORRIOSION RING
	22:30 - 04:30	6.00	TRP	10	DRLIN2	TRIP IN HOLE WITH BIT #9
	04:30 - 05:00	0.50	REAM	1	DRLIN2	WASH 85' TO BOTTM, 10' OF OUT OF GAUGE HOLE
	05:00 - 06:00	1.00	DRL	1	DRLIN2	DRILLING F/10589 T/10600 11' 11'/HR WOB 12 DHRPM 100 SPM 100 GPM 419
8/27/2008	06:00 - 14:00	8.00	DRL	1	DRLIN2	BOTTOMS UP GAS 7800 UNITS AND 20'-25' FLAIR 10 BBL GAIN DRILLING F/10600 T/10786 186' 23.25'/HE WOB 18 DHPRM 110 SPM 100 GPM 419
	14:00 - 14:30	0.50	RIG	1	DRLIN2	RIG SERVICE
8/28/2008	14:30 - 06:00	15.50	DRL	1	DRLIN2	DRILLING F/10786 T/11070 284' 18.3' HR
	06:00 - 11:30	5.50	DRL	1	DRLIN2	DRLG F/11070 TO 11167 (97 FT 17.63 FPH) WOB 18 GPM 419 RPM 118
	11:30 - 12:00	0.50	RIG	1	DRLIN2	RIG SERVICE
	12:00 - 06:00	18.00	DRL	1	DRLIN2	DRLG F/11167 TO 11,520' (353 FT. 19.6 FPH) WOB 19 GPM 419 RPM 113
8/29/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRLG F/11520 TO 11612 (92 FT 20.44 FPH) WOB 18-20 RPM 113 GPM 419
	10:30 - 11:30	1.00	CIRC	1	DRLIN2	CIR & BUILD ECD PILL
	11:30 - 12:00	0.50	SUR	1	DRLIN2	FLOW CHECK & DROP SURVEY
	12:00 - 13:00	1.00	CIRC	1	DRLIN2	SPOT ECD PILL & PUMP DRY JOB
	13:00 - 18:30	5.50	TRP	10	DRLIN2	TOH F/BIT
	18:30 - 19:30	1.00	TRP	1	DRLIN2	CHANGE OUT BIT & MOTOR
	19:30 - 02:00	6.50	TRP	2	DRLIN2	TIH, FILL PIPE @BHA, 5500, 9500
	02:00 - 02:30	0.50	REAM	1	DRLIN2	WASH & REAM 60 FT TO BTM, 15 FT FILL
	02:30 - 06:00	3.50	DRL	1	DRLIN2	DRLG F/11612 TO 11695 (83 FT 23.71 FPH) WOB 15 RPM 104 GPM 419
8/30/2008	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRLG F/11695 TO 11809, LOSSES @11713 FT 230 BBL TOTAL
	12:00 - 13:30	1.50	CIRC	5	DRLIN2	CIR F/SAMPLES
	13:30 - 14:00	0.50	TRP	14	DRLIN2	SHORT TRIP 5 STD
	14:00 - 17:00	3.00	CIRC	1	DRLIN2	CIR BTM'S UP & SPOT 100 BBL ECD PILL, PUMP DRY JOB
	17:00 - 00:30	7.50	TRP	2	DRLIN2	TOH F/LOGS, L/D MONEL & MOTOR, SLM,
	00:30 - 01:30	1.00	LOG	1	EVAL 2	S/M & R/U LOGGERS
	01:30 - 06:00	4.50	LOG	1	EVAL 2	LOG W/TRIPLE COMBO, LOGGERS DEPTH 11812, STRAP 11808, TALLEY 11809.95
8/31/2008	06:00 - 06:30	0.50	LOG	1	EVAL 2	CONT LOG OUT W/PLATFORM EXPRESS
	06:30 - 07:30	1.00	LOG	1	EVAL 2	R/D LOGGERS
	07:30 - 08:00	0.50	RIG	1	EVAL 2	SERVICE RIG
	08:00 - 08:30	0.50	TRP	1	EVAL 2	P/U MOTOR & TEST
	08:30 - 10:00	1.50	TRP	2	EVAL 2	TIH W/BHA
	10:00 - 10:30	0.50	CIRC	1	EVAL 2	FILL PIPE & FLUSH LCM F/PUMPS
	10:30 - 12:30	2.00	TRP	2	EVAL 2	TIH TO 5300 FT
	12:30 - 14:00	1.50	RIG	6	EVAL 2	SLIP & CUT DRLG LINE
	14:00 - 18:30	4.50	TRP	2	EVAL 2	TIH FILL PIPE @ 5300, 9500 FT

### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/31/2008	18:30 - 21:00	2.50	CIRC	1	EVAL 2	CIR & CONDITION MUD, SPOT 100 BBL ECD PILL
	21:00 - 06:00	9.00	TRP	3	EVAL 2	LAY DOWN DRILL PIPE
9/1/2008	06:00 - 10:30	4.50	TRP	3	EVAL 2	L/D DRILL PIPE & BHA, FLOW CHECK @BHA
	10:30 - 11:00	0.50	OTH		EVAL 2	PULL WEAR BUSHING
	11:00 - 13:00	2.00	CSG	1	CSGIN2	R/U CASING CREW & FILL TOOL
	13:00 - 22:30	9.50	CSG	2	CSGIN2	RUN 7" CASING BREAK CIR EVERY 2000 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	22:30 - 23:00	0.50	CIRC	1	CSGIN2	CIR @7100 FT
	23:00 - 01:00	2.00	CSG	2	CSGIN2	RUN CASING TO 9600 FT
	01:00 - 02:30	1.50	CIRC	1	CSGIN2	CIR @9600 FT
	02:30 - 05:00	2.50	CSG	2	CSGIN2	RUN CASING TO 11773 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	05:00 - 06:00	1.00			CSGIN2	CIR BTM'S UP THROUGH CHOKE, R/U RETURN LINE OFF B-SECTION, TOTAL LOSSES 250 BBL
	9/2/2008	06:00 - 07:00	1.00	CIRC	1	CSGIN2
07:00 - 07:30		0.50	CSG	2	CSGIN2	LAND CASING @11798 & ENGUAGE TIE DOWN BOLTS
07:30 - 08:30		1.00	CSG	1	CSGIN2	R/D CASING CREW
08:30 - 11:30		3.00	CIRC	1	CSGIN2	CIR & SHAKE OUT LCM
11:30 - 12:00		0.50	CMT	2	CSGIN2	S/M & R/U HALLIBURTON
12:00 - 18:00		6.00	CMT	2	CSGIN2	PRESS TEST CEMENT LINES TO 6000 PSI, NO2 LINES TO 8000 PSI AND CEMENT PUMP 10 BBL FRESH WATER AHEAD, 30 BBL SUPERFLUSH, 10 BBL FRESH WATER BEHIND, PUMP FOAM SCAVENGER 115 SKS. @ 7.0 PPG, PUMP 1ST. LEAD 475 SKS. @ 9.0 PPG, PUMPED 2ND. FOAMED LEAD 1375 SKS @ 11.0 PPG PUMP UNFOAMED TAIL 195 SKS. @ 14.3 PPG, DISPLACED W/ 445 BBL. FRESH WATER, BUMP PLUG AND TEST CSG TO 2600 PSI F/30 MIN. FLOATS HELD, 240 BBL CMT RETURNS, PUMP CAP CEMENT 55 SKS @ 14.6 PPG-PRESSURE INCREASED TO 1000 PSI
18:00 - 19:00		1.00	CMT	1	CSGIN2	R/D CEMENTERS & L/D LANDING JT
19:00 - 00:30		5.50	BOP	1	DRLPRO	N/D BOP, CHANGE OUT BTM RAMS TO 4"
00:30 - 02:00		1.50	WHD	1	DRLPRO	N/U C-SECTION, INSTALL PACKING, PACKING LEAKING PAST NECK SEALS ON HANGER
02:00 - 04:30		2.50	WHD	1	DRLPRO	N/D C-SECTION, CHANGE OUT SEALS ON HANGER
9/3/2008	04:30 - 06:00	1.50	WHD	1	DRLPRO	N/U C-SECTION, INSTALL PACKING
	06:00 - 13:00	7.00	BOP	1	DRLPRO	NIPPLE UP BOP, ORBIT VALVE, FLOW LINE
	13:00 - 16:30	3.50	OTH		DRLPRO	R/U TOP DRIVE F/4" PIPE
	16:30 - 17:30	1.00	BOP	2	DRLPRO	R/U TESTER
	17:30 - 23:30	6.00	BOP	2	DRLPRO	TEST BOP & CHOKE 250 LOW, 10000 HI, HYDRIL 250 LOW, 5000 HI, SURFACE LINES 250 LOW 3500 HI
	23:30 - 03:00	3.50	TRP	1	DRLPRO	STRAP BHA, DRILL PIPE & INSTALL DRIP PAN
9/4/2008	03:00 - 04:30	1.50	OTH		DRLPRO	INSTALL WEAR BUSHING & BEARNING PACK
	04:30 - 06:00	1.50	TRP	1	DRLPRO	P/U BIT & BHA
	06:00 - 11:00	5.00	TRP	1	DRLPRO	P/U BHA & DP TO 4018
	11:00 - 11:30	0.50	CIRC	1	DRLPRO	CIR & STRAP PIPE
	11:30 - 15:30	4.00	TRP	3	DRLPRO	P/U DRILL PIPE TO 7998
	15:30 - 16:00	0.50	CIRC	1	DRLPRO	CIR & STRAP PIPE
	16:00 - 16:30	0.50	RIG	4	DRLPRO	INSTALL STRIPPING RUBBER
	16:30 - 20:00	3.50	TRP	3	DRLPRO	P/U DRILL PIPE TO 11695
	20:00 - 22:00	2.00	DRL	4	DRLPRO	DRLG CMT, FLOAT EQUIPMENT, POCKET
	22:00 - 23:00	1.00	DRL	1	DRLPRO	DRLG F/11809 TO 11820
	23:00 - 00:00	1.00	CIRC	1	DRLPRO	CIR & CONDITION MUD F/FIT
	00:00 - 01:30	1.50	EQT	2	DRLPRO	FIT TO EMW 15.5 OMW 13.3 W/1352 PSI
	01:30 - 06:00	4.50	DRL	1	DRLPRO	DRLG F/11820 TO 11892 (72 FT 16 FPH) WOB 10/12 RPM 70

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST  
 Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66  
 Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/5/2008	06:00 - 10:00	4.00	DRL	1	DRLPRO	DRLG F/11982 TO 11982 (90 FT 22.5 FPH) W/O/B 15 RPM 70 GPM 225
	10:00 - 10:30	0.50	RIG	2	DRLPRO	WORK ON PUMPS, NO PRESSURE
	10:30 - 11:00	0.50	RIG	1	DRLPRO	RIG SERVICE
	11:00 - 06:00	19.00	DRL	1	DRLPRO	DRLG F/11982 TO 12317 (335 FT 17.63 FPH) WOB 12-15 RPM 65-75 GPM 225
9/6/2008	06:00 - 07:30	1.50	DRL	1	DRLPRO	DRLG F/12317 TO 12330
	07:30 - 08:30	1.00	CIRC	1	DRLPRO	CIR BTM'S UP
	08:30 - 09:00	0.50	TRP	2	DRLPRO	TOH 6 STD TO SHOE
	09:00 - 09:30	0.50	EQT	2	DRLPRO	FIT TO EMW 15.5 OMW 13.4 W/1352 PSI
	09:30 - 10:00	0.50	TRP	2	DRLPRO	TOH TO 12330
	10:00 - 11:30	1.50	CIRC	1	DRLPRO	DISPLACE MUD W/14.6 PPG INVERT MUD
	11:30 - 12:30	1.00	SUR	1	DRLPRO	FLOW CHECK, DROP SURVEY, BUILD TRIP SLUG
	12:30 - 17:30	5.00	TRP	2	DRLPRO	TOH F/MOTOR & BIT
	17:30 - 18:00	0.50	TRP	1	DRLPRO	P/U MOTOR & BIT
	18:00 - 00:30	6.50	TRP	2	DRLPRO	TIH, FILL PIPE @BHA, 5300 & 9300 FT
	00:30 - 01:00	0.50	REAM	1	DRLPRO	WASH 50 FT TO BTM
	01:00 - 01:30	0.50	DRL	1	DRLPRO	DRLG F/12330 TO 12381 WOB 9 RPM GPM 225
	01:30 - 02:30	1.00	RIG	1	DRLPRO	RIG SERVICE
	02:30 - 03:00	0.50	DRL	1	DRLPRO	DRLG F/12381 TO 12411 WOB 9 RPM GPM 225
9/7/2008	03:00 - 06:00	3.00	RIG	2	DRLPRO	CLEAN SUCTIONS ON MUD PUMPS
	06:00 - 07:30	1.50	RIG	2	DRLPRO	CLEAN OUT PUMP SUCTIONS
	07:30 - 12:30	5.00	DRL	1	DRLPRO	DRLG F/12420 TO 12705 (285 FT 57 FPH) WOB 8-10 RPM 150 GPM 211
	12:30 - 13:00	0.50	RIG	2	DRLPRO	WORK ON PUMPS
	13:00 - 13:30	0.50	DRL	1	DRLPRO	DRLG F/12705 TO 12720
	13:30 - 14:00	0.50	RIG	2	DRLPRO	WORK ON PUMPS
	14:00 - 15:00	1.00	DRL	1	DRLPRO	DRLG F/12720 TO 12750
	15:00 - 16:00	1.00	RIG	2	DRLPRO	WORK ON PUMPS
	16:00 - 06:00	14.00	DRL	1	DRLPRO	DRLG F/12750 TO 13294 (544 FT 38.85 FPH) WOB 7/9 RPM 160 GPM 211
	9/8/2008	06:00 - 13:30	7.50	DRL	1	DRLPRO
13:30 - 14:00		0.50	RIG	1	DRLPRO	RIG SERVICE
14:00 - 06:00		16.00	DRL	1	DRLPRO	DRLG F/13554 14017 (463 FT 28.93 FPH) WOB 8-10 RPM 160 GPM 211
9/9/2008	06:00 - 13:30	7.50	DRL	1	DRLPRO	DRLG F/14017 TO 14236 (219 FT 29.2 FPH) WOB 9-11 RPM 160 GPM 211
	13:30 - 14:00	0.50	RIG	1	DRLPRO	RIG SERVICE
	14:00 - 06:00	16.00	DRL	1	DRLPRO	DRLG F/14236 TO 14722 (486 FT 30.37 FPH) WOB 8-11 RPM 160 GPM 211
9/10/2008	06:00 - 15:30	9.50	DRL	1	DRLPRO	DRLG F/14722 TO 15014 (292 FT 30.73 FPH) WOB 7-11 RPM 160 GPM 211
	15:30 - 16:30	1.00	RIG	1	DRLPRO	RIG SERVICE
	16:30 - 06:00	13.50	DRL	1	DRLPRO	DRLG F/15014 TO 15345 (330 FT 24.44 FPH) WOB 7-11 RPM 160 GPM 211
9/11/2008	06:00 - 13:00	7.00	DRL	1	DRLPRO	DRILLING F/15345 T/15495 150' 21.4'/HR
	13:00 - 13:30	0.50	RIG	1	DRLPRO	RIG SERVICE
	13:30 - 06:00	16.50	DRL	1	DRLPRO	DRILLING F/15495 T/15775 280' 17.0'/HR
9/12/2008	06:00 - 07:30	1.50	DRL	1	DRLPRO	DRILLING F/15775 T/15788 13' 8.7'/HR
	07:30 - 08:00	0.50	SUR	1	DRLPRO	FLOW CHECK AND DROP SURVEY
	08:00 - 09:30	1.50	CIRC	1	DRLPRO	CIRCULATE AND PUMP ECD SLUG 130 BBLs OF 16.3PPG

### Operations Summary Report

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/12/2008	09:30 - 17:00	7.50	TRP	10	DRLPRO	TRIP OUT OF HOLE FOR BIT
	17:00 - 18:00	1.00	TRP	1	DRLPRO	PULL SURVEY, CHANGE OUT BIT AND MOTOR, CLEAN RIG FLOOR
	18:00 - 23:30	5.50	TRP	10	DRLPRO	TRIP IN HOLE FILL @ BHA, 5000',9000'
	23:30 - 00:30	1.00	RIG	6	DRLPRO	CUT DRILLING LINE AT SHOE
	00:30 - 02:30	2.00	TRP	10	DRLPRO	TRIP IN HOLE
	02:30 - 03:00	0.50	REAM	1	DRLPRO	WASH 85' TO BOTTOM, 3' OF FILL
9/13/2008	03:00 - 06:00	3.00	DRL	1	DRLPRO	DRILLING F/15788 T/15885 97' 32.3'/HR
	06:00 - 16:30	10.50	DRL	1	DRLPRO	DRILLING F/15885 T/16376 491' 46.8'/HR
	16:30 - 17:00	0.50	RIG	1	DRLPRO	RIG SERVICE
	17:00 - 00:00	7.00	DRL	1	DRLPRO	DRILLING F/16376 T/16412 36' 5.1'/HR
9/14/2008	00:00 - 02:00	2.00	CIRC	1	DRLPRO	CIRCULATE BOTTOMS UP, SPOT ECD SLUG 150 BBLs OF 16.3 PPG
	02:00 - 06:00	4.00	TRP	10	DRLPRO	TRIP OUT OF HOLE FOR BIT
	06:00 - 09:00	3.00	TRP	10	DRLPRO	TRIP OUT OF HOLE FOR BIT
	09:00 - 10:00	1.00	TRP	1	DRLPRO	CHANGE OUT BIT, LAY DOWN MOTOR AND PICK UP TORQUE BUSTER, CLEAN FLOOR
	10:00 - 17:30	7.50	TRP	10	DRLPRO	TRIP IN HOLE WITH BIT #14, FILL PIPE @ BHA,5000',9000',13000'
	17:30 - 18:00	0.50	REAM	1	DRLPRO	WSH 60' TO BOTTOM, NO FILL
9/15/2008	18:00 - 06:00	12.00	DRL	1	DRLPRO	DRILLING F/16412 T/16520 108' 9.0'/HR WOB 14 RPM 75 GPM 211 SPM 60
	06:00 - 11:00	5.00	DRL	1	DRLPRO	DRILLING F/16520 T/16545
	11:00 - 11:30	0.50	RIG	1	DRLPRO	RIG SERVICE
9/16/2008	11:30 - 06:00	18.50	DRL	1	DRLPRO	DRILLING F/16545 T/16622
	06:00 - 10:30	4.50	DRL	1	DRLPRO	DRILLING F/16522 T/16640 18' 4.0'/HR
9/17/2008	10:30 - 11:00	0.50	RIG	1	DRLPRO	RIG SERVICE
	11:00 - 04:00	17.00	DRL	1	DRLPRO	DRILLING F/16640 T/16725 85' 5.0'/HR WOB 16 RPM 75 SPM 60 GPM 211
	04:00 - 05:00	1.00	CIRC	1	DRLPRO	CIRCULATE AND CONDITION HOLE CHECK SAMPLES
	05:00 - 06:00	1.00	DRL	1	DRLPRO	DRILLING F/16725 T/167228
	06:00 - 10:00	4.00	DRL	1	DRLPRO	DRILLING F/16728 T/16748 20 5.0'/HR
	10:00 - 11:00	1.00	CIRC	1	DRLPRO	CIRCULATE AND CONDITION HOLE, SPOT LCM SWEEP ON BOTTOM
9/18/2008	11:00 - 12:00	1.00	TRP	14	DRLPRO	SHORT TRIP 10 STANDS, WASH 70' TO BOTTOM
	12:00 - 12:30	0.50	SUR	1	DRLPRO	DROP SURVEY
	12:30 - 15:30	3.00	OTH		DRLPRO	TRIED TO CIRCULATE, PIPE PLUGED . WAIT ON WIRELINE TRUCK. HOLD SAFETY MEETING, RIG UP WIRELINE TRUCK AND PERFERATE BOTTOM DRILL COLLAR @ 16636'
	15:30 - 20:00	4.50	PERF	2	DRLPRO	
	20:00 - 23:00	3.00	CIRC	1	DRLPRO	CIRCULATE AND CONDITION HOLE FOR LOGS, SPOT ECD PILL
	23:00 - 06:00	7.00	TRP	2	DRLPRO	TRIP OUT OF HOLE FOR LOGS -SL
	06:00 -				DRLPRO	NOTOFIED CLIFF JOHNSON WITH THE BLM IN REGARDS TO RUNNING PRODUCTION CASING @ 22:00 HRS ON 9/16/2008
	06:00 - 08:00	2.00	TRP	2	EVALPR	TRIP OUT OF HOLE FOR LOGS, SLM=167726.51' 21.49' DIFF. LAY DOWN MONEL, D.C. AND PULL SURVEY
	08:00 - 10:00	2.00	LOG	1	EVALPR	HOLD SAFETY MEETING, RIG UP SCHLUMBERGER
	10:00 - 18:00	8.00	LOG	1	EVALPR	RUN #1- GAMMA AND RESETIVITY
9/19/2008	18:00 - 02:30	8.50	OTH		EVALPR	LOGGING TRUCK BROKE DOWN, WAIT ON PARTS AND FIX TRUCK- RIG DOWN
	02:30 - 06:00	3.50	TRP	2	EVALPR	PICK UP RERUN BIT AND BIT SUG AND TRIP IN HOLE
	06:00 - 06:30	0.50	TRP	2	EVALPR	TRIP IN HOLE
	06:30 - 07:00	0.50	RIG	1	EVALPR	RIG SERVICE
	07:00 - 10:00	3.00	TRP	2	EVALPR	TRIP IN HOLE, FILL @ 5000',9000'
	10:00 - 10:30	0.50	RIG	2	EVALPR	RIG REPAIR -HYDRAULIC HOSE ON ST-80
	10:30 - 13:00	2.50	TRP	2	EVALPR	TRIP IN HOLE, FILL @ 11800', 13500'

**Operations Summary Report**

Legal Well Name: WV 4BD-23-8-21  
 Common Well Name: WV 4BD-23-8-21  
 Event Name: DRILLING  
 Contractor Name: SST Energy  
 Rig Name: SST

Start: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Spud Date: 6/28/2008  
 End: 9/23/2008  
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/19/2008	13:00 - 13:30	0.50	REAM	1	EVALPR	WASH 70' TO BOTTOM, NO FILL
	13:30 - 00:30	11.00	CIRC	1	EVALPR	CIRCULATE ND CONDITION HOLE
	00:30 - 01:30	1.00	CIRC	1	EVALPR	SPOT ECD PIPP, 150 BBLS OF 16.0PPG
9/20/2008	01:30 - 06:00	4.50	TRP	2	EVALPR	TRIP OUT OF HOLE FOR LOGS
	06:00 - 08:00	2.00	TRP	2	EVALPR	TRIP OUT OF HOLE FOR LOGS
	08:00 - 09:00	1.00	LOG	1	EVALPR	RIG UP SCHLUMBERGER LOGGERS AND HOLD SAFETY MEETING
9/21/2008	09:00 - 16:00	7.00	LOG	1	EVALPR	WORKING ON FINDING POWER PROBLEM BETWEEN TOOLS AND TRUCK
	16:00 - 04:30	12.50	LOG	1	EVALPR	RUN OPEN HOLE LOGS RUN # 1- PEX RUN #2 OBMI
	04:30 - 06:00	1.50	OTH		EVALPR	PULL WEAR BUSHING
9/22/2008	06:00 - 11:00	5.00	TRP	2	CSGPRO	TRIP IN HOLE FILL @ 1500',4000',8000,AND SHOE
	11:00 - 12:00	1.00	RIG	6	CSGPRO	CUT DRILLING LINE
	12:00 - 14:00	2.00	TRP	2	CSGPRO	TRIP IN HOLE FILL @ 15,000'
9/23/2008	14:00 - 14:30	0.50	REAM	1	CSGPRO	WASH 70' TO BOTTOM
	14:30 - 17:00	2.50	CIRC	1	CSGPRO	CIRCULATE AND CONDITION HOLE FOR CASING
	17:00 - 18:00	1.00	CIRC	1	CSGPRO	SPOT 150 BBLS OF 15.9 PPG ECD PILL ON BOTTOM
9/22/2008	18:00 - 06:00	12.00	TRP	3	CSGPRO	LAY DOWN DRILL PIPE
	06:00 - 07:30	1.50	TRP	3	CSGPRO	LAY DOWN DRILL PIPE
	07:30 - 10:30	3.00	CSG	1	CSGPRO	RIG UP TOP DRIVE, HOLD SAFETY MEETING AND RIG UP CASING CREW
9/23/2008	10:30 - 21:30	11.00	CSG	2	CSGPRO	RUN 4 1/2" CASING T/11796'
	21:30 - 22:30	1.00	CIRC	1	CSGPRO	INSTALL ROTATING RUBBER AND CIRCULATE BOTTOMS UP
	22:30 - 02:30	4.00	CSG	1	CSGPRO	RUN 4 1/2" CASING
9/23/2008	02:30 - 04:00	1.50	REAM	1	CSGPRO	WASH 25' TO BOTTOM, LANDED @ 16748. FILL UP TOOL LEAKING, CHANGE OUT , RIG UP CEMENT HEAD AND RIG DOWN CASING CREW
	04:00 - 06:00	2.00	CIRC	1	CSGPRO	CIRCULATE AND CONDITION HOLE FOR CEMENT
	06:00 - 06:30	0.50	CIRC	1	CSGPRO	CIRCULATE AND CONDITION HOLE FOR CEMENT
9/23/2008	06:30 - 07:00	0.50	CMT	1	CSGPRO	HOLD SAFETY MEETING AND RIG UP HALLIBURTON CEMENTERS
	07:00 - 09:30	2.50	CMT	2	CSGPRO	PUMP CEMENT 20 BBL FLUSH, 655 SACK 15# MOUNTIAN G, DISPLACE WITH 238 BBLS OF CLAYFIX WATER. PLUG BUMPED AND FLATS HELD- NO CEMENT TO SURFACE
	09:30 - 10:00	0.50	CMT	2	CSGPRO	HOLD 7200 PSI FOR 30 MIN.
9/23/2008	10:00 - 10:30	0.50	CMT	1	CSGPRO	RIG DOWN CEMENTERS
	10:30 - 14:30	4.00	BOP	1	CSGPRO	NIPPLE DOWN TO SET SLIPS
	14:30 - 15:30	1.00	BOP	1	CSGPRO	SET SLIPS @ 230,000, CUT CASING OFF
9/23/2008	15:30 - 18:00	2.50	LOC	7	CSGPRO	CLEAN MUD TANKS RIG RELEASED @ 18:00 HRS
	18:00 - 06:00	12.00	LOC	4	CSGPRO	PREPARE TOP DRIVE TO LAY DOWN, CONTINUE WITH GENERAL RIG DOWN.

## Operations Summary Report

Legal Well Name:	WV 4BD-23-8-21		
Common Well Name:	WV 4BD-23-8-21	Start:	9/27/2008
Event Name:	COMPLETION	End:	6/28/2008
Contractor Name:		Rig Release:	Group:
Rig Name:		Rig Number:	

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/27/2008	10:00 - 17:30	7.50	LOG	2	C-LOG	MIRU OWP ELU. MU AND RIH WITH CCL/GR/CBL/VDL LOGGING TOOLS AND TAG CORRELATED PBDT AT 16,722' (FC @ 16,746'). PRESSURE UP TO 4,000 PSI AND LOG UP TO 7,300'. BLEED PRESSURE TO ZERO AND POOH. RDMO ELU. EST. TOC AT 8,220'. RU HIGH DESERT PUMP AND TEST 4 1/2" CSG TO 10,000 PSI AND 4 1/2" X 7" ANNULUS TO 3,000 PSI. BOTH HELD GOOD. RDMO PUMP.
	17:30 - 19:00	1.50	EQT	1	C-PRE	
9/29/2008	06:00 - 06:00	24.00	WHD	2	C-PRE	SPOT FRAC TANKS AND START FILLING. NU 4 1/16" FRAC TREE. CONTINUE FILLING FRAC TANKS. NU 4 1/16" SCHOONER HCR VALVE. SET FRAC STAND. PREP TO CLEAN OUT TO FC WITH CTU. MIRU IPS CTU AND FLOW BACK TANKS. MU QES 2 7/8" MOTOR/JARS AND 3.50" 5-BLADE CONCAVE MILL. RIH AND TAG FILL AT 16,717'. INCREASE RATE TO 1.75 BPM AND CLEAN OUT TO FC AT 16,735' (CTM). PUMP 10 BBL SWEEP AND POOH. RDMO CTU.
9/30/2008	06:00 - 06:00	24.00	WHD	2	C-PRE	
10/1/2008	06:00 - 15:00	9.00	DRL	6	C-PRE	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.  
UTU-0809

1a. Type of Well  Oil Well  Gas Well  Dry  Other  
b. Type of Completion:  New Well  Work Over  Deepen  Plug Back  Diff. Resrv.  
Other: \_\_\_\_\_

6. If Indian, Allottee or Tribe Name  
UTE TRIBE

2. Name of Operator  
Questar Exploration & Production Co.

7. Unit or CA Agreement Name and No.  
WONSITS VALLEY UNIT

3. Address 11002 EAST 17500 SOUTH - VERNAL, UT 84078

3a. Phone No. (include area code)  
435.781.4342 - Dahn Caldwell

8. Lease Name and Well No.  
WV 4BD 23 8 21

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface 189' FNL, 101' FWL, NWNW, SEC 23-T8S-R21E

At top prod. interval reported below  
189' FNL, 101' FWL, NWNW, SEC 23-T8S-R21E

At total depth 189' FNL, 101' FWL, NWNW, SEC 23-T8S-R21E

10. Field and Pool or Exploratory  
WONSITS VALLEY

11. Sec., T., R., M., on Block and Survey or Area SEC 23-T8S-R21E

12. County or Parish UINTAH  
13. State UT

14. Date Spudded  
06/28/2008

15. Date T.D. Reached  
09/16/2008

16. Date Completed 10/10/2008  
 D & A  Ready to Prod.

17. Elevations (DF, RKB, RT, GL)\*  
4,819' KB

18. Total Depth: MD 16,748'  
TVD

19. Plug Back T.D.: MD 16,746'  
TVD

20. Depth Bridge Plug Set: MD N/A  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) **ACTR, ORL**  
ACL/GR/CCL/Temp, Three Detector Litho Comp Neutron & Spectral Density DSN

22. Was well cored?  No  Yes (Submit analysis)  
Was DST run?  No  Yes (Submit report)  
Directional Survey?  No  Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	13-3/8 J-55	54.5#		509'		500 SXS		Surf - Circ	
12-1/4"	9-5/8 P-110	46.1#		5303'		1925 SXS		Surf - Circ	
8-1/2"	7" P-110	26 & 29		11,798'		2215 SXS		Surf - Unk	
6-1/8"	4-1/2" P-110	15.1/16.6		16,748'		655 SXS		8,200' - Log	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
N/A		N/A			N/A			

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) SEE ATTACHMENT ONE			SEE ATTACHMENT ONE			
B) <b>WDMED</b>						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
SEE ATTACHMENT ONE	SEE ATTACHMENT ONE

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
10/10/08	10/12/08	24	→	0	3,682	1,822			Flowing
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
26	SI N/A	2,820	→					Producing	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI		→						

\*(See instructions and spaces for additional data on page 2)

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Solid, used for fuel, vented, etc.)  
Sold

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
GREEN RIVER	2593'			MANCOS 'B'	12710'
MAHOGANY	3338'			FRONTIER	15429'
WASATCH	5922'			DAKOTA SILT	16317'
MESA VERDE	8996'			DAKOTA	16519'
CASTLEGATE	11464'				
BLACKHAWK	11807'				
MANCOS	12313'				

32. Additional remarks (include plugging procedure):

FUTURE OIL PROSPECTS: GREEN RIVER & MAHOGANY

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- Electrical/Mechanical Logs (1 full set req'd.)     
  Geologic Report     
  DST Report     
  Directional Survey  
 Sundry Notice for plugging and cement verification     
  Core Analysis     
 Other: ATTACHMENT ONE - PERF & FRAC INFO

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) JIM SIMONTON Title COMPLETION SUPERVISOR  
 Signature *Jim Simonton (d/c)* Date 12/04/2008

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

(Continued on page 3)

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(Form 3160-4, page 2)

**WV 4BD 23 8 21 – ATTACHMENT ONE**  
**PERFORATION DETAIL:**

Open Perfs	Stimulation					Perf Status
7581' – 7582'	Frac w/	52,278	Lbs in	32,802	Gals	Open – Wasatch
7584' – 7585'						Open – Wasatch
7643' – 7644'						Open – Wasatch
9689' – 7690'						Open – Wasatch
7694' – 9695'						Open – Wasatch
8052' – 8053'						Open – Wasatch
8058' – 8059'						Open – Wasatch
8060' – 8061'						Open – Wasatch
9006' – 9007'	Frac w/	70,181	Lbs in	122,808	Gals	Open – Mesa Verde
9008' – 9009'						Open – Mesa Verde
9012' – 9013'						Open – Mesa Verde
9015' – 9016'						Open – Mesa Verde
9040' – 9041'						Open – Mesa Verde
9042' – 9043'						Open – Mesa Verde
9309' – 9310'						Open – Mesa Verde
9312' – 9313'						Open – Mesa Verde
9314' – 9315'						Open – Mesa Verde
10296' – 10297'	Frac w/	69,860	Lbs in	122,850	Gals	Open – LMV
10326' – 10327'						Open – LMV
10437' – 10438'						Open – LMV
10442' – 10443'						Open – LMV
10448' – 10449'						Open – LMV
10451' – 10452'						Open – LMV
10517' – 10518'						Open – LMV
10519' – 10520'						Open – LMV
10602' – 10603'	Frac w/	70,592	Lbs in	122,766	Gals	Open – LMV
10605' – 10606'						Open – LMV
10630' – 10631'						Open – LMV
10632' – 10633'						Open – LMV
10634' – 10635'						Open – LMV
10699' – 10700'						Open – LMV
10760' – 10761'						Open – LMV
10763' – 10764'						Open – LMV
10765' – 10766'						Open – LMV
11907' – 11909'	Frac w/	53,997	Lbs in	105,252	Gals	Open – Blackhawk
11973' – 11977'						Open – Blackhawk
12061' – 12063'						Open – Blackhawk
12098' – 12100'						Open – Blackhawk
12234' – 12236'						Open – Blackhawk
12281' – 12283'						Open – Blackhawk

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12406' - 12408'	}	Frac w/	43,172	Lbs in	101,934	Gals	Open - Mancos
12468' - 12470'							Open - Mancos
12603' - 12605'							Open - Mancos
12733' - 12735'							Open - Mancos 'B'
12802' - 12804'							Open - Mancos 'B'
12844' - 12848'							Open - Mancos 'B'
12983' - 12987'	}	Frac w/	41,300	Lbs in	104,076	Gals	Open - Mancos
13090' - 13094'							Open - Mancos
13262' - 13264'							Open - Mancos
13397' - 13399'							Open - Mancos
13533' - 13535'							Open - Mancos
13654' - 13658'	}	Frac w/	40,932	Lbs in	105,672	Gals	Open - Mancos
13691' - 13693'							Open - Mancos
13839' - 13841'							Open - Mancos
13949' - 13953'							Open - Mancos
14143' - 14145'							Open - Mancos
14352' - 14354'	}	Frac w/	39,027	Lbs in	116,382	Gals	Open - Mancos
14432' - 14436'							Open - Mancos
14597' - 14601'							Open - Mancos
14785' - 14787'							Open - Mancos
14857' - 14859'							Open - Mancos
15000' - 15001'	}	Frac w/	39,895	Lbs in	102,564	Gals	Open - Mancos
15126' - 15128'							Open - Mancos
15319' - 15321'							Open - Mancos
15402' - 15404'							Open - Mancos
15432' - 15435'							Open - Frontier
15504' - 15506'							Open - Frontier
15699' - 15701'							Open - Frontier
15797' - 15801'	}	Frac w/	50,171	Lbs in	120,078	Gals	Open - Frontier
15891' - 15892'							Open - Frontier
16161' - 16163'							Open - Frontier
16247' - 16251'							Open - Frontier
16327' - 16329'							Open - Dakota Silt
16407' - 16408'							Open - Dakota Silt
Stage 1A & 1B							
16530' - 16532'	}	Frac w/	73,101	Lbs in	59,934	Gals	Open - Dakota
16639' - 16642'							Open - Dakota 'C'
16685' - 16689'							Open - Dakota 'C'
16691' - 16693'							Open - Dakota 'C'
Stage 1A							
16717' - 16720'	}	Acidize w/	1,500	Gals	15% HCL		Open - Dakota 'C'
16723' - 16727'							Open - Dakota 'C'

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43-047-39041  
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**Operations Summary Report - DRILLING**

Well Name: WV 4BD-23-8-21  
Location: 23- 8-S 21-E 26  
Rig Name: SST

Spud Date: 6/28/2008  
Rig Release: 9/22/2008  
Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/4/2008	06:00 - 10:00	4.00			DRILL 30" HOLE 88 FT. DEEP AND SET 20" PIPE AND CEMENT WITH READY MIX
	10:00 - 00:00	14.00			DRILL 17 1/2" HOLE FROM 88 FT. TO 548 FT. 460 FT. AND BLOW DOWN HOLE LAY DOWN DRILL PIPE & BHA
	00:00 - 02:00	2.00			RAN 12 JTS OF 13 3/8", J-55, 54.5 #, ST&C WITH SHOE AT 509', FLOAT COLLAR AT 466', 3 BOW SPRING CENTRALIZERS, 1 AT 489' AND 445' AND 403, AND 1 AT 125'.
	02:00 - 04:00	2.00			CEMENT CASING WITH PRO-PETRO, PUMPED 70 BBL'S WATER, 20 BBL'S GEL WATER, 500 SKS CLASS G 50/50 POZ AT 102.4 BBL'S CEMENT AT 15.8 PPG, YEILD 1.15, 5 GAL/STK, BUMP PLUG TO 600 PSI CHECK FLOATS, HELD OK, HAD GOOD RETURNS THROUGHOUT JOB WITH 15 BB'S CEMENT BACK TO PIT.
	04:00 - 06:00	2.00			NOTIFY JAMIE SPARGER WITH THE BLM AT 1340 HRS ON 7/02/2008 LEFT MESSAGE ABOUT DRILLING OUT FROM CONDUCTOR TO SET 13 3/8" CASING AND CEMENT ON 7/04/2008 AT 0200 HRS.
	06:00 -				CALLER CAROL DANIELS WITH UTAH REGULATORY, NO ANSWER AND COULD NOT LEAVE MESSAGE ON 7/02/2008 AT 1330 HRS.
					NOTIFY JAN NELSON WITH QUESTAR IN RED WASH ON DRILLING AND SETTING SURFACE AT WV 23-8-21 ON 7/03/2008 AT 0830 HRS.
7/28/2008	06:00 - 06:00	24.00	LOC	4	RIG DOWN FLOOR, PITS, PUMPS, MOVE OUT PRAGMA CAT WALK, L/D TOP DRIVE, LOWER DERRICK @ 20:30 HRS & UNSTRING BLOCKS- BLEEDING OFF GAS FROM CSG ANN-F/2100 PSI TO 1800 PSI ABOUT EVERY 30 MIN.- DRY GAS
					30% RIGGED DOWN 0% MOVED 0% RIGGED UP
7/29/2008	06:00 - 18:00	12.00	LOC	4	R/D & MOVE MUD TANKS, DOG HOUSES, BACK YARD, VFD HOUSE
					65% RIGGED DOWN 40% MOVED 10% RIGGED UP
	18:00 - 06:00	12.00	LOC	3	WAIT ON DAYLIGHT
7/30/2008	06:00 - 18:00	12.00	LOC	4	SET OFF DRAWWORKS, SET DERRICK OFF FLOOR, R/D SUB BASES & MOVE TO NEW LOCATION, MOVE MATTING BOARDS
					RIGGED DOWN 100% MOVED 70% RIGGED UP 10%
	18:00 - 06:00	12.00	LOC	4	WAIT ON DAYLIGHT
7/31/2008	06:00 - 18:00	12.00	LOC	4	SET SET MATS, STACK SUBBASE, MUD TANKS, & BACK YARD, N/D BOP & SET TREE ON WV 7BD & TEST
	18:00 - 06:00	12.00	LOC	4	W/O/DAYLIGHT
8/1/2008	06:00 - 18:00	12.00	LOC	4	SET IN SPREADERS, DOG HOUSE, FLOOR PLATES, SET TANK FARM, PIN DERRICK TO FLOOR
	18:00 - 06:00	12.00	LOC	4	W/O/DAYLIGHT
8/2/2008	06:00 - 18:00	12.00	LOC	4	STRING UP, RAISE DERRICK, SET IN BAR HOPPERS, GAS BUSTER, R/U FLOOR, BRIDLE DOWN, P/U TOP DRIVE & SET CATWALK
	18:00 - 06:00	12.00	LOC	4	W/O/DAYLIGHT
8/3/2008	06:00 - 18:00	12.00	LOC	4	R/U TOP DRIVE, CHANGE OUT LINERS IN PUMPS, R/U SOLID CONTROL EQUIPMENT, N/U BOP, CHOKE LINE, & FLOW LINE
	18:00 - 06:00	12.00	LOC	4	W/O/DAYLIGHT
8/4/2008	06:00 - 12:00	6.00	ISP	1	REMOVE & INSPECT QUIL & VALVE ON TOP DRIVE

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/4/2008	12:00 - 14:30	2.50	BOP	2	TEST TOP DRIVE VALVES 250 LOW 5000 HI & SUFRACE LINES 250 LOW 3000 HI
	14:30 - 19:00	4.50	RIG	2	TROUBLE SHOOT KOOMEY UNIT & LINES
	19:00 - 23:00	4.00	BOP	2	TEST HYDRIL 250 LOW 3500 HI, PIPE, BLIND & CHOKE 250 LOW, 5000 HI, CASING 1500 PSI
	23:00 - 23:30	0.50	OTH		CENTER TOP DRIVE
	23:30 - 00:00	0.50	OTH		INSTALL WEAR BUSHING
	00:00 - 02:30	2.50	TRP	1	STRAP BHA
	02:30 - 06:00	3.50	TRP	1	P/U 12 1/4 BHA
8/5/2008	06:00 - 06:30	0.50	RIG	2	RIG REPAIR SHAKER RESET SWITCH
	06:30 - 09:00	2.50	DRL	4	DRLG FLOAT EQUIPMENT, CMT & POCKET
	09:00 - 09:30	0.50	DRL	1	DRLG F/548 TO 558
	09:30 - 10:30	1.00	EQT	2	CIR & FIT TO 10.5 PPG, 64 PSI, MW 8.4
	10:30 - 13:30	3.00	DRL	1	DRLG F/558 TO 850 (292 FT 97.33 FPH) WOB 5-10, RPM 50, GPM 905
	13:30 - 19:00	5.50	RIG	2	RIG REPAIR SHAKER MOTOR, POP OFF ON #1 MUD PUMP
	19:00 - 19:30	0.50	SUR	1	CIR SWEEP & SURVEY @710 .4 DEG AZ 350.2 TVD 709.99
	19:30 - 01:00	5.50	DRL	1	DRLG F/850 TO 1363 (513 FT 93.27 FPH) WOB 5-10, RPM 50, GPM 905
	01:00 - 01:30	0.50	SUR	1	SURVEY@ 1271 .1 DEG AZ 111.4 TVD 1270.99
	01:30 - 06:00	4.50	RIG	2	RIG REPAIR CLAMP ON TOP DRIVE BETWEEN LOWER VALVE & THROUGH AWAY SUB, NOT HOLDING, BREAKING OUT ON TOP OF THROUGH AWAY SUB
	8/6/2008	06:00 - 07:30	1.50	DRL	1
07:30 - 11:00		3.50	RIG	2	RIG REPAIR, TROUBLE SHOOT TD COMM FAILURE
11:00 - 16:30		5.50	RIG	2	TOH HOLE PACKED OFF @1377, WORK FREE, CONT PUMP OUT OF HOLE TO SHOE
16:30 - 22:00		5.50	RIG	2	CHANGE OUT COM LINE ON TD, INSTALL THROUGH AWAY SUB
22:00 - 23:00		1.00	RIG	2	WASH DOWN 2 STAND, TD OK, 2" BLEED OFF VALVE ON #1 MUD PUMP LEAKING, PULL BACK IN SHOE
23:00 - 00:00		1.00	RIG	2	CHANGE OUT GATE ON #1 PUMP BLEED OFF VALVE
00:00 - 02:30		2.50	RIG	2	TIH, WASH & REAM F/SHOE TO TD
02:30 - 04:00		1.50	DRL	1	DRLG F/1482 TO 1580
04:00 - 04:30		0.50	RIG	4	INSTALL ROTATING RUBBER
04:30 - 05:30		1.00	FISH	6	WORK TIGHT HOLE @1560
05:30 - 06:00		0.50	DRL	1	DRLG F/1580 TO 1612
06:00 - 09:30		3.50	DRL	1	DRLG F/1612 TO 1899 (287 FT 82 FPH) WOB 8-12 RPM 167 GPM 905
09:30 - 10:00		0.50	CIRC	1	CIR F/SURVEY
10:00 - 10:30	0.50	SUR	1	SURVEY @1807 .5 DEG AZ 152.9 TVD 1806.98	
10:30 - 14:30	4.00	DRL	1	DRLG F/1899 TO 2185 (286 FT 71.5 FPH) WOB 12-14 RPM 164 GPM 880	
14:30 - 15:00	0.50	RIG	1	RIG SERVICE	
15:00 - 20:30	5.50	DRL	1	DRLG F/2185 TO 2471 (286 FT 52 FPH) WOB 15-18 RPM 164 GMP 880	
20:30 - 21:00	0.50	CIRC	1	CIR F/SURVEY	
21:00 - 21:30	0.50	SUR	1	SURVEY@2379 .9 DEG AZ 60.0 TVD 2378.95, FLOW CHECK ON SURVEY FLOWING 64 BBL HR	
21:30 - 05:00	7.50	DRL	1	DRLG F/2471 TO 2609	
05:00 - 05:30	0.50	CIRC	1	CIR BTM UP	
05:30 - 06:00	0.50	REAM	1	BACK REAM OUT TO 2471	
8/8/2008	06:00 - 14:30	8.50	RIG	2	CIR & TROUBLE SHOOT POWER PROBLEMS, W/O/ELECTRICIAN & WELDER PUMP OUT HOLE TO SHOE
	14:30 - 18:00	3.50	TRP	2	PUMP OUT HOLE TO SHOE
	18:00 - 02:30	8.50	RIG	2	FLOW CHECK-NO FLOW, REPAIR ST-80, REPLACE UNION ON STANDPIPE & TEST TO 3600 PSI, CUT VENTS ON PUMP HOUSE, REPAIR #2 ENGINE
	02:30 - 05:00	2.50	TRP	10	TOH
8/9/2008	05:00 - 06:00	1.00	TRP	1	CHANGE OUT MOTOR & BIT
	06:00 - 07:00	1.00	TRP	1	P/U MOTOR & BIT

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations	
8/9/2008	07:00 - 10:00	3.00	RIG	2	RIG REPAIR, LOCK ON ROTARY TABLE	
	10:00 - 12:30	2.50	TRP	2	TIH W/BIT #2 , HIT BRIDGE AT 1327'	
	12:30 - 13:00	0.50	REAM	1	WASH & REAM F/ 1327' TO 1423'	
	13:00 - 13:30	0.50	TRP	2	TIH TO 2470' HIT BRIDGE	
	13:30 - 14:00	0.50	REAM	1	WASH & REAM F/ 2470' TO 2609'	
	14:00 - 16:00	2.00	DRL	1	DRILG F/ 2609' TO 2656' (47' @ 23.5 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM	
	16:00 - 16:30	0.50	RIG	1	RIG SERVICE	
	16:30 - 20:00	3.50	DRL	1	DRILG F/ 2656' TO 2752' (106.5' @ 30.4 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM	
	20:00 - 21:00	1.00	RIG	2	CHANGE OUT LINER & SWAB #2 PUMP	
	21:00 - 23:00	2.00	DRL	1	DRILG F/ 2752' TO 2794' (42' @ 21.0 FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM	
	23:00 - 23:30	0.50	RIG	2	CHANGE SWAB #1 PUMP	
	23:30 - 06:00	6.50	DRL	1	DRILG F/ 2794' TO 2925' (131' @ 20.01FPH) WOB 12,RPM 50,SPM 102X102,PSI 2850 AT 854 GPM	
	8/10/2008	06:00 - 06:30	0.50	DRL	1	DRLG F/2925 TO 2942
		06:30 - 07:00	0.50	CIRC	1	CIR F/SURVEY
07:00 - 07:30		0.50	SUR	1	SURVEY@2857 .3 DEG AZ 171.0 TVD 2856.93	
07:30 - 08:30		1.00	DRL	1	DRLG F/2942 TO 2972	
08:30 - 09:00		0.50	RIG	2	CHANGE SWAB IN #1PUMP	
09:00 - 14:00		5.00	DRL	1	DRLG. F/ 2972' TO 3133' (161' @ 32.2 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM	
14:00 - 14:30		0.50	RIG	1	RIG SERVICE	
14:30 - 22:30		8.00	DRL	1	DRLG. F/ 3133' TO 3420' (287' @ 35.8 FPH)WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM	
22:30 - 23:30		1.00	SUR	1	SURVEY @ 3332' INC.1.10 , AZM 170.60 TVD 3331.89	
23:30 - 03:30		4.00	DRL	1	DRLG. F/ 3420' TO 3462' (42' @ 10.5 FPH) WOB 12/14,RPM 50,SPM 102X102 AT 854 GPM	
03:30 - 04:30		1.00	CIRC	1	CIR & BUILD TRIP SLUG, FLOW CHECK 1" STREAM	
04:30 - 05:00		0.50	TRP	10	TOH F/BIT-3462 FT	
05:00 - 05:30		0.50	OTH		FLOW CHECK FLOWING 30 BBL HR	
05:30 - 06:00		0.50	TRP	10	TOH	
8/11/2008	06:00 - 07:30	1.50	CIRC	1	CIR BTM'S UP & SPOT 150 BB ECD PILL, 9.1 PPG	
	07:30 - 09:00	1.50	TRP	10	TOH F/BIT	
	09:00 - 10:30	1.50	TRP	2	TIH TO SHOE	
	10:30 - 11:30	1.00	RIG	6	SLIP & CUT DRLG LINE	
	11:30 - 13:00	1.50	TRP	2	TIH TO 3420 FT	
	13:00 - 13:30	0.50	REAM	1	WASH & REAM 42 FT TO BTM	
	13:30 - 15:30	2.00	DRL	1	DRLG F/3462 TO 3512'(50' @ 25.0 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM	
	15:30 - 16:00	0.50	RIG	1	RIG SERVICE	
	16:00 - 22:00	6.00	DRL	1	DRLG F/3512' TO 3684'(172' @ 28.6 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM	
	22:00 - 23:00	1.00	RIG	2	CHANGE SWAB IN #2 PUMP	
	23:00 - 06:00	7.00	DRL	1	DRLG F/3684' TO 3799'(115' @ 16.42 FPH) WOB 12,RPM 50,SPM 102X102 PSI 3150 AT 854 GPM	
8/12/2008	06:00 - 14:30	8.50	DRL	1	DRLG F/3799 TO 3987 (188 FT 22.11 FPH) WOB 15-18 RPM 144 GPM 854	
	14:30 - 15:00	0.50	RIG	1	RIG SERVICE	
	15:00 - 15:30	0.50	CIRC	1	CIR F/SURVEY	
	15:30 - 16:00	0.50	SUR	1	SURVEY@3905 1.1 DEG AZ 163.2 TVD 3904.79	
	16:00 - 17:30	1.50	DRL	1	DRLG F/ 3987' TO 3997'	
	17:30 - 19:00	1.50	RIG	2	CHANGE OUT 2 SWABS & LINER #1 PUMP	

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/12/2008	19:00 - 20:00	1.00	DRL	1	DRLG F/ 3997' TO 4009'
	20:00 - 23:00	3.00	TRP	2	PUMP PILL & TRIP OUT
	23:00 - 00:30	1.50	TRP	1	CHANGE OUT MUD MTR'S & BITS
	00:30 - 01:30	1.00	OTH		CENTER UP TOP DRIVE
	01:30 - 03:30	2.00	TRP	2	T.I.H W/ BIT #4
	03:30 - 04:00	0.50	REAM	1	WASH & REAM F/3885' TO 4009'
	04:00 - 06:00	2.00	DRL	1	DRLG F/ 4009' TO 4050' (41' @ 20.5 FPH) WOB 10,RPM 45, SPM 102X102 AT 3150 PSI AT 854 GPM
8/13/2008	06:00 - 07:00	1.00	RIG	2	ROD CLAMP & SWAB # 1 PUMP
	07:00 - 09:00	2.00	DRL	1	DRLG. F/ 4050' TO 4080' (30' @ 15.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	09:00 - 10:00	1.00	RIG	2	CHANGE SWAB #2 PUMP
	10:00 - 12:00	2.00	DRL	1	DRLG. F/ 4080' TO 4115' (35' @ 17.5 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	12:00 - 13:00	1.00	RIG	2	CHANGE SWAB # 2 PUMP
	13:00 - 15:00	2.00	DRL	1	DRLG. F/ 4115' TO 4175' (60' @ 30.0 FPH) WOB 10/12,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	15:00 - 15:30	0.50	RIG	1	RIG SERVICE
	15:30 - 01:00	9.50	DRL	1	DRLG. F/ 4175' TO 4365' (190' @20.0 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
	01:00 - 01:30	0.50	RIG	1	RIG SERVICE
	01:30 - 06:00	4.50			DRLG. F/ 4365' TO 4457' (92' @20.4 FPH) WOB 12/14,RPM 45,SPM 102X102 AT 3150 PSI AT 854 GPM
8/14/2008	06:00 - 07:00	1.00	DRL	1	DRILLING F/4457 T/4464 7' 7'/HR
	07:00 - 07:30	0.50	SUR	1	PUMP HIGH VIS SWEEP AND CIRC. BOTTOMS UP
	07:30 - 16:00	8.50	DRL	1	SURVEY @ 4379****1.3 DEG***146.2 AZ
	16:00 - 17:30	1.50	RIG	8	DRILLING F/4464 T/4725 261' 30.7'/HR
	17:30 - 18:00	0.50	DRL	1	WOB 16, 45 RPM, 2X102 SPM, 854 GPM
	18:00 - 18:30	0.50	RIG	1	REPAIR #2 PUMP SWAB
	18:30 - 19:00	0.50	OTH		DRILLING F/4725 T/4759 34' 68'/HR
	19:00 - 00:00	5.00	DRL	1	RIG SERVICE
	00:00 - 00:30	0.50	RIG	8	CHANGE OUT CORRISION RING IN TOP DRIVE
	00:30 - 04:30	4.00	DRL	1	DRLLING F/4759 T/4876 117' 23.4'/HR
	04:30 - 05:30	1.00	RIG	8	REPAIR #2 PUMP SWAB
05:30 - 06:00	0.50	DRL	1	DRILLING F/4876 T/4938 62' 15.5'/HR	
8/15/2008	06:00 - 12:00	6.00	DRL	1	REPAIR #1 PUMP SWAB
	12:00 - 12:30	0.50	SUR	1	DRILLING F/4938 T/4941' 3' 6'/HR
	12:30 - 15:30	3.00	TRP	10	DRILLING F/4941 T/5015 74' 12.3'/HR
	15:30 - 16:00	0.50	TRP	10	DROP SURVEY(CHECK FLOW) AND PUMP TRIP SLUG
	16:00 - 18:30	2.50	TRP	10	TRIP OUT OF HOLE FOR BIT
	18:30 - 19:00	0.50	REAM	1	PULL SURVEY, CHANGE OUT BIT AND CHECK MOTOR
	19:00 - 06:00	11.00	DRL	1	TRIP IN HOLE WITH BIT #5
	06:00 - 14:30	8.50	DRL	1	WASH 75' TO BOTTOM, NO FILL
8/16/2008	14:30 - 15:00	0.50	RIG	1	DRILLING F/5015 T/5145 130' 11.8'/HR
	15:00 - 22:00	7.00	DRL	1	WOB 15/20 RPM 40/55 SPM 2X100 PSI 3400
	22:00 - 23:00	1.00	CIRC	1	DRILLING F/5145 T/5225 80' 9.4'/HR
	23:00 - 00:00	1.00	TRP	14	RIG SERVICE
	00:00 - 01:00	1.00	CIRC	1	DRILLING F/5225 T/5325 100' 14.2'/HR
					WOB 18/20 RPM 60 SPM 2X102 GPM 854
				CIRCULATE AND CONDITION HOLE FOR SHORT TRIP, PUMP HIGH VIS SWEEP	
				SHORT TRIP 10 SANDS, WASH 90' TO BOTTOM- NO FILL	
				CIRCULATE AND CONDITION HOLE FOR CASING	

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Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/16/2008	01:00 - 01:30	0.50	SUR	1	CHECK FOR FLOW,DROP SURVEY AND PUMP TRIP SLUG
	01:30 - 06:00	4.50	TRP	2	TRIP OUT OF HOLE FOR CASING, SLM=0.89' DIFFERENCE, NO CORRECTION LAY DOWN 8" BHA
8/17/2008	06:00 - 07:00	1.00	OTH		PULL WEAR BUSHING
	07:00 - 10:00	3.00	CSG	1	HOLD SAFETY MEETING, RIG UP CASING CREW AND FILL UP TOOL
	10:00 - 16:00	6.00	CSG	2	RUN 124 JTS OF 9 5/8", 47.0#,HCP 110,LT&C CASING
	16:00 - 17:30	1.50	CIRC	1	CIRCULATE AND CONDITION HOLE, RIG DOWN CSERS ANDPULL DRILLING NIPPLE
	17:30 - 20:00	2.50	CSG	7	LAND CASING HANGER,RIG DOWN FILL UP TOOL AND RIG UP CEMENT HEAD 185,000K STRING WEIGHT ON HANGER
	20:00 - 21:30	1.50	CIRC	1	CIRCULTE AND CONDITION HOLE FOR CEMENT, HOLD SAFETY MEETING
	21:30 - 01:30	4.00	CMT	2	PUMP CEMENT-30 BBLs MUD FLUSH, 30 BBL CEMENT SCAVENGER. LEAD 1, 610 SACKS 50/50 POZ AND 40.1% N2. LEAD 2, 770 SACKS 50/50 POZ WITH23.1% N2. TAIL 230 SACKS 50/50 POZ. DISPLACED WITH 382 BBLs. 55.1 BBLs OF 50/50 POZ CAP PUMPED DOWN BACK SIDE.WATER.GOOD RETURNS THROUGHT JOB, RETURNED 175 BBLs OF CEMENT TO SURFACE. PLUG BUMPED AND FLOATS HELD.
8/18/2008	01:30 - 02:00	0.50	OTH		TEST CASING TO 1500 PSI FOR 30 MIN.
	02:00 - 03:30	1.50	CMT	1	RIG DOWN HALLIBURTON, PULL LANDING JOINT
	03:30 - 06:00	2.50	BOP	1	NIPPLE DOWN BOP
	06:00 - 08:00	2.00	BOP	1	NIPPLE DOWN 13 5/8" BOP
	08:00 - 11:00	3.00	WHD	1	NIPPLUP B SECTION AND TEST TO 5000 PSI
	11:00 - 19:00	8.00	BOP	1	NIPPLE UP 11" BOP
	19:00 - 23:30	4.50	BOP	2	TEST BOP, ALL RAMS,IBOP , FLOOR VALVES, CHOKE MANIFLOD AND AND HCR VALVE 10,000 PSI HIGH 250 LOW. ANNULAR 5,000 HIGH 250 LOW. FUNTION TEST KOOMEY
	23:30 - 00:00	0.50	OTH		SET WEAR BUSHING
	00:00 - 00:30	0.50	OTH		RIG UP FLOOR AND TOP DRIVE AND CENTER OVER HOLE
	00:30 - 04:00	3.50	TRP	2	PICK UP BIT #6, MOTOR AND MONEL AND TRIP IN HOLE- INSTALL ROTATING RUBBER
8/19/2008	04:00 - 06:00	2.00	DRL	4	DRILL CEMENT AND FLOAT EQUIPMENT AND 10' OF NEW HOLE F/5201 T/5335'. CIRCULATE FOR FIT TEST
	06:00 - 06:30	0.50	EQT	2	FIT TEST TO 1220 PSI- 13.5 EQMW
	06:30 - 16:00	9.50	DRL	1	DRILLING F/5335 T/5640 305' 32.1'/HR WOB 15/16 RPM 50 SPM 100 GPM 418
	16:00 - 16:30	0.50	RIG	1	RIG SERVICE
	16:30 - 00:00	7.50	DRL	1	DRILLING F/5640 T/5927 287' 38.3'/HR WOB 17/18 RPM 50 SPM 100 GPM 418
	00:00 - 01:00	1.00	SUR	1	SURVEY @ 5842***1.2 DEG***161.5 AZ
	01:00 - 06:00	5.00	DRL	1	DRILLING F/5927 T/6005 78' 15.6'/HR WOB 17/18 RPM 50 SPM 100 GPM 418
8/20/2008	06:00 - 12:30	6.50	DRL	1	DRILLING F/6005 T/6308 303' 46.6'/HR WOG 17/18 RPM 55 SPM 100 GPM 418
	12:30 - 13:00	0.50	RIG	1	RIG SERVICE
	13:00 - 17:30	4.50	DRL	1	DRILLING F/6308 T/6499 191' 42.4'/HR
	17:30 - 18:30	1.00	SUR	1	SURVEY @ 6414***1.0 DEG***169.7 AZ
	18:30 - 22:30	4.00	DRL	1	DRILLING F/6499 T/6532
	22:30 - 23:00	0.50	CIRC	1	FLOW CHECK AND PUMP TRIP SLUG
	23:00 - 02:30	3.50	TRP	10	TRIP OUT OF HOLE FOR BIT
	02:30 - 03:00	0.50	TRP	10	CHANGE OUT BITAND CHECK MOTOR
	03:00 - 06:00	3.00	TRP	10	TRIP IN HOLE WITH BIT #7
	8/21/2008	06:00 - 06:30	0.50	REAM	1
06:30 - 15:00		8.50	DRL	1	DRILLING F/6532 T/6999 467' 54.9'/HR

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/21/2008	15:00 - 16:00	1.00	CIRC	1	CIRCULATE, BUILD AND PUMP TRIP SLUG
	16:00 - 19:00	3.00	TRP	10	TRIP OUT OF HOLE FOR BIT
	19:00 - 19:30	0.50	TRP	10	CHANGE OUT MOTOR AND PICK UP BIT #8
	19:30 - 22:00	2.50	TRP	10	TRIP IN HOLE WITH BIT # 8 TO SHOE
	22:00 - 23:30	1.50	RIG	6	CUT DRILLING LINE, CENTER TOP DRIVE
	23:30 - 00:00	0.50	TRP	10	TRIP IN HOLE WITH BIT #8
	00:00 - 00:30	0.50	REAM	1	WSH 30' TO BOTTOM, NO FILL- LOST 120 BBLs OF MUD ON TRIP
	00:30 - 03:30	3.00	DRL	1	DRILLING F/6999 T/7237 238' 79.3'/HR WOB 14 RPM 55 SPM 100 GPM 419
	03:30 - 06:00	2.50	CIRC	2	LOST CIRCULATION @ 7237' LOST APPROXIMATELY 220 BBLs, SPOT LCM SWEEPS ON BOTTOM WHILE MIXING ANOTHER HAVE PARTIAL RETURNS @ THIS TIME
8/22/2008	06:00 - 08:30	2.50	DRL	1	DRILLING F/7237 T/7320 83' 33.2'/HR DRILLING WITH SLOWER PUMP RATE AND LOW BIT WEIGHT TRYING TO HEAL UP LOSSES WOB 6/8 RPM 40 SPM 75 GPM 320
	08:30 - 11:30	3.00	DRL	1	DRILLING F/7320 T/7548 228' 76.0'/HR WOB 14 RPM 50 SPM 100 GPM 418
	11:30 - 12:00	0.50	RIG	1	RIG SERVICE
	12:00 - 13:00	1.00	DRL	1	DRILLING F/7548 T/7644 96' 96'/HR
	13:00 - 14:00	1.00	SUR	1	CIRC. AND SURVEY @ 7559***1.3 DEG***166.1 AZ
	14:00 - 06:00	16.00	DRL	1	DRILLING F/7644 T/8220 576' 36.0'/HR WOB 16 RPM 55 SPM 100 GPM 419
8/23/2008	06:00 - 14:00	8.00	DRL	1	DRILLING F/8220 T/8499 279' 34.9'/HR WOB 22/20 DHRPM 155 SPM 100 GPM 419
	14:00 - 14:30	0.50	RIG	1	RIG SERVICE
	14:30 - 22:30	8.00	DRL	1	DRILLING F/8499 T/8784 285' 35.6'/HR
	22:30 - 23:30	1.00	SUR	1	SURVEY @ 8699***1.1 DEG***147.7 AZ
8/24/2008	23:30 - 06:00	6.50	DRL	1	DRILLING F/8784 T/9015 231' 35.5'/HR
	06:00 - 13:30	7.50	DRL	1	DRILLING F/9015 T/9357 342' 45.6'/HR WOB 20/25 DHRPM 150 SPM 100 GPM 419
	13:30 - 14:00	0.50	RIG	1	RIG SERVICE, FUNCTION PIPE RAMS
8/25/2008	14:00 - 06:00	16.00	DRL	1	DRILLING F/9357 T/9919 562' 35.1'/HR
	06:00 - 12:00	6.00	DRL	1	DRILLING F/9919 T/10119 200' 33.3'/HR WOB 22/25 DHRPM 150 SPM 100 GPM 419
	12:00 - 12:30	0.50	RIG	1	RIG SERVICE
8/26/2008	12:30 - 06:00	17.50	DRL	1	DRILLING F/10119 T/10570 451' 25.8'/HR SAME PARAMETERS
	06:00 - 08:30	2.50	DRL	1	DRILLING F/10570 T/10589 19' 7.6'/HR WOB 25 DHRPM 150 SPM 100 GPM 419
	08:30 - 09:30	1.00	CIRC	1	CIRCULATE BOTTOMS UP
	09:30 - 10:00	0.50	SUR	1	CHECK FLOW, DROP SURVEY AND PUMP TRIP SLUG
	10:00 - 14:00	4.00	TRP	10	TRIP OUT OF HOLE FOR BIT
	14:00 - 20:30	6.50	TRP	10	INSPECT BHA, CHANGE OUT JARS AND LAY DOWN 3 DRILL COLLARS, WASHED FACE
	20:30 - 21:30	1.00	TRP	10	CHANGE OUT MOTOR, PULL SURVEY, MAKE UP BIT AND PICK UP 3 NEW DRILL COLLARS
	21:30 - 22:30	1.00	OTH		CHANGE OUT CORROSION RING
	22:30 - 04:30	6.00	TRP	10	TRIP IN HOLE WITH BIT #9
	04:30 - 05:00	0.50	REAM	1	WASH 85' TO BOTTM, 10' OF OUT OF GAUGE HOLE
8/27/2008	05:00 - 06:00	1.00	DRL	1	DRILLING F/10589 T/10600 11' 11'/HR WOB 12 DHRPM 100 SPM 100 GPM 419
	06:00 - 14:00	8.00	DRL	1	BOTTOMS UP GAS 7800 UNITS AND 20'-25' FLAIR 10 BBL GAIN DRILLING F/10600 T/10786 186' 23.25'/HR

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/27/2008	06:00 - 14:00	8.00	DRL	1	WOB 18 DHPRM 110 SPM 100 GPM 419
	14:00 - 14:30	0.50	RIG	1	RIG SERVICE
	14:30 - 06:00	15.50	DRL	1	DRILLING F/10786 T/11070 284' 18.3' HR
8/28/2008	06:00 - 11:30	5.50	DRL	1	DRLG F/11070 TO 11167 (97 FT 17.63 FPH) WOB 18 GPM 419 RPM 118
	11:30 - 12:00	0.50	RIG	1	RIG SERVICE
	12:00 - 06:00	18.00	DRL	1	DRLG F/11167 TO 11,520' (353 FT. 19.6 FPH) WOB 19 GPM 419 RPM 113
8/29/2008	06:00 - 10:30	4.50	DRL	1	DRLG F/11520 TO 11612 (92 FT 20.44 FPH) WOB 18-20 RPM 113 GPM 419
	10:30 - 11:30	1.00	CIRC	1	CIR & BUILD ECD PILL
	11:30 - 12:00	0.50	SUR	1	FLOW CHECK & DROP SURVEY
	12:00 - 13:00	1.00	CIRC	1	SPOT ECD PILL & PUMP DRY JOB
	13:00 - 18:30	5.50	TRP	10	TOH F/BIT
	18:30 - 19:30	1.00	TRP	1	CHANGE OUT BIT & MOTOR
	19:30 - 02:00	6.50	TRP	2	TIH, FILL PIPE @BHA, 5500, 9500
	02:00 - 02:30	0.50	REAM	1	WASH & REAM 60 FT TO BTM, 15 FT FILL
	02:30 - 06:00	3.50	DRL	1	DRLG F/11612 TO 11695 (83 FT 23.71 FPH) WOB 15 RPM 104 GPM 419
	8/30/2008	06:00 - 12:00	6.00	DRL	1
12:00 - 13:30		1.50	CIRC	5	CIR F/SAMPLES
13:30 - 14:00		0.50	TRP	14	SHORT TRIP 5 STD
14:00 - 17:00		3.00	CIRC	1	CIR BTM'S UP & SPOT 100 BBL ECD PILL, PUMP DRY JOB
17:00 - 00:30		7.50	TRP	2	TOH F/LOGS, L/D MONEL & MOTOR, SLM,
00:30 - 01:30		1.00	LOG	1	S/M & R/U LOGGERS
01:30 - 06:00		4.50	LOG	1	LOG W/TRIPLE COMBO, LOGGERS DEPTH 11812, STRAP 11808, TALLEY 11809.95
8/31/2008	06:00 - 06:30	0.50	LOG	1	CONT LOG OUT W/PLATFORM EXPRESS
	06:30 - 07:30	1.00	LOG	1	R/D LOGGERS
	07:30 - 08:00	0.50	RIG	1	SERVICE RIG
	08:00 - 08:30	0.50	TRP	1	P/U MOTOR & TEST
	08:30 - 10:00	1.50	TRP	2	TIH W/BHA
	10:00 - 10:30	0.50	CIRC	1	FILL PIPE & FLUSH LCM F/PUMPS
	10:30 - 12:30	2.00	TRP	2	TIH TO 5300 FT
	12:30 - 14:00	1.50	RIG	6	SLIP & CUT DRLG LINE
	14:00 - 18:30	4.50	TRP	2	TIH FILL PIPE @ 5300, 9500 FT
	18:30 - 21:00	2.50	CIRC	1	CIR & CONDITION MUD, SPOT 100 BBL ECD PILL
9/1/2008	21:00 - 06:00	9.00	TRP	3	LAY DOWN DRILL PIPE
	06:00 - 10:30	4.50	TRP	3	L/D DRILL PIPE & BHA, FLOW CHECK @BHA
	10:30 - 11:00	0.50	OTH		PULL WEAR BUSHING
	11:00 - 13:00	2.00	CSG	1	R/U CASING CREW & FILL TOOL
	13:00 - 22:30	9.50	CSG	2	RUN 7" CASING BREAK CIR EVERY 2000 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	22:30 - 23:00	0.50	CIRC	1	CIR @7100 FT
	23:00 - 01:00	2.00	CSG	2	RUN CASING TO 9600 FT
	01:00 - 02:30	1.50	CIRC	1	CIR @9600 FT
	02:30 - 05:00	2.50	CSG	2	RUN CASING TO 11773 FT, TOTAL 255 JTS 63 JTS 29# 192 JTS 26#
	05:00 - 06:00	1.00			CIR BTM'S UP THROUGH CHOKE, R/U RETURN LINE OFF B-SECTION, TOTAL LOSSES 250 BBL
9/2/2008	06:00 - 07:00	1.00	CIRC	1	CIR & R/U HALLIBURTON LINE F/B-SECTION
	07:00 - 07:30	0.50	CSG	2	LAND CASING @11798 & ENGUAGE TIE DOWN BOLTS
	07:30 - 08:30	1.00	CSG	1	R/D CASING CREW
	08:30 - 11:30	3.00	CIRC	1	CIR & SHAKE OUT LCM
	11:30 - 12:00	0.50	CMT	2	S/M & R/U HALLIBURTON
	12:00 - 18:00	6.00	CMT	2	PRESS TEST CEMENT LINES TO 6000 PSI, NO2 LINES TO 8000 PSI AND CEMENT PUMP 10 BBL FRESH WATER AHEAD, 30 BBL SUPERFLUSH, 10 BBL FRESH WATER BEHIND, PUMP FOAM SCAVENGER 115 SKS. @ 7.0 PPG, PUMP

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/2/2008	12:00 - 18:00	6.00	CMT	2	1ST. LEAD 475 SKS. @ 9.0PPG, PUMPED 2ND. FOAMED LEAD 1375 SKS @ 11.0 PPG PUMP UNFOAMED TAIL 195 SKS. @ 14.3 PPG, DISPLACED W/ 445 BBL. FRESH WATER, BUMP PLUG AND TEST CSG TO 2600 PSI F/30 MIN. FLOATS HELD, 240 BBL CMT RETURNS, PUMP CAP CEMENT 55 SKS @ 14.6 PPG-PRESSURE INCREASED TO 1000 PSI
	18:00 - 19:00	1.00	CMT	1	R/D CEMENTERS & L/D LANDINGJT
	19:00 - 00:30	5.50	BOP	1	N/D BOP, CHANGE OUT BTM RAMS TO 4"
	00:30 - 02:00	1.50	WHD	1	N/U C-SECTION, INSTALL PACKING, PACKING LEAKING PAST NECK SEALS ON HANGER
9/3/2008	02:00 - 04:30	2.50	WHD	1	N/D C-SECTION, CHANGE OUT SEALS ON HANGER
	04:30 - 06:00	1.50	WHD	1	N/U C-SECTION, INSTALL PACKING
	06:00 - 13:00	7.00	BOP	1	NIPPLE UP BOP, ORBIT VALVE, FLOW LINE
	13:00 - 16:30	3.50	OTH		R/U TOP DRIVE F/4" PIPE
	16:30 - 17:30	1.00	BOP	2	R/U TESTER
	17:30 - 23:30	6.00	BOP	2	TEST BOP & CHOKE 250 LOW, 10000 HI, HYDRIL 250 LOW, 5000 HI, SURFACE LINES 250 LOW 3500 HI
	23:30 - 03:00	3.50	TRP	1	STRAP BHA, DRILL PIPE & INSTALL DRIP PAN
9/4/2008	03:00 - 04:30	1.50	OTH		INSTALL WEAR BUSHING & BEARNING PACK
	04:30 - 06:00	1.50	TRP	1	P/U BIT & BHA
	06:00 - 11:00	5.00	TRP	1	P/U BHA & DP TO 4018
	11:00 - 11:30	0.50	CIRC	1	CIR & STRAP PIPE
	11:30 - 15:30	4.00	TRP	3	P/U DRILL PIPE TO 7998
	15:30 - 16:00	0.50	CIRC	1	CIR & STRAP PIPE
	16:00 - 16:30	0.50	RIG	4	INSTALL STRIPPING RUBBER
	16:30 - 20:00	3.50	TRP	3	P/U DRILL PIPE TO 11695
	20:00 - 22:00	2.00	DRL	4	DRLG CMT, FLOAT EQUIPMENT, POCKET
	22:00 - 23:00	1.00	DRL	1	DRLG F/11809 TO 11820
9/5/2008	23:00 - 00:00	1.00	CIRC	1	CIR & CONDITION MUD F/FIT
	00:00 - 01:30	1.50	EQT	2	FIT TO EMW 15.5 OMW 13.3 W/1352 PSI
	01:30 - 06:00	4.50	DRL	1	DRLG F/11820 TO 11892 (72 FT 16 FPH) WOB 10/12 RPM 70
	06:00 - 10:00	4.00	DRL	1	DRLG F/11892 TO 11982 (90 FT 22.5 FPH) W/O/B 15 RPM 70 GPM 225
	10:00 - 10:30	0.50	RIG	2	WORK ON PUMPS, NO PRESSURE
9/6/2008	10:30 - 11:00	0.50	RIG	1	RIG SERVICE
	11:00 - 06:00	19.00	DRL	1	DRLG F/11982 TO 12317 (335 FT 17.63 FPH) WOB 12-15 RPM 65-75 GPM 225
	06:00 - 07:30	1.50	DRL	1	DRLG F/12317 TO 12330
	07:30 - 08:30	1.00	CIRC	1	CIR BTM'S UP
	08:30 - 09:00	0.50	TRP	2	TOH 6 STD TO SHOE
	09:00 - 09:30	0.50	EQT	2	FIT TO EMW 15.5 OMW 13.4 W/1352 PSI
	09:30 - 10:00	0.50	TRP	2	TOH TO 12330
	10:00 - 11:30	1.50	CIRC	1	DISPLACE MUD W/14.6 PPG INVERT MUD
	11:30 - 12:30	1.00	SUR	1	FLOW CHECK, DROP SURVEY, BUILD TRIP SLUG
	12:30 - 17:30	5.00	TRP	2	TOH F/MOTOR & BIT
	17:30 - 18:00	0.50	TRP	1	P/U MOTOR & BIT
	18:00 - 00:30	6.50	TRP	2	TIH, FILL PIPE @BHA, 5300 & 9300 FT
	9/7/2008	00:30 - 01:00	0.50	REAM	1
01:00 - 01:30		0.50	DRL	1	DRLG F/12330 TO 12381 WOB 9 RPM GPM 225
01:30 - 02:30		1.00	RIG	1	RIG SERVICE
02:30 - 03:00		0.50	DRL	1	DRLG F/12381 TO 12411 WOB 9 RPM GPM 225
03:00 - 06:00		3.00	RIG	2	CLEAN SUCTIONS ON MUD PUMPS
06:00 - 07:30		1.50	RIG	2	CLEAN OUT PUMP SUCTIONS
07:30 - 12:30		5.00	DRL	1	DRLG F/12420 TO 12705 (285 FT 57 FPH) WOB 8-10 RPM 150 GPM 211
12:30 - 13:00		0.50	RIG	2	WORK ON PUMPS
13:00 - 13:30		0.50	DRL	1	DRLG F/12705 TO 12720

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/7/2008	13:30 - 14:00	0.50	RIG	2	WORK ON PUMPS
	14:00 - 15:00	1.00	DRL	1	DRLG F/12720 TO 12750
	15:00 - 16:00	1.00	RIG	2	WORK ON PUMPS
9/8/2008	16:00 - 06:00	14.00	DRL	1	DRLG F/12750 TO 13294 (544 FT 38.85 FPH) WOB 7/9 RPM 160 GPM 211
	06:00 - 13:30	7.50	DRL	1	DRLG F/13294 TO 13554 (260 FT 34.66 FPH) WOB 8-10 RPM 160 GPM 211
	13:30 - 14:00	0.50	RIG	1	RIG SERVICE
9/9/2008	14:00 - 06:00	16.00	DRL	1	DRLG F/13554 14017 (463 FT 28.93 FPH) WOB 8-10 RPM 160 GPM 211
	06:00 - 13:30	7.50	DRL	1	DRLG F/14017 TO 14236 (219 FT 29.2 FPH) WOB 9-11 RPM 160 GPM 211
	13:30 - 14:00	0.50	RIG	1	RIG SERVICE
9/10/2008	14:00 - 06:00	16.00	DRL	1	DRLG F/14236 TO 14722 (486 FT 30.37 FPH) WOB 8-11 RPM 160 GPM 211
	06:00 - 15:30	9.50	DRL	1	DRLG F/14722 TO 15014 (292 FT 30.73 FPH) WOB 7-11 RPM 160 GPM 211
	15:30 - 16:30	1.00	RIG	1	RIG SERVICE
9/11/2008	16:30 - 06:00	13.50	DRL	1	DRLG F/15014 TO 15345 (330 FT 24.44 FPH) WOB 7-11 RPM 160 GPM 211
	06:00 - 13:00	7.00	DRL	1	DRILLING F/15345 T/15495 150' 21.4'/HR
	13:00 - 13:30	0.50	RIG	1	RIG SERVICE
9/12/2008	13:30 - 06:00	16.50	DRL	1	DRILLING F/15495 T/15775 280' 17.0'/HR
	06:00 - 07:30	1.50	DRL	1	DRILLING F/15775 T/15788 13' 8.7'/HR
	07:30 - 08:00	0.50	SUR	1	FLOW CHECK AND DROP SURVEY
9/12/2008	08:00 - 09:30	1.50	CIRC	1	CIRCULATE AND PUMP ECD SLUG 130 BBLs OF 16.3PPG
	09:30 - 17:00	7.50	TRP	10	TRIP OUT OF HOLE FOR BIT
	17:00 - 18:00	1.00	TRP	1	PULL SURVEY, CHANGE OUT BIT AND MOTOR, CLEAN RIG FLOOR
	18:00 - 23:30	5.50	TRP	10	TRIP IN HOLE FILL @ BHA, 5000', 9000'
	23:30 - 00:30	1.00	RIG	6	CUT DRILLING LINE AT SHOE
	00:30 - 02:30	2.00	TRP	10	TRIP IN HOLE
	02:30 - 03:00	0.50	REAM	1	WASH 85' TO BOTTOM, 3' OF FILL
	03:00 - 06:00	3.00	DRL	1	DRILLING F/15788 T/15885 97' 32.3'/HR
	06:00 - 16:30	10.50	DRL	1	DRILLING F/15885 T/16376 491' 46.8'/HR
	16:30 - 17:00	0.50	RIG	1	RIG SERVICE
9/13/2008	17:00 - 00:00	7.00	DRL	1	DRILLING F/16376 T/16412 36' 5.1'/HR
	00:00 - 02:00	2.00	CIRC	1	CIRCULATE BOTTOMS UP, SPOT ECD SLUG 150 BBLs OF 16.3 PPG
	02:00 - 06:00	4.00	TRP	10	TRIP OUT OF HOLE FOR BIT
9/14/2008	06:00 - 09:00	3.00	TRP	10	TRIP OUT OF HOLE FOR BIT
	09:00 - 10:00	1.00	TRP	1	CHANGE OUT BIT, LAY DOWN MOTOR AND PICK UP TORQUE BUSTER, CLEAN FLOOR
	10:00 - 17:30	7.50	TRP	10	TRIP IN HOLE WITH BIT #14, FILL PIPE @ BHA, 5000', 9000', 13000'
9/14/2008	17:30 - 18:00	0.50	REAM	1	WSH 60' TO BOTTOM, NO FILL
	18:00 - 06:00	12.00	DRL	1	DRILLING F/16412 T/16520 108' 9.0'/HR WOB 14 RPM 75 GPM 211 SPM 60
	06:00 - 11:00	5.00	DRL	1	DRILLING F/16520 T/16545
9/15/2008	11:00 - 11:30	0.50	RIG	1	RIG SERVICE
	11:30 - 06:00	18.50	DRL	1	DRILLING F/16545 T/16622
	06:00 - 10:30	4.50	DRL	1	DRILLING F/16522 T/16640 18' 4.0'/HR
9/16/2008	10:30 - 11:00	0.50	RIG	1	RIG SERVICE
	11:00 - 04:00	17.00	DRL	1	DRILLING F/16640 T/16725 85' 5.0'/HR WOB 16 RPM 75 SPM 60 GPM 211
	04:00 - 05:00	1.00	CIRC	1	CIRCULATE AND CONDITION HOLE CHECK SAMPLES
9/17/2008	05:00 - 06:00	1.00	DRL	1	DRILLING F/16725 T/16728
	06:00 - 10:00	4.00	DRL	1	DRILLING F/16728 T/16748 20' 5.0'/HR
	10:00 - 11:00	1.00	CIRC	1	CIRCULATE AND CONDITION HOLE, SPOT LCM SWEEP ON BOTTOM
	11:00 - 12:00	1.00	TRP	14	SHORT TRIP 10 STANDS, WASH 70' TO BOTTOM
	12:00 - 12:30	0.50	SUR	1	DROP SURVEY

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/17/2008	12:30 - 15:30	3.00	OTH		TRIED TO CIRCULATE, PIPE PLUGED . WAIT ON WIRELINE TRUCK.
	15:30 - 20:00	4.50	PERF	2	HOLD SAFETY MEETING, RIG UP WIRELINE TRUCK AND PERFERATE BOTTOM DRILL COLLAR @ 16636'
	20:00 - 23:00	3.00	CIRC	1	CIRCULATE AND CONDITION HOLE FOR LOGS, SPOT ECD PILL
	23:00 - 06:00 06:00 -	7.00	TRP	2	TRIP OUT OF HOLE FOR LOGS -SL NOTOFIED CLIFF JOHNSON WITH THE BLM IN REGARDS TO RUNNING PRODUCTION CASING @ 22:00 HRS ON 9/16/2008
9/18/2008	06:00 - 08:00	2.00	TRP	2	TRIP OUT OF HOLE FOR LOGS, SLM=167726.51' 21.49' DIFF. LAY DOWN MONEL, D.C. AND PULL SURVEY
	08:00 - 10:00	2.00	LOG	1	HOLD SAFETY MEETING, RIG UP SCHLUMBERGER
	10:00 - 18:00	8.00	LOG	1	RUN #1- GAMMA AND RESETIVITY
	18:00 - 02:30	8.50	OTH		LOGGING TRUCK BROKE DOWN, WAIT ON PARTS AND FIX TRUCK- RIG DOWN
9/19/2008	02:30 - 06:00	3.50	TRP	2	PICK UP RERUN BIT AND BIT SUG AND TRIP IN HOLE
	06:00 - 06:30	0.50	TRP	2	TRIP IN HOLE
	06:30 - 07:00	0.50	RIG	1	RIG SERVICE
	07:00 - 10:00	3.00	TRP	2	TRIP IN HOLE, FILL @ 5000',9000'
	10:00 - 10:30	0.50	RIG	2	RIG REPAIR -HYDRAULIC HOSE ON ST-80
	10:30 - 13:00	2.50	TRP	2	TRIP IN HOLE, FILL @ 11800', 13500
	13:00 - 13:30	0.50	REAM	1	WASH 70' TO BOTTOM, NO FILL
9/20/2008	13:30 - 00:30	11.00	CIRC	1	CIRCULATE ND CONDITION HOLE
	00:30 - 01:30	1.00	CIRC	1	SPOT ECD PIPP, 150 BBLS OF 16.0PPG
	01:30 - 06:00	4.50	TRP	2	TRIP OUT OF HOLE FOR LOGS
	06:00 - 08:00	2.00	TRP	2	TRIP OUT OF HOLE FOR LOGS
	08:00 - 09:00	1.00	LOG	1	RIG UP SCHLUMBERGER LOGGERS AND HOLD SAFETY MEETING
	09:00 - 16:00	7.00	LOG	1	WORKING ON FINDING POWER PROBLEM BETWEEN TOOLS AND TRUCK
	16:00 - 04:30	12.50	LOG	1	RUN OPEN HOLE LOGS RUN # 1- PEX RUN #2 OBM!
9/21/2008	04:30 - 06:00	1.50	OTH		PULL WEAR BUSHING
	06:00 - 11:00	5.00	TRP	2	TRIP IN HOLE FILL @ 1500',4000',8000,AND SHOE
	11:00 - 12:00	1.00	RIG	6	CUT DRILLING LINE
	12:00 - 14:00	2.00	TRP	2	TRIP IN HOLE FILL @ 15,000'
	14:00 - 14:30	0.50	REAM	1	WASH 70' TO BOTTOM
	14:30 - 17:00	2.50	CIRC	1	CIRCULATE AND CONDITION HOLE FOR CASING
	17:00 - 18:00	1.00	CIRC	1	SPOT 150 BBLS OF 15.9 PPG ECD PILL ON BOTTOM
9/22/2008	18:00 - 06:00	12.00	TRP	3	LAY DOWN DRILL PIPE
	06:00 - 07:30	1.50	TRP	3	LAY DOWN DRILL PIPE
	07:30 - 10:30	3.00	CSG	1	RIG UP TOP DRIVE, HOLD SAFETY MEETING AND RIG UP CASING CREW
	10:30 - 21:30	11.00	CSG	2	RUN 4 1/2" CASING T/11796'
	21:30 - 22:30	1.00	CIRC	1	INSTALL ROTATING RUBBER AND CIRCULATE BOTTOMS UP
	22:30 - 02:30	4.00	CSG	1	RUN 4 1/2" CASING
	02:30 - 04:00	1.50	REAM	1	WASH 25' TO BOTTOM, LANDED @ 16748. FILL UP TOOL LEAKING, CHANGE OUT , RIG UP CEMENT HEAD AND RIG DOWN CASING CREW
9/23/2008	04:00 - 06:00	2.00	CIRC	1	CIRCULATE AND CONDITION HOLE FOR CEMENT
	06:00 - 06:30	0.50	CIRC	1	CIRCULATE AND CONDITION HOLE FOR CEMENT
	06:30 - 07:00	0.50	CMT	1	HOLD SAFETY MEETING AND RIG UP HALLIBURTON CEMENTERS
	07:00 - 09:30	2.50	CMT	2	PUMP CEMENT 20 BBL FLUSH, 655 SACK 15# MOUNTIAN G, DISPLACE WITH 238 BBLS OF CLAYFIX WATER. PLUG BUMPED AND FLATS HELD- NO CEMENT TO SURFACE
	09:30 - 10:00	0.50	CMT	2	HOLD 7200 PSI FOR 30 MIN.
	10:00 - 10:30	0.50	CMT	1	RIG DOWN CEMENTERS
	10:30 - 14:30	4.00	BOP	1	NIPPLE DOWN TO SET SLIPS

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### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name: SST

Spud Date: 6/28/2008  
 Rig Release: 9/22/2008  
 Rig Number: 66

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/23/2008	14:30 - 15:30	1.00	BOP	1	SET SLIPS @ 230,000, CUT CASING OFF CLEAN MUD TANKS RIG RELEASED @ 18:00 HRS
	15:30 - 18:00	2.50	LOC	7	
	18:00 - 06:00	12.00	LOC	4	PREPARE TOP DRIVE TO LAY DOWN, CONTINUE WITH GENERAL RIG DOWN.

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Operations Summary Report - **COMPLETION**

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name:

Spud Date: 6/28/2008  
 Rig Release:  
 Rig Number:

Date	From - To	Hours	Code	Sub Code	Description of Operations	
9/27/2008	10:00 - 17:30	7.50	LOG	2	MIRU OWP ELU. MU AND RIH WITH CCL/GR/CBL/VDL LOGGING TOOLS AND TAG CORRELATED PBDT AT 16,722' (FC @ 16,746'). PRESSURE UP TO 4,000 PSI AND LOG UP TO 7,300'. BLEED PRESSURE TO ZERO AND POOH. RDMO ELU. EST. TOC AT 8,220'.	
	17:30 - 19:00	1.50	EQT	1	RU HIGH DESERT PUMP AND TEST 4 1/2" CSG TO 10,000 PSI AND 4 1/2" X 7" ANNULUS TO 3,000 PSI. BOTH HELD GOOD. RDMO PUMP.	
9/29/2008	06:00 - 06:00	24.00	WHD	2	SPOT FRAC TANKS AND START FILLING. NU 4 1/16" FRAC TREE.	
9/30/2008	06:00 - 06:00	24.00	WHD	2	CONTINUE FILLING FRAC TANKS. NU 4 1/16" SCHOONER HCR VALVE. SET FRAC STAND. PREP TO CLEAN OUT TO FC WITH CTU.	
10/1/2008	06:00 - 15:00	9.00	DRL	6	MIRU IPS CTU AND FLOW BACK TANKS. MU QES 2 7/8" MOTOR/JARS AND 3.50" 5-BLADE CONCAVE MILL. RIH AND TAG FILL AT 16,717'. INCREASE RATE TO 1.75 BPM AND CLEAN OUT TO FC AT 16,735' (CTM). PUMP 10 BBL SWEEP AND POOH. RDMO CTU.	
10/2/2008	07:00 - 10:00	3.00	PERF	2	MIRU OWP ELU. MU AND RIH WITH 2 1/2" GUNS AND PERF STAGE 1A FROM 16,717' TO 16,727'. 1,000 PSI WHEN THE GUNS WERE FIRED AND 1,000 PSI WITH GUNS ON THE SURFACE.	
	10:00 - 12:25	2.42	STIM	1	MIRU HES ACID EQUIPMENT AND PUMP 1,500 GALLONS OF HCL AND FLUSHED WITH 264 BBL 2% KCL WATER. AVERAGE RATE WAS 8.4 BPM AND AVERAGE PRESSURE WAS 7,815 PSI. RDMO HES EQUIPMENT.	
10/3/2008	12:25 - 06:00	17.58	PTST	2	FLOW TEST THROUGH IPS FBE.	
10/3/2008	06:00 - 06:00	24.00	PTST	2	FLOW TEST THROUGH IPS FBE.	
10/4/2008	06:00 - 06:00	24.00	PTST	2	SI FOR BUILD UP	
10/5/2008	06:00 - 06:00	24.00	PTST	2	SI FOR BUILD UP	
10/6/2008	06:00 - 09:00	3.00	PERF	2	RU OWP ELU AND RIH WITH 2 1/2" GUNS. PERF THE REST OF STAGE #1 FROM 16,530' TO 16,693'. 4,000 PSI WHEN GUNS WERE FIRED AND 4,000 PSI WITH GUNS ON THE SURFACE.	
10/7/2008	09:00 - 06:00	21.00	WOT	4	HES HAD EQUIPMENT PROBLEMS. SD UNTIL MORNING TO REPAIR.	
	06:00 - 06:45	0.75	STIM	3	FRAC STAGE #1 WITH 1,427 BBL 35# HYBOR-G CARRYING 73,101 LBS# 30/60 SINTERLITE SAND. AVG RATE= 41.4 BPM. AVG PSI= 10,492.	
	06:45 - 10:00	3.25	PERF	2	PERF STG #2 WITH 2- 4', 2- 2' & 2- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 16,440' WITH 7,000 PSI. SHOOT 42 HOLES FROM 15,797' TO 16,408'.	
	10:00 - 11:45	1.75	STIM	3	FRAC STAGE #2 WITH 2,859 BBL Slickwater CARRYING 50,171 LBS# 30/60 SINTERLITE SAND. AVG RATE= 37.6 BPM. AVG PSI= 10,858.	
	11:45 - 14:00	2.25	PERF	2	PERF STG #3 WITH 1- 3', 5- 2' & 1- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 15,730' WITH 8,300 PSI. SHOOT 42 HOLES FROM 15,000' TO 15,701'.	
	14:00 - 15:50	1.83	STIM	3	FRAC STAGE #3 WITH 2,442 BBL Slickwater CARRYING 39,895 LBS# 30/60 SINTERLITE SAND. AVG RATE= 39.0 BPM. AVG PSI= 10,630.	
	15:50 - 18:30	2.67	PERF	2	PERF STG #4 WITH 2- 4' & 3- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 14,884' WITH 8,100 PSI. SHOOT 42 HOLES FROM 14,352' TO 14,859'.	
	18:30 - 06:00	11.50	WOT	4	SDFN	
	10/8/2008	06:00 - 07:45	1.75	STIM	3	FRAC STAGE #4 WITH 2,771 BBL Slickwater CARRYING 39,027 LBS# 30/60 SINTERLITE SAND. AVG RATE= 33.2 BPM. AVG PSI= 10,991.
	07:45 - 09:50	2.08	PERF	2	PERF STG #5 WITH 2- 4' & 3- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 14,170' WITH 7,000 PSI. SHOOT 42 HOLES FROM 13,854' TO 14,145'.	
09:50 - 11:15	1.42	STIM	3	FRAC STAGE #5 WITH 2,516 BBL Slickwater CARRYING 40,932 LBS# 30/60 SINTERLITE SAND. AVG RATE= 41.1 BPM. AVG PSI= 9,018.		
11:15 - 13:15	2.00	PERF	2	PERF STG #6 WITH 2- 4' & 3- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 13,555' WITH 7,000 PSI. SHOOT 42 HOLES FROM 12,983' TO 13,535'.		

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12/2/2008 7:11:09 AM

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DIV. OF OIL, GAS & MINING

### Operations Summary Report

Well Name: WV 4BD-23-8-21  
 Location: 23- 8-S 21-E 26  
 Rig Name:

Spud Date: 6/28/2008  
 Rig Release:  
 Rig Number:

Date	From - To	Hours	Code	Sub Code	Description of Operations
10/8/2008	13:15 - 14:30	1.25	STIM	3	FRAC STAGE #6 WITH 2,478 BBLs SLICKWATER CARRYING 41,300 LBS# 30/60 SINTERLITE SAND. AVG RATE= 42.3 BPM. AVG PSI= 9,088.
	14:30 - 16:30	2.00	PERF	2	PERF STG #7 WITH 1- 4' & 5- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 12,880' WITH 7,100 PSI. SHOOT 42 HOLES FROM 12,406' TO 12,848'.
	16:30 - 17:30	1.00	STIM	3	FRAC STAGE #7 WITH 2,427 BBLs SLICKWATER CARRYING 43,172 LBS# 30/60 SINTERLITE SAND. AVG RATE= 45.6 BPM. AVG PSI= 8,507.
	17:30 - 19:00	1.50	PERF	2	PERF STG #8 WITH 1- 4' & 5- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 12,315' WITH 5,600 PSI. SHOOT 42 HOLES FROM 11,907' TO 12,283'.
	19:00 - 20:45	1.75	STIM	3	FRAC STAGE #8 WITH 2,506 BBLs SLICKWATER CARRYING 53,997 LBS# 30/60 SINTERLITE SAND. AVG RATE= 45.0 BPM. AVG PSI= 6,762.
10/9/2008	20:45 - 06:00	9.25	WOT	4	SDFN
	06:00 - 07:30	1.50	PERF	2	PERF STG #9 WITH 9- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 10,790' WITH 4,800 PSI. SHOOT 27 HOLES FROM 10,602' TO 10,766'.
	07:30 - 08:45	1.25	STIM	3	FRAC STAGE #9 WITH 2,923 BBLs SLICKWATER CARRYING 70,592 LBS# 30/50 SB EXCEL SAND. AVG RATE= 49.8 BPM. AVG PSI= 7,452.
	08:45 - 10:10	1.42	PERF	2	PERF STG #10 WITH 8- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 10,547' WITH 3,800 PSI. SHOOT 24 HOLES FROM 10,296' TO 10,520'.
	10:10 - 11:30	1.33	STIM	3	FRAC STAGE #10 WITH 2,925 BBLs SLICKWATER CARRYING 69,860 LBS# 30/50 SB EXCEL SAND. AVG RATE= 48.7 BPM. AVG PSI= 7,198.
	11:30 - 14:00	2.50	PERF	2	PERF STG #11 WITH 9- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 9,340' WITH 3,300 PSI. SHOOT 27 HOLES FROM 9,006' TO 9,315'.
	14:00 - 15:15	1.25	STIM	3	FRAC STAGE #11 WITH 2,924 BBLs SLICKWATER CARRYING 70,181 LBS# 30/50 SB EXCEL SAND. AVG RATE= 51.1 BPM. AVG PSI= 6,531.
	15:15 - 16:40	1.42	PERF	2	PERF STG #12 WITH 8- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 8,095' WITH 2,500 PSI. SHOOT 24 HOLES FROM 7,581' TO 8,061'.
	16:40 - 17:10	0.50	STIM	3	FRAC STAGE #12 WITH 781 BBLs X-LINK GEL CARRYING 52,278 LBS# 30/50 SB EXCEL SAND. AVG RATE= 46.7 BPM. AVG PSI= 7,304.
	10/10/2008	17:10 - 06:00	12.83	WOT	4
06:00 - 20:00		14.00	LOC	4	MIRU IPS CTU, GCDOE AND SPIRIT FLUIDS. LOAD CT WITH 60° WATER. MU QES 2 7/8" MOTOR/JARS AND 3.55" 5-BLADE JUNK MILL. TEST STACK TO 8,000 PSI. RIH AND DRILL OUT 11 PLUGS IN 6 HOURS TO PBDT DEPTH OF 16,746'. PUMP FINAL SWEEP AND POOH. RDMO IPS CTU, GCDOE & SPIRIT FLUIDS.
10/11/2008	20:00 - 06:00	10.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
10/12/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
10/13/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
10/14/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
10/15/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
10/16/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH PRODUCTION EQUIPMENT.

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State of Utah  
Division of Oil, Gas and Mining

OPERATOR: Questar Exploration & Production Co.  
ADDRESS: 11002 East 17500 South  
Vernal, Utah 84078 (435)781-4342

OPERATOR ACCT. No. N-5085

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
C	16958	17123	43-047-39041	WV 4BD 23 8 21	NWNW	23	8S	21	Uintah	6/28/08	10/10/08

WELL 1 COMMENTS: WMMFD

**CONFIDENTIAL** 12/30/08

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)

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

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

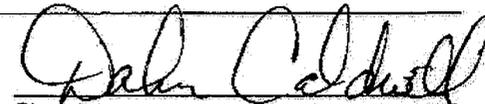
(3/89)

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DIV. OF OIL, GAS & MINING

**CONFIDENTIAL**

  
Signature

Office Administrator II      12/16/08  
Title      Date

Phone No. (435)781-4342

ENTITY ACTION FORM

Operator Questar Exploration and Production Co. Operator Account Number: N 5085  
 Address: 11002 E. 17500 S.  
 City Vernal  
 State UT Zip 84078 Phone Number: (435) 781-~~4300~~ 4342

Well 1

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304739041	WV 4BD-23-8-21	NWNW	23	080S	210E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
D	16958	17123			11/1/2007	
Comments:	WMMFD --- 1/29/2009					

Well 2

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304739044	WV 7BD-23-8-21	SWNE	23	080S	210E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
D	16812	17123			11/1/2007	
Comments:	WMMFD --- 1/29/2009					

Well 3

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304738049	WV 11AD-14-8-21	NWSE	14	080S	210E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date	
D	14864	17123			11/1/2007	
Comments:	WMMFD --- 1/29/2009					

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JAN 26 2009

Name (Please Print)

Signature

Title

Date

ACTION CODES:

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

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*DAHN CALDWELL*  
 Name (Please Print)  
*Dahn Caldwell*  
 Signature  
 Office Admin 1/20/09  
 Title Date

CONFIDENTIAL

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**CONFIDENTIAL**

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

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

5. Lease Serial No. **UTU-0809**  
6. If Indian, Allottee or Tribe Name **UTE TRIBE**

**SUBMIT IN TRIPLICATE** – Other instructions on page 2.

1. Type of Well  
 Oil Well     Gas Well     Other

2. Name of Operator **QUESTAR EXPLORATION & PRODUCTION CO.**    CONTACT: **Mike Stahl**

3a. Address **11002 EAST 17500 SOUTH, VERNAL, UTAH 84078**    3b. Phone No. (include area code) **(303) 308-3613**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**189' FNL 101' FWL, NWNW, SECTION 23, T8S, R21E**

7. If Unit of CA/Agreement, Name and/or No. **WONSITS VALLEY UNIT**

8. Well Name and No. **WV 4BD-23-8-21**

9. API Well No. **43-047-39041**

10. Field and Pool or Exploratory Area **WONSITS VALLEY**

11. Country or Parish, State **UINTAH, UTAH**

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

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

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

In Compliance with the Administrative Utah code for drilling and operating practice R649-3-22, completion into two or more pools. Questar Exploration & Production Company hereby requests the commingling of production between intervals in the WV 4BD-23-8-21. Questar considers this commingling to be in the public interest in that it promotes maximum ultimate economic recovery, prevents waste, provides for orderly and efficient production of oil and gas and presents no detrimental effects from commingling the gas streams.

Questar requests approval for the commingling of production of the Dakota <sup>through</sup> and Wasatch intervals. Based upon offset production logs, the proposed initial allocation is as follows: Dakota - 10% ; Mancos - 40% ; Mesa Verde - 40% ; Wasatch - 10%.

On an annual basis the gas will be sampled and a determination will be made of the BTU content and gas constituents. These annual samples can be used to determine if the gas allocation is changing over time. If these samples do not indicate that any adjustments in allocation are necessary they may be discontinued after the fifth anniversary of the initial production.

**COPY SENT TO OPERATOR**

Date: 5.4.2009

Initials: KS

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) **Laura Bills**    Title **Associate Regulatory Affairs Analyst**

Signature *Laura Bills*    Date **03/23/2009**

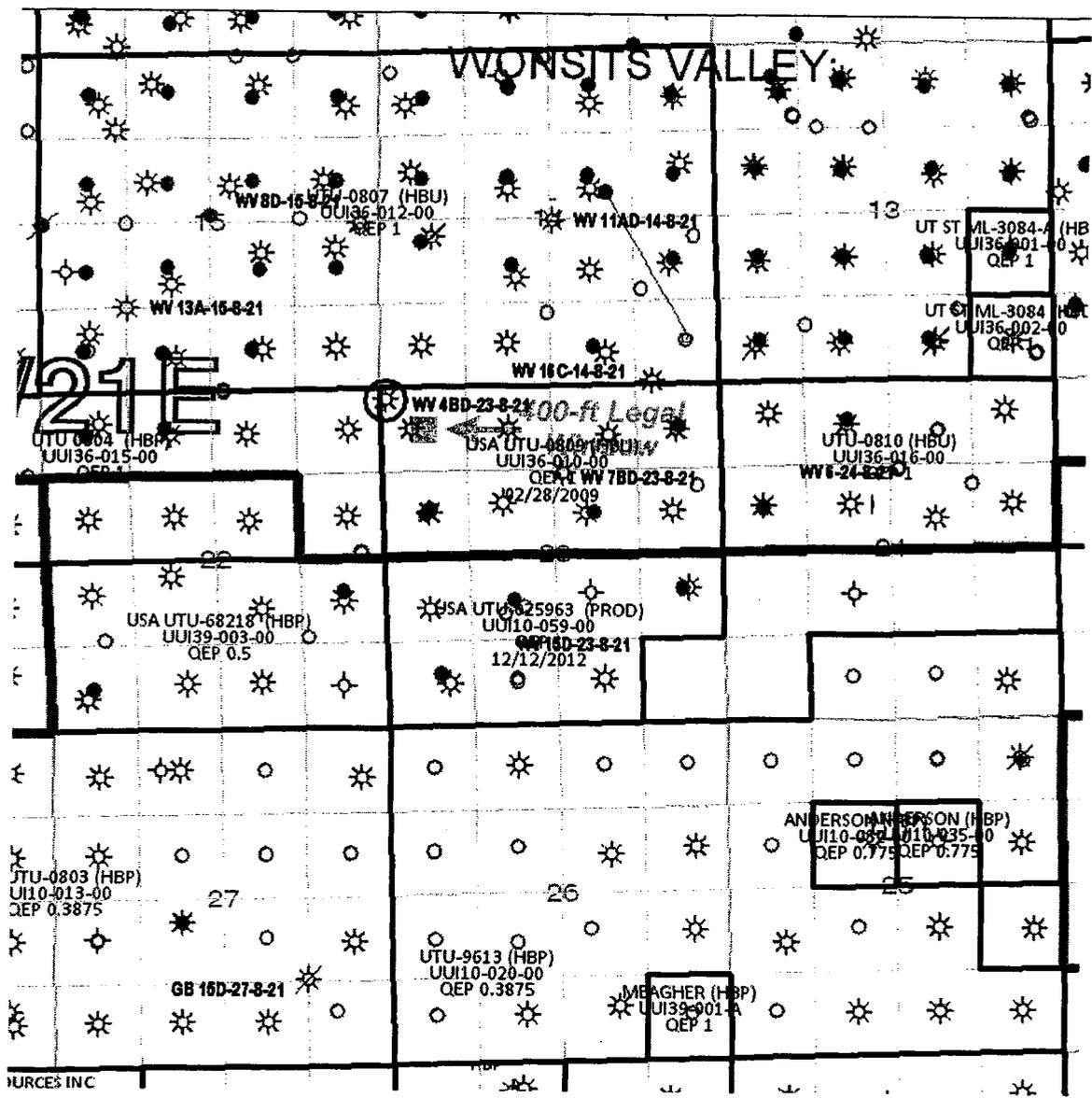
**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by *[Signature]*    Title **Pet. Eng.**    Date **4/23/09**

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.    Office **DOG**    Federal Approval Of This Action Is Necessary

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

**RECEIVED**  
**MAR 25 2009**



T8S-R21E

**Tw/Kmv**  
**COMMINGLED PRODUCTION**  
 Uinta Basin—Uintah County, Utah

---

**Well: WV 4BD-23-8-21**  
**Lease: UTU 0809**

---

**QUESTAR**  
 Exploration and Production

<b>Geologist:</b>	
<b>Landman:</b> Nate Koeniger/Chad Matney/Birgit Roesink	
<b>Date:</b> February 17, 2009	

1050 17th St., # 500 Denver, CO 80205

○ Commingled well

AFFIDAVIT OF NOTICE

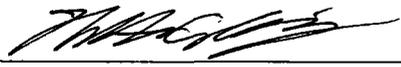
STATE OF COLORADO )  
 ) ss:  
COUNTY OF DENVER )

Nathan C. Koeniger, being duly sworn, deposes and says:

- 1. That I am employed by Questar Exploration and Production Company in the capacity as a Landman. My business address is:

Independence Plaza  
1050 17<sup>th</sup> Street, Suite 500  
Denver, CO 80265

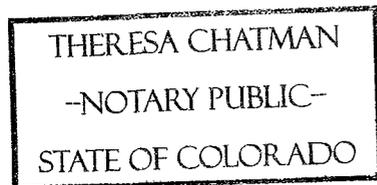
- 2. In my capacity as a Landman, pursuant to the provisions of Utah Administrative Rule 649-3-22, I have provided a copy of Questar Exploration and Production Company's application for completion of the WV 4BD-23-8-21 well into two or more pools, in the form of Utah Division of Oil, Gas and Mining's Form 9 Sundry Notice, to owners of all contiguous oil and gas leases or drilling units overlying the pools which are the subject of that application.
- 3. In my capacity as a Landman, I am authorized to provide such notice of Questar Exploration and Production Company's application to contiguous owners and to make this affidavit on this 17<sup>th</sup> day of March 2009.

  
Printed Name: Nathan C. Koeniger

The foregoing instrument was sworn to and subscribed before me this 17<sup>th</sup> day of March 2009, by Nathan C. Koeniger.

  
Notary Public

MY COMMISSION EXPIRES: 7/7/11



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

ROUTING  
 CDW

Change of Operator (Well Sold)

**X - Operator Name Change**

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

**6/14/2010**

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

CA No.

Unit:

WONSITS VALLEY

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

5. LEASE DESIGNATION AND SERIAL NUMBER: See attached
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: See attached
7. UNIT or CA AGREEMENT NAME: See attached
8. WELL NAME and NUMBER: See attached
9. API NUMBER: Attached
10. FIELD AND POOL, OR WILDCAT: See attached

**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 _____
2. NAME OF OPERATOR: Questar Exploration and Production Company <i>N5085</i>
3. ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 Denver, CO 80265
PHONE NUMBER: (303) 672-6900

4. LOCATION OF WELL: FOOTAGES AT SURFACE: See attached	COUNTY: Attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:	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~~  
 Fee Land Bond Number: ~~965003033~~ *965010695*  
 BIA Bond Number: ~~799446~~ *965010693*

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

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

(This space for State use only)

**RECEIVED**  
**JUN 28 2010**  
DIV. OF OIL, GAS & MINING

(See Instructions on Reverse Side)

**APPROVED** 6/13/2010  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)

WONSITS VALLEY

effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
WV 43	11	080S	210E	4304715471	5265	Federal	OW	P	
WV 48	10	080S	210E	4304715476	5265	Federal	OW	P	
WV 53	10	080S	210E	4304720003	5265	Federal	OW	P	
WV 55	14	080S	210E	4304720005	5265	Federal	OW	P	
WV 62	10	080S	210E	4304720024	5265	Federal	OW	P	
WV 65	15	080S	210E	4304720041	5265	Federal	OW	P	
WV 83 WG	23	080S	210E	4304720205	17123	Federal	GW	P	
WV 103	14	080S	210E	4304730021	5265	Federal	OW	P	
WV 104	15	080S	210E	4304730022	5265	Federal	OW	P	
WV 105	10	080S	210E	4304730023	5265	Federal	OW	P	
WV 109	15	080S	210E	4304730045	5265	Federal	OW	P	
WV 110	14	080S	210E	4304730046	5265	Federal	OW	P	
WV 112	15	080S	210E	4304730048	5265	Federal	OW	P	
WV 124	15	080S	210E	4304730745	5265	Federal	OW	P	
WV 128	10	080S	210E	4304730798	5265	Federal	OW	P	
WV 132	15	080S	210E	4304730822	5265	Federal	OW	P	
WV 136	21	080S	210E	4304731047	5265	Federal	OW	S	
WV 137	11	080S	210E	4304731523	5265	Federal	OW	P	
WV 133	15	080S	210E	4304731706	5265	Federal	OW	P	
WV 144	10	080S	210E	4304731807	5265	Federal	OW	P	
WV 145	18	080S	220E	4304731820	17123	Federal	GW	P	
WV 121	14	080S	210E	4304731873	5265	Federal	OW	TA	
WV 135-2	21	080S	210E	4304732016	5265	Federal	OW	P	
WV 130	22	080S	210E	4304732307	5265	Federal	OW	P	
WV 119	21	080S	210E	4304732461	5265	Federal	OW	P	
WV 54 WG	07	080S	220E	4304732821	17123	Federal	GW	P	
WV 69 WG	18	080S	220E	4304732829	17123	Federal	GW	P	
WV 38 WG	08	080S	220E	4304732831	17123	Federal	GW	P	
WV 49 WG	08	080S	220E	4304732832	17123	Federal	GW	P	
WV 138 WG	18	080S	220E	4304733054	17123	Federal	GW	P	
WV 14 WG	12	080S	210E	4304733070	17123	Federal	GW	P	
WV 11 WG	12	080S	210E	4304733085	17123	Federal	GW	P	
WV 81 WG	24	080S	210E	4304733086	17123	Federal	GW	S	
WV 146 WG	19	080S	220E	4304733128	17123	Federal	GW	P	
WV 1W-14-8- 21	14	080S	210E	4304733220	17123	Federal	GW	P	
WV 5W-13- 8-21	13	080S	210E	4304733221	17123	Federal	GW	P	
WV 46 WG	07	080S	220E	4304733241	17123	Federal	GW	P	
WV 9W-14-8-21	14	080S	210E	4304733269	17123	Federal	GW	P	
WV 7W-13-8-21	13	080S	210E	4304733270	17123	Federal	GW	P	
WV 1W-18-8-22	18	080S	220E	4304733294	17123	Federal	GW	P	
WV 11W-8-8-22	08	080S	220E	4304733295	17123	Federal	GW	P	
WV 3W-8-8-22	08	080S	220E	4304733493	17123	Federal	GW	S	
WV 5W-7-8-22	07	080S	220E	4304733494	17123	Federal	GW	S	
WV 11W-7-8-22	07	080S	220E	4304733495	17123	Federal	GW	P	
WV 13W-7-8-22	07	080S	220E	4304733496	17123	Federal	GW	P	
WV 1W-7-8-22	07	080S	220E	4304733501	17123	Federal	GW	P	
WV 3W-7-8-22	07	080S	220E	4304733502	17123	Federal	GW	P	
WV 7WRG-7-8-22	07	080S	220E	4304733503	5265	Federal	OW	P	
WV 16W-9-8-21	09	080S	210E	4304733529	17123	Federal	GW	P	

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

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

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
WV 1W-12-8-21	12	080S	210E	4304733531	17123	Federal	GW	S	
WV 1W-13-8-21	13	080S	210E	4304733532	17123	Federal	GW	S	
WV 3W-18-8-22	18	080S	220E	4304733533	17123	Federal	GW	P	
WV 9W-12-8-21	12	080S	210E	4304733534	17123	Federal	GW	P	
WV 11W-12-8-21	12	080S	210E	4304733535	17123	Federal	GW	P	
WV 11W-13-8-21	13	080S	210E	4304733536	17123	Federal	GW	P	
WV 13W-12-8-21	12	080S	210E	4304733537	17123	Federal	GW	S	
WV 13W-18-8-22	18	080S	220E	4304733538	17123	Federal	GW	P	
WV 16G-9-8-21	09	080S	210E	4304733565	5265	Federal	OW	P	
WV 1W-21-8-21	21	080S	210E	4304733602	17123	Federal	GW	P	
WV 3W-13-8-21	13	080S	210E	4304733603	17123	Federal	GW	S	
WV 3W-22-8-21	22	080S	210E	4304733604	17123	Federal	GW	P	
WV 3W-24-8-21	24	080S	210E	4304733605	17123	Federal	GW	P	
WV 13W-14-8-21	14	080S	210E	4304733607	17123	Federal	GW	P	
WV 1W-24-8-21	24	080S	210E	4304733613	17123	Federal	GW	P	
WV 11W-18-8-22	18	080S	220E	4304733626	17123	Federal	GW	P	
WV 2W-10-8-21	10	080S	210E	4304733655	17123	Federal	GW	P	
WV 4W-11-8-21	11	080S	210E	4304733657	17123	Federal	GW	P	
WV 12W-10-8-21	10	080S	210E	4304733659	17123	Federal	GW	S	
WV 12G-10-8-21	10	080S	210E	4304733660	5265	Federal	OW	P	
WV 15W-9-8-21	09	080S	210E	4304733661	17123	Federal	GW	P	
WV 15G-9-8-21	09	080S	210E	4304733662	5265	Federal	OW	P	
WV 2W-13-8-21	13	080S	210E	4304733791	17123	Federal	GW	P	
WV 6W-13-8-21	13	080S	210E	4304733792	17123	Federal	GW	P	
WV 8W-13-8-21	13	080S	210E	4304733793	17123	Federal	GW	P	
WV 10W-1-8-21	01	080S	210E	4304733794	17123	Federal	GW	TA	
WV 10W-13-8-21	13	080S	210E	4304733795	17123	Federal	GW	P	
WV 12W-7-8-22	07	080S	220E	4304733808	17123	Federal	GW	P	
WV 6W-8-8-22	08	080S	220E	4304733811	17123	Federal	GW	P	
WV 7W-8-8-22	08	080S	220E	4304733812	17123	Federal	GW	P	
WV 10W-7-8-22	07	080S	220E	4304733813	17123	Federal	GW	P	
WV 12W-8-8-22	08	080S	220E	4304733815	17123	Federal	GW	P	
WV 14W-7-8-22	07	080S	220E	4304733816	17123	Federal	GW	P	
WV 16W-7-8-22	07	080S	220E	4304733817	17123	Federal	GW	P	
WV 6W-7-8-22	07	080S	220E	4304733828	17123	Federal	GW	P	
WV 6W-18-8-22	18	080S	220E	4304733842	17123	Federal	GW	P	
WV 6WC-18-8-22	18	080S	220E	4304733843	17123	Federal	GW	P	
WV 6WD-18-8-22	18	080S	220E	4304733844	17123	Federal	GW	P	
WV 5W-23-8-21	23	080S	210E	4304733860	17123	Federal	GW	P	
WV 7W-23-8-21	23	080S	210E	4304733861	17123	Federal	GW	P	
WV 8W-12-8-21	12	080S	210E	4304733862	17123	Federal	GW	P	
WV 10W-12-8-21	12	080S	210E	4304733863	17123	Federal	GW	P	
WV 14W-12-8-21	12	080S	210E	4304733864	17123	Federal	GW	P	
WV 16W-12-8-21	12	080S	210E	4304733865	17123	Federal	GW	P	
WV 1W-15-8-21	15	080S	210E	4304733902	17123	Federal	GW	S	
WV 1W-22-8-21	22	080S	210E	4304733903	17123	Federal	GW	S	
WV 1W-23-8-21	23	080S	210E	4304733904	17123	Federal	GW	P	
WV 6W-11-8-21	11	080S	210E	4304733906	17123	Federal	GW	P	
WV 7W-24-8-21	24	080S	210E	4304733908	17123	Federal	GW	P	

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

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

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
WV 10W-11-8-21	11	080S	210E	4304733910	17123	Federal	GW	P	
WV 11W-15-8-21	15	080S	210E	4304733911	17123	Federal	GW	P	
WV 13W-11-8-21	11	080S	210E	4304733913	17123	Federal	GW	S	
WV 13W-15-8-21	15	080S	210E	4304733914	17123	Federal	GW	P	
WV 15W-10-8-21	10	080S	210E	4304733916	17123	Federal	GW	P	
WV 15W-15-8-21	15	080S	210E	4304733917	17123	Federal	GW	P	
WV 5W-14-8-21	14	080S	210E	4304733953	17123	Federal	GW	P	
WV 7W-14-8-21	14	080S	210E	4304733955	17123	Federal	GW	P	
WV 8W-11-8-21	11	080S	210E	4304733957	17123	Federal	GW	S	
WV 8W-14-8-21	14	080S	210E	4304733958	17123	Federal	GW	P	
WV 9W-15-8-21	15	080S	210E	4304733959	17123	Federal	GW	P	
WV 12W-13-8-21	13	080S	210E	4304733961	17123	Federal	GW	P	
WV 14W-13-8-21	13	080S	210E	4304733962	17123	Federal	GW	P	
WV 15W-14-8-21	14	080S	210E	4304733963	17123	Federal	GW	P	
WV 2W-18-8-22	18	080S	220E	4304733986	17123	Federal	GW	P	
WV 8W-18-8-22	18	080S	220E	4304733989	17123	Federal	GW	P	
WV 10W-18-8-22	18	080S	220E	4304733991	17123	Federal	GW	P	
WV 12W-18-8-22	18	080S	220E	4304733993	17123	Federal	GW	S	
WV 14W-18-8-22	18	080S	220E	4304733995	17123	Federal	GW	P	
WV 8W-1-8-21	01	080S	210E	4304734009	17123	Federal	GW	OPS	C
WV 4W-17-8-22	17	080S	220E	4304734038	17123	Federal	GW	P	
WV 12G-1-8-21	01	080S	210E	4304734108	5265	Federal	OW	TA	
WV 2W-14-8-21	14	080S	210E	4304734140	17123	Federal	GW	P	
GH 2W-21-8-21	21	080S	210E	4304734141	17123	Federal	GW	P	
WV 2W-23-8-21	23	080S	210E	4304734142	17123	Federal	GW	P	
WV 3W-21-8-21	21	080S	210E	4304734143	17123	Federal	GW	P	
WV 4W-13-8-21	13	080S	210E	4304734144	17123	Federal	GW	P	
WV 4W-21-8-21	21	080S	210E	4304734145	17123	Federal	GW	P	
WV 4W-22-8-21	22	080S	210E	4304734146	17123	Federal	GW	P	
WV 16W-11-8-21	11	080S	210E	4304734155	5265	Federal	GW	P	
WV 3W-19-8-22	19	080S	220E	4304734187	17123	Federal	GW	P	
WV 4W-23-8-21	23	080S	210E	4304734188	17123	Federal	GW	P	
WV 6W-23-8-21	23	080S	210E	4304734189	17123	Federal	GW	S	
WV 2W-15-8-21	15	080S	210E	4304734242	17123	Federal	GW	P	
WV 2W-22-8-21	22	080S	210E	4304734243	17123	Federal	GW	P	
WV 4W-14-8-21	14	080S	210E	4304734244	17123	Federal	GW	S	
WV 6W-12-8-21	12	080S	210E	4304734245	5265	Federal	GW	TA	
WV 7W-15-8-21	15	080S	210E	4304734246	17123	Federal	GW	P	
WV 8W-15-8-21	15	080S	210E	4304734247	17123	Federal	GW	P	
WV 12W-12-8-21	12	080S	210E	4304734248	17123	Federal	GW	TA	
WV 14W-15-8-21	15	080S	210E	4304734249	17123	Federal	GW	P	
WV 16W-10-8-21	10	080S	210E	4304734250	17123	Federal	GW	P	
WV 16W-15-8-21	15	080S	210E	4304734251	17123	Federal	GW	P	
WV 3W-12-8-21	12	080S	210E	4304734267	17123	Federal	GW	OPS	C
WV 4D-12-8-21	12	080S	210E	4304734268	17123	Federal	GW	OPS	C
WV 6W-14-8-21	14	080S	210E	4304734271	17123	Federal	GW	S	
WV 9W-11-8-21	11	080S	210E	4304734274	17123	Federal	GW	OPS	C
WV 10W-14-8-21	14	080S	210E	4304734275	17123	Federal	GW	P	
WV 11W-14-8-21	14	080S	210E	4304734277	17123	Federal	GW	P	

Bonds: BLM = ESB000024  
BIA = 956010693  
State = 965010695

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

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
WV 12W-14-8-21	14	080S	210E	4304734279	17123	Federal	GW	TA	
WV 14M-11-8-21	11	080S	210E	4304734280	17123	Federal	GW	P	
WV 14W-14-8-21	14	080S	210E	4304734281	17123	Federal	GW	S	
WV 16G-14-8-21	14	080S	210E	4304734283	5265	Federal	OW	P	
WV 3MU-15-8-21	15	080S	210E	4304734289	17123	Federal	GW	P	
WV 4MU-15-8-21	15	080S	210E	4304734291	17123	Federal	GW	P	
WV 5MU-15-8-21	15	080S	210E	4304734293	17123	Federal	GW	P	
WV 6W-15-8-21	15	080S	210E	4304734294	17123	Federal	GW	P	
WV 10W-15-8-21	15	080S	210E	4304734295	17123	Federal	GW	P	
WV 4W-24-8-21	24	080S	210E	4304734330	17123	Federal	GW	P	
WV 8M-23-8-21	23	080S	210E	4304734339	17123	Federal	GW	P	
WV 8W-24-8-21	24	080S	210E	4304734340	17123	Federal	GW	P	
WV 2W-8-8-22	08	080S	220E	4304734468	17123	Federal	GW	P	
WV 8W-7-8-22	07	080S	220E	4304734469	17123	Federal	GW	S	
WV 8W-22-8-21	22	080S	210E	4304734564	17123	Federal	GW	P	
WV 14MU-10-8-21	10	080S	210E	4304735879	17123	Federal	GW	P	
WV 13MU-10-8-21	10	080S	210E	4304736305	17123	Federal	GW	P	
WV 3D-13-8-21	13	080S	210E	4304737923	17123	Federal	GW	OPS	C
WV 14DML-12-8-21	12	080S	210E	4304737924	17123	Federal	GW	P	
WV 15AML-12-8-21	12	080S	210E	4304737925	17123	Federal	GW	OPS	C
WV 13DML-10-8-21	10	080S	210E	4304737926	17123	Federal	GW	P	
WV 4DML-15-8-21	15	080S	210E	4304737927	17123	Federal	GW	P	
WV 11AD-14-8-21	14	080S	210E	4304738049	17123	Federal	GW	P	
WV 6-24-8-21	24	080S	210E	4304738663	17123	Federal	GW	P	
WV 2ML-24-8-21	24	080S	210E	4304738664		Federal	GW	APD	C
WV 16C-14-8-21	14	080S	210E	4304738737	17123	Federal	GW	P	
WV 7BML-24-8-21	24	080S	210E	4304738970		Federal	GW	APD	C
WV 7AML-12-8-21	12	080S	210E	4304739035		Federal	GW	APD	C
WV 14BML-12-8-21	12	080S	210E	4304739036		Federal	GW	APD	C
WV 14B-13-8-21	13	080S	210E	4304739037		Federal	GW	APD	C
WV 4B-14-8-21	14	080S	210E	4304739038		Federal	GW	APD	C
WV 13A-15-8-21	15	080S	210E	4304739039	17123	Federal	GW	P	
WV 8D-15-8-21	15	080S	210E	4304739040	17123	Federal	GW	P	
WV 4BD-23-8-21	23	080S	210E	4304739041	17123	Federal	GW	P	
WV 7CML-11-8-21	11	080S	210E	4304739042		Federal	GW	APD	C
WV 7BD-23-8-21	23	080S	210E	4304739044	17123	Federal	GW	P	
WV 2CML-7-8-22	07	080S	220E	4304739155		Federal	GW	APD	C
WV 13AD-8-8-22R(RIGSKID)	08	080S	220E	4304739321	17123	Federal	GW	P	
WV 2B-22-8-21	22	080S	210E	4304740262		Federal	GW	APD	C
WV 8D-22-8-21	22	080S	210E	4304740263		Federal	GW	APD	C
WV 7A-24-8-21	24	080S	210E	4304740331		Federal	GW	APD	C



# 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 Bankert*

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

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