

**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. GLH
2. CDW
3. FILE

**005**

Change of Operator (Well Sold)

Designation of Agent/Operator

**X Operator Name Change**

Merger

The operator of the well(s) listed below has changed, effective:		<b>2/1/2003</b>
<b>FROM: (Old Operator):</b>	<b>TO: ( New Operator):</b>	
N4235-Shenandoah Energy Inc 11002 E 17500 S Vernal, UT 84078-8526 Phone: (435) 781-4341	N2460-QEP Uinta Basin Inc 11002 E 17500 S Vernal, UT 84078-8526 Phone: (435) 781-4341	

**CA No. Unit:**

<b>WELL(S)</b>									
NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	Confid
RED WASH U 34-27C	27	070S	240E	4304735045		Federal	GW	APD	C
WV EXT 1W-17-8-21	17	080S	210E	4304734927		Federal	GW	APD	C
WV EXT 8W-17-8-21	17	080S	210E	4304734929	13792	Federal	GW	DRL	C
N DUCK CREEK 9M-22-8-21	22	080S	210E	4304734901		Federal	GW	APD	C
N DUCK CREEK 11M-22-8-21	22	080S	210E	4304734902		Federal	GW	APD	C
NDC 10W-25-8-21	25	080S	210E	4304734923		Federal	GW	APD	C
N DUCK CREEK 3M-27-8-21	27	080S	210E	4304734900		Federal	GW	APD	C
NDC 11M-27-8-21	27	080S	210E	4304734952	13809	Federal	GW	DRL	C
NDC 9M-27-8-21	27	080S	210E	4304734956		Federal	GW	APD	C
NDC 1M-27-8-21	27	080S	210E	4304734957		Federal	GW	APD	C
NDC 15M-28-8-21	28	080S	210E	4304734958		Federal	GW	APD	C
GB 7W-36-8-21	36	080S	210E	4304734893		State	GW	APD	
GB 3W-36-8-21	36	080S	210E	4304734894	13791	State	GW	DRL	
GB 5W-36-8-21	36	080S	210E	4304734925	13808	State	GW	DRL	
GB 4W-36-8-21	36	080S	210E	4304734926		State	GW	APD	
WRU EIH 9W-26-8-22	26	080S	220E	4304735047		Federal	GW	APD	C
NC 8M-32-8-22	32	080S	220E	4304734897		State	GW	APD	
NC 3M-32-8-22	32	080S	220E	4304734899		State	GW	APD	
NC 11M-32-8-22	32	080S	220E	4304735040		State	GW	NEW	
WRU EIH 10W-35-8-22	35	080S	220E	4304735046	13544	Federal	GW	DRL	C

**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: 6/2/2003
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/2/2003
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/19/2003
- Is the new operator registered in the State of Utah: YES Business Number: 5292864-0151
- If NO, the operator was contacted on: \_\_\_\_\_

6. (R649-9-2)Waste Management Plan has been received on: IN PLACE

7. **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: 7/21/2003

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 7/21/2003

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 9/11/2003
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/11/2003
3. Bond information entered in RBDMS on: n/a
4. Fee wells attached to bond in RBDMS on: n/a

**STATE WELL(S) BOND VERIFICATION:**

1. State well(s) covered by Bond Number: 965-003-032

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: ESB000024

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: 799446

**FEE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 965-003-033
2. The **FORMER** operator has requested a release of liability from their bond on: n/a  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** 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:**

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## SEI (N4235) to QEP (N2460)

well name	Sec	T	R	api DOGM	Entity	type	stat	
WV 14W-4-8-21	04	080S	210E	4304734040		Federal	GW	APD C
WV 16W-4-8-21	04	080S	210E	4304734041		Federal	GW	APD C
WV 5W-36-7-21	36	070S	210E	4304734099	13807	State	GW	DRL C
WV 16W-31-7-22	31	070S	220E	4304734257		Federal	GW	APD C
RED WASH 16W-19-7-22	19	070S	220E	4304734258		Federal	GW	APD C
WV 9W-16-7-21	16	070S	210E	4304734324		State	GW	APD
GH 6W-20-8-21	20	080S	210E	4304734331		Federal	GW	APD C
WV 10W-23-8-21	23	080S	210E	4304734341	13766	Federal	GW	PA C
WV 11W-23-8-21	23	080S	210E	4304734342		Federal	GW	APD C
WV 13W-23-8-21	23	080S	210E	4304734344		Federal	GW	APD C
WV 14W-23-8-21	23	080S	210E	4304734345		Federal	GW	APD C
WV 15W-23-8-21	23	080S	210E	4304734346		Federal	GW	APD C
WV 7W-31-7-22	31	070S	220E	4304734379		Federal	GW	APD C
WV 9W-30-7-22	30	070S	220E	4304734381		Federal	GW	APD C
WV 10W-25-7-21	25	070S	210E	4304734382		Federal	GW	APD C
WV 10W-26-7-21	26	070S	210E	4304734383		Federal	GW	APD C
WV 14W-30-7-22	30	070S	220E	4304734384	13750	Federal	GW	DRL C
WV 15W-27-7-21	27	070S	210E	4304734385		Federal	GW	APD C
GH 8W-20-8-21	20	080S	210E	4304734393		Federal	GW	APD C
SU PURDY 3W-30-7-22	30	070S	220E	4304734394		Federal	GW	APD C
STIRRUP UNIT 10G-5-8-22	05	080S	220E	4304734396		Federal	OW	APD C
WV 10W-35-7-21	35	070S	210E	4304734397		Federal	GW	APD C
WV 16G-6-8-22	06	080S	220E	4304734404		Federal	OW	APD C
SU 4W-26-7-21	26	070S	210E	4304734408		Federal	GW	APD C
STIRRUP U 12W-6-8-22	06	080S	220E	4304734449		Federal	GW	APD C
STIRRUP U 10W-6-8-22	06	080S	220E	4304734451		Federal	GW	APD C
STIRRUP U 8W-5-8-22	05	080S	220E	4304734453		Federal	GW	APD C
STIRRUP U 6W-5-8-22	05	080S	220E	4304734454		Federal	GW	APD C
WV EXT 10W-17-8-21	17	080S	210E	4304734561	13744	Federal	GW	P C
STIRRUP U 7G-5-8-22	05	080S	220E	4304734609		Federal	OW	APD C
STIRRUP U 9G-5-8-22	05	080S	220E	4304734610		Federal	OW	APD C
STIRRUP U 9G-6-8-22	06	080S	220E	4304734611		Federal	OW	APD C
OU GB 10W-16-8-22	16	080S	220E	4304734616		State	GW	APD C
OU GB 14W-16-8-22	16	080S	220E	4304734619		State	GW	APD C
OU GB 16W-20-8-22	20	080S	220E	4304734633		Federal	GW	APD C
OU WIH 15W-21-8-22	21	080S	220E	4304734634		Federal	GW	APD C
OU GB 8W-17-8-22	17	080S	220E	4304734647		Federal	GW	APD C
OU GB 11W-15-8-22	15	080S	220E	4304734648	13822	Federal	GW	DRL C
OU GB 16W-16-8-22	16	080S	220E	4304734655	13815	State	GW	DRL C
OU GB 1W-16-8-22	16	080S	220E	4304734656		State	GW	APD C
OU GB 8W-16-8-22	16	080S	220E	4304734660	13769	State	GW	DRL C
OU GB 3W-15-8-22	15	080S	220E	4304734677		Federal	GW	APD C
OU GB 4W-21-8-22	21	080S	220E	4304734685	13772	Federal	GW	P C
OU WIH 2W-21-8-22	21	080S	220E	4304734687	13837	Federal	GW	PA C
OU GB 9W-16-8-22	16	080S	220E	4304734692		State	GW	APD C
OU WIH 1W-21-8-22	21	080S	220E	4304734693		Federal	GW	APD C
OU GB 7G-19-8-22	19	080S	220E	4304734694		Federal	OW	APD C
OU GB 5G-19-8-22	19	080S	220E	4304734695	13786	Federal	OW	P C
OU GB 8W-20-8-22	20	080S	220E	4304734706		Federal	GW	APD C
OU SG 14W-15-8-22	15	080S	220E	4304734710	13821	Federal	GW	DRL C
OU SG 15W-15-8-22	15	080S	220E	4304734711	13790	Federal	GW	DRL C
OU SG 16W-15-8-22	15	080S	220E	4304734712	13820	Federal	GW	DRL C
OU SG 4W-15-8-22	15	080S	220E	4304734713	13775	Federal	GW	DRL C
OU SG 12W-15-8-22	15	080S	220E	4304734714	13828	Federal	GW	DRL C
OU SG 5W-15-8-22	15	080S	220E	4304734715		Federal	GW	APD C
OU SG 6W-15-8-22	15	080S	220E	4304734716	13865	Federal	GW	PA C
OU SG 8W-15-8-22	15	080S	220E	4304734717	13819	Federal	GW	DRL C

## SEI (N4235) to QEP (N2460)

well name	Sec	T	R	api DOGM	Entity		type	stat	
OU SG 9W-15-8-22	15	080S	220E	4304734718	13773	Federal	GW	P	C
OU SG 1W-15-8-22	15	080S	220E	4304734720		Federal	GW	APD	C
OU SG 2W-15-8-22	15	080S	220E	4304734721		Federal	GW	APD	C
OU SG 7W-15-8-22	15	080S	220E	4304734722		Federal	GW	APD	C
GYP SUM HILLS 13HG-17-8-22	17	080S	210E	4304734723	13765	Federal	GW	DRL	C
OU GB 14SG-29-8-22	29	080S	220E	4304734743		Federal	GW	APD	C
OU GB 16SG-29-8-22	29	080S	220E	4304734744	13771	Federal	GW	DRL	C
OU GB 13W-10-8-22	10	080S	220E	4304734754	13774	Federal	GW	P	C
OU GB 6W-21-8-22	21	080S	220E	4304734755	13751	Federal	GW	P	C
OU SG 10W-10-8-22	10	080S	220E	4304734764		Federal	GW	DRL	C
OU SG 15W-10-8-22	10	080S	220E	4304734765	13849	Federal	GW	DRL	C
OU GB 14W-10-8-22	10	080S	220E	4304734768	13781	Federal	GW	P	C
OU SG 16W-10-8-22	10	080S	220E	4304734784	13777	Federal	GW	P	C
OU GB 15G-16-8-22	16	080S	220E	4304734829		State	OW	DRL	
BASER WASH 6W-7-7-22	07	070S	220E	4304734837		Federal	GW	APD	C
GB 5G-15-8-22	15	080S	220E	4304734876		Federal	OW	APD	C
GB 4G-21-8-22	21	080S	220E	4304734882		Federal	OW	APD	C
W IRON HORSE 2W-28-8-22	28	080S	220E	4304734883		Federal	GW	APD	C
OU GB 8WX-29-8-22	29	080S	220E	4304734884		Federal	GW	APD	C
GB 7W-36-8-21	36	080S	210E	4304734893		State	GW	APD	
GB 3W-36-8-21	36	080S	210E	4304734894	13791	State	GW	DRL	
NC 8M-32-8-22	32	080S	220E	4304734897		State	GW	APD	
NC 3M-32-8-22	32	080S	220E	4304734899		State	GW	APD	
N DUCK CREEK 3M-27-8-22	27	080S	210E	4304734900		Federal	GW	APD	C
N DUCK CREEK 9M-22-8-22	22	080S	210E	4304734901		Federal	GW	APD	C
N DUCK CREEK 11M-22-8-22	22	080S	210E	4304734902		Federal	GW	APD	C
NDC 10W-25-8-21	25	080S	210E	4304734923		Federal	GW	APD	C
GB 5W-36-8-21	36	080S	210E	4304734925	13808	State	GW	DRL	
GB 4W-36-8-21	36	080S	210E	4304734926		State	GW	APD	
WV EXT 1W-17-8-21	17	080S	210E	4304734927		Federal	GW	APD	C
WV EXT 8W-17-8-21	17	080S	210E	4304734929	13792	Federal	GW	DRL	C
NDC 11M-27-8-21	27	080S	210E	4304734952	13809	Federal	GW	DRL	C
NDC 9M-27-8-21	27	080S	210E	4304734956		Federal	GW	APD	C
NDC 1M-27-8-21	27	080S	210E	4304734957		Federal	GW	APD	C
NDC 15M-28-8-21	28	080S	210E	4304734958		Federal	GW	APD	C
NC 11M-32-8-22	32	080S	220E	4304735040		State	GW	NEW	
RED WASH U 34-27C	27	070S	240E	4304735045		Federal	GW	APD	C
WRU EIH 10W-35-8-22	35	080S	220E	4304735046	13544	Federal	GW	DRL	C
WRU EIH 9W-26-8-22	26	080S	220E	4304735047		Federal	GW	APD	C
WRU EIH 15W-26-8-22	26	080S	220E	4304735048		Federal	GW	APD	C
WRU EIH 1W-35-8-22	35	080S	220E	4304735049		Federal	GW	APD	C
WRU EIH 9W-35-8-22	35	080S	220E	4304735050		Federal	GW	APD	C
WRU EIH 7W-35-8-22	35	080S	220E	4304735051		Federal	GW	APD	C
WRU EIH 2W-35-8-22	35	080S	220E	4304735052		Federal	GW	APD	C

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

<b>APPLICATION FOR PERMIT TO DRILL</b>		5. MINERAL LEASE NO: <b>ML-3085</b>	6. SURFACE: <b>TRIBAL</b>
1A. TYPE OF WORK: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN		7. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>UTE TRIBE</b>	
B. TYPE OF WELL <input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS OTHER _____ <input checked="" type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE		8. UNIT OF CA AGREEMENT NAME: <b>N/A</b>	
2. NAME OF OPERATOR: <b>SHENANDOAH ENERGY, INC.</b>		9. WELL NAME and NUMBER: <b>NC 3M-32-8-22</b>	
3. ADDRESS OF OPERATOR: <b>11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078</b>		10. FIELD AND POOL, OR WILDCAT: <b>NATURAL BUTTES</b>	
PHONE NUMBER: <b>(435) 781-4341</b>		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NENW 32 8S 22E</b>	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>620' FNL, 1988' FWL</b> AT PROPOSED PRODUCING ZONE: <b>SAME</b>		12. COUNTY: <b>UINTAH</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>15+/- MILES EAST OF VERNAL, UTAH</b>		13. STATE: <b>UTAH</b>	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE(FEET) <b>620' +/-</b>	16. NUMBER OF ACRES IN LEASE: <b>600</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>2000' +/-</b>	19. PROPOSED DEPTH <b>12,060</b>	20. BOND DESCRIPTION: <b>159261960</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>4769' KB</b>	22. APPROXIMATE DATE WORK WILL START: <b>ASAP</b>	23. ESTIMATED DURATION: <b>10 DAYS</b>	

24 PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
See attached cement calculation			
			<b>RECEIVED</b>
			<b>FEB 1-8-2003</b>
			<b>DIV. OF OIL, GAS &amp; MINING</b>

25 **ATTACHMENTS**

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

WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  COMPLETE DRILLING PLAN

EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER  FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OW

NAME (PLEASE PRINT) John Busch TITLE Construction Supervisor

SIGNATURE John Busch DATE Feb 14-03

(This space for State use only)

API NUMBER ASSIGNED: 43-047-34899 APPROVAL: \_\_\_\_\_

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 03-05-03  
By: [Signature]

# T8S, R22E, S.L.B.&M.

## SHENANDOAH ENERGY, INC.

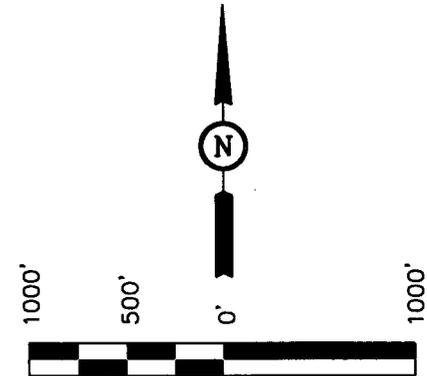
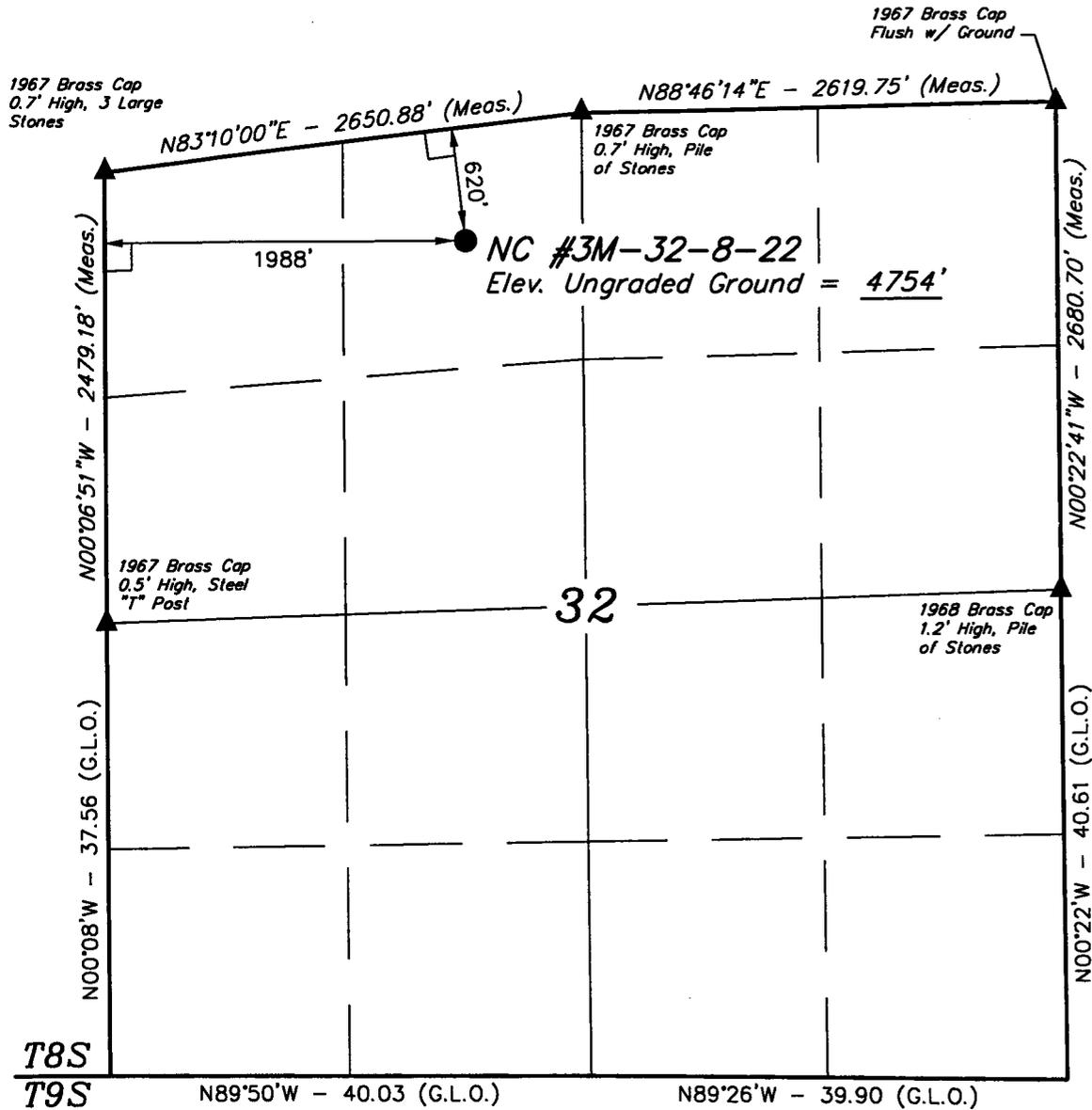
Well location, NC #3M-32-8-22, located as shown in the NE 1/4 NW 1/4 of Section 32, T8S, R22E, S.L.B.&M. Uintah County, Utah.

### BASIS OF ELEVATION

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

### BASIS OF BEARINGS

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



SCALE  
CERTIFICATE

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

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

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

### LEGEND:

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

(NAD 83)  
LATITUDE = 40°05'06.21" (40.085058)  
LONGITUDE = 109°27'58.33" (109.466203)

SCALE 1" = 1000'	DATE SURVEYED: 01-29-03	DATE DRAWN: 02-04-03
PARTY S.H. G.O. D.COX	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE SHENANDOAH ENERGY, INC.	

ONSHORE OIL & GAS ORDER NO. 1  
 Shenandoah Energy Inc.  
 NC 3M-32-8-22

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>	<u>Prod. Phase Anticipated</u>
Uinta	Surface	
Green River	2269'	
Mahongy	2879'	
Wasatch	5364'	
Mesa Verde	8025'	
Black Hawk	10910'	
Mancos B	11700'	
TD	12050'	

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>
Oil/Gas	Mancos	12050'

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 no flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right #36125 or where possible a fresh water line (poly pipe) will be laid in the access road to each location to supply fresh water for drilling purposes.

3. Operator's Specification for Pressure Control Equipment:

- A. 5,000 psi W.P. Double Gate BOP or Single Gate BOP (schematic attached)
- B. Functional test daily
- C. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- D. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing whichever is less. Tests shall be done at the time of installation, prior to drilling out and weekly. All tests shall be for a period of 15 minutes

4. Casing Program

	<u>Depth</u>	<u>Hole Size</u>	<u>Csg Size</u>	<u>Type</u>	<u>Weight</u>
Surface	700'	17-1/2"	13-3/8"	H-40	48lb/ft (new) ST&C
Intermediate	4400'	12 -1/4"	9-5/8"	N-80	40lb/ft (new) LT&C
Intermediate	5364'	12 -1/4"	9- 5/8"	S-95	40lb/ft (new) LT&C
Production (new)LT&C	11400'	8 -1/2"	4 -1/2"	HCP-110seamless	11.6lb/ft
Production LT&C	12050' -	8 -1/2"	4 -1/2"	P-110 seamless	13.5lb/ft (new)

5. Auxiliary Equipment

- A. Kelly Cock – yes
- B. Float at the bit – no
- C. Monitoring equipment on the mud system – visually

DRILLING PROGRAM

5. Auxiliary Equipment

- A. Kelly Cock – yes
- B. Float at the bit – no
- C. Monitoring equipment on the mud system – visually
- D. Full opening safety valve on the rig floor – yes
- E. Rotating Head – yes
- F. The blooie line shall be at least 6” in diameter and extend at least 100’ from the well bore into the reserve/blooie pit.
- G. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500’).
- H. Compressor shall be tied directly to the blooie line through a manifold.
- I. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

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

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

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

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

DRILLING PROGRAM

6. Testing, logging and coring program

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

Logging – Mud logging – 4500 to TD  
GR-SP-Induction  
Neutron Density  
MRI

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

7. Cementing Program

<u>Casing</u>	<u>Volume</u>	<u>Type &amp; Additives</u>
---------------	---------------	-----------------------------

See attached cement calculations

\*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface. 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.

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

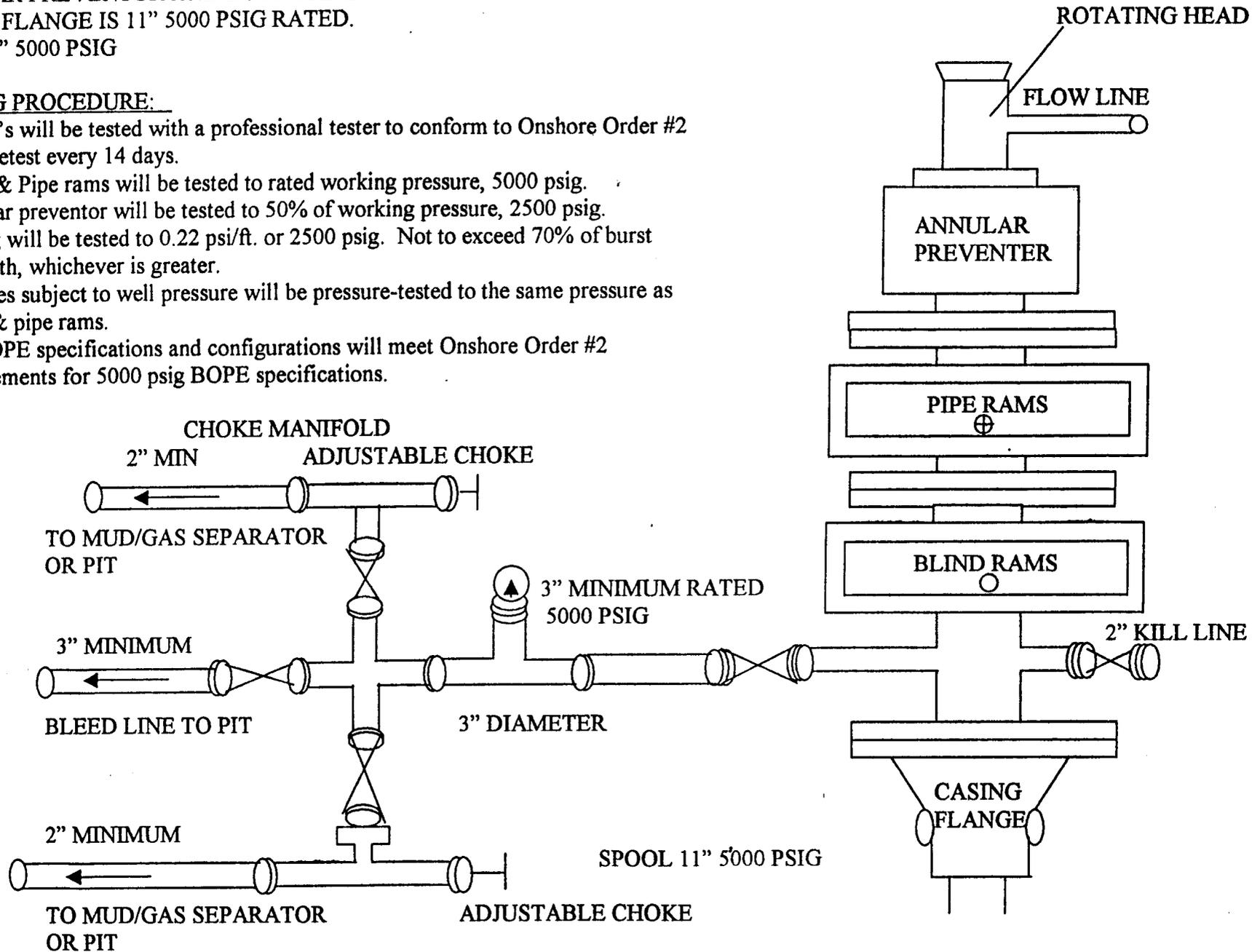
No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 4820.0 psi. Maximum anticipated bottom hole temperature is 140° F.

### 5000 PSIG DIAGRAM

ANNULAR PREVENTOR AND BOTH RAMS ARE 5000 PSIG RATED.  
 CASING FLANGE IS 11" 5000 PSIG RATED.  
 BOPE 11" 5000 PSIG

#### TESTING PROCEDURE:

1. BOPE's will be tested with a professional tester to conform to Onshore Order #2 with retest every 14 days.
2. Blind & Pipe rams will be tested to rated working pressure, 5000 psig.
3. Annular preventor will be tested to 50% of working pressure, 2500 psig.
4. Casing will be tested to 0.22 psi/ft. or 2500 psig. Not to exceed 70% of burst strength, whichever is greater.
5. All lines subject to well pressure will be pressure-tested to the same pressure as blind & pipe rams.
6. All BOPE specifications and configurations will meet Onshore Order #2 requirements for 5000 psig BOPE specifications.



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

John Busch  
Red Wash Operations Rep.  
Shenandoah Energy Inc.  
11002 East 17500 South  
Vernal, Utah 84078  
(435) 781-4341

**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.

Shenandoah Energy Inc. will be fully responsible for the actions of their subcontractors.

A complete copy of the approved Application for Permit to Drill will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Shenandoah Energy Inc. its' 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.

  
\_\_\_\_\_  
John Busch  
Red Wash Operations Representative

February 13, 2003  
\_\_\_\_\_  
Date

Under the Federal regulations in effect as of June 15, 1988, an operator is now required to submit a self-certification statement to the appropriate Bureau office stating that said operator has the right to operate upon the leasehold premises. Said notification may be in the following format:

"Please be advised that SHENANDOAH ENERGY INC. is considered to be the operator of Well No. NC 3M-32-8--22 1/4 NENW1/4, Section 32 Township 8S, Range 22E; Lease ML-3085; UINTAH County, UT; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by UT-1237."

135-7



**Shenandoah Energy Inc.**  
**475 17th Street, Suite 1000**  
**Denver, Colorado 80202**

NDC 3M 32-8-22

Uintah County, Utah  
United States of America

## **Cementing Recommendation**

Prepared for: Mr. Darryl Knopp  
February 13, 2003  
Version: 1

Submitted by:  
Rob Kruger  
Halliburton Energy Services  
Vernal Ut Us  
1085 E Main  
Vernal, Utah 84078  
+435.789.2550

**HALLIBURTON**

*Halliburton appreciates the opportunity to present  
this proposal and looks forward to being of service to you.*

## **Foreword**

---

Enclosed is our recommended procedure for cementing the casing strings in the referenced well. The information in this proposal includes well data, calculations, materials requirements, and cost estimates. This proposal is based on information from our field personnel and previous cementing services in the area.

Halliburton Energy Services recognizes the importance of meeting society's needs for health, safety, and protection of the environment. It is our intention to proactively work with employees, customers, the public, governments, and others to use natural resources in an environmentally sound manner while protecting the health, safety, and environmental processes while supplying high quality products and services to our customers.

We appreciate the opportunity to present this proposal for your consideration and we look forward to being of service to you. Our Services for your well will be coordinated through the Service Center listed below. If you require any additional information or additional designs, please feel free to contact myself or our field representative listed below.

Prepared by: \_\_\_\_\_  
John Jorgensen  
Procedure Analyst

Submitted by: \_\_\_\_\_  
Rob Kruger  
Technical Advisor

SERVICE CENTER: Vernal Utah  
SERVICE COORDINATOR: Dale Horrald  
OPER. ENGINEER: Mike Stahl  
PHONE NUMBER:(800)874-2550

## Job Information

13 3/8" Surface

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NDC 3M 32-8-22

Well Intervals:

17 1/2" Open Hole	0 - 700 ft (MD)
	0 - 700 ft (TVD)
Inner Diameter	17.500 in
Job Excess	50 %
13 3/8" Surface	0 - 700 ft (MD)
	0 - 700 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.615 in
Linear Weight	48 lbm/ft
Job Excess	0 %

## Calculations

13 3/8" Surface

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Spacer:

$$\begin{aligned} \text{Total Spacer} &= 112.29 \text{ ft}^3 \\ &= 20.00 \text{ bbl} \end{aligned}$$

Cement : (700.00 ft fill)

$$\begin{aligned} 700.00 \text{ ft} * 0.6946 \text{ ft}^3/\text{ft} * 50 \% &= 729.37 \text{ ft}^3 \\ \text{Primary Cement} &= 729.37 \text{ ft}^3 \\ &= 129.91 \text{ bbl} \end{aligned}$$

Shoe Joint Volume: (42.00 ft fill)

$$\begin{aligned} 42.00 \text{ ft} * 0.868 \text{ ft}^3/\text{ft} &= 36.45 \text{ ft}^3 \\ &= 6.49 \text{ bbl} \\ \text{Tail plus shoe joint} &= 765.82 \text{ ft}^3 \\ &= 136.40 \text{ bbl} \\ \text{Total Tail} &= 649 \text{ sks} \end{aligned}$$

Total Pipe Capacity:

$$\begin{aligned} 700.00 \text{ ft} * 0.868 \text{ ft}^3/\text{ft} &= 607.58 \text{ ft}^3 \\ &= 108.21 \text{ bbl} \end{aligned}$$

Displacement Volume to Shoe Joint:

$$\begin{aligned} \text{Capacity of Pipe - Shoe Joint} &= 108.21 \text{ bbl} - 6.49 \text{ bbl} \\ &= 101.72 \text{ bbl} \end{aligned}$$

## Job Recommendation

## 13 3/8" Surface

---

### Fluid Instructions

Fluid 1: Water Based Spacer

Gel Water Ahead

Fluid Density: 8.40 lbm/gal

Fluid Volume: 20 bbl

### Fluid 2: Primary Cement

Premium Plus Cement

94 lbm/sk Premium Plus Cement (Cement-api)

2 % Calcium Chloride (Accelerator)

0.25 lbm/sk Flocele (Lost Circulation Additive)

Fluid Weight 15.60 lbm/gal

Slurry Yield: 1.18 ft<sup>3</sup>/sk

Total Mixing Fluid: 5.25 Gal/sk

Top of Fluid: 0 ft

Calculated Fill: 700 ft

Volume: 136.40 bbl

Calculated Sacks: 649.00 sks

Proposed Sacks: 650 sks

### Fluid 3: Water Spacer

Displacement

Fluid Density: 8.33 lbm/gal

Fluid Volume: 101.72 bbl

**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	3.0	20 bbl
2	Cement	Premium Plus V	15.6	3.0	650 sks
3	Spacer	Displacement	8.3	3.0	101.72 bbl

# HALLIBURTON

## Cost Estimate

## 13 3/8" Surface

### SAP Quote #0

<u>Mtrl Nbr</u>	<u>Description</u>	<u>Qty</u>	<u>U/M</u>	<u>Unit Price</u>	<u>Gross Amt</u>	<u>Discount</u>	<u>Net Amt</u>
7521	PSL - CMT SURFACE CASING - BOM	1	JOB	0.00	0.00	47%	0.00
1	"ZI-MILEAGE FROM NEAREST HES BASE,/UNIT"	80	MI	4.41	352.80	47%	186.98
	Number of Units	1					
2	MILEAGE FOR CEMENTING CREW,ZI	80	MI	2.60	208.00	47%	110.24
	Number of Units	1					
16091	ZI - PUMPING CHARGE	1	EA	2,405.00	2,405.00	47%	1,274.65
	DEPTH	700					
	FEET/METRES (FT/M)	FT					
	<b>Equipment &amp; Services</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>2,965.80</b>	<b>47.0%</b>	<b>1,571.87</b>
100003167	PLUG - CMTG - TOP PLASTIC - 13-3/8	1	EA	510.00	510.00	47%	270.30
100005048	HOWCO GEL	4	SK	26.44	105.76	47%	56.05
100003684	PREMIUM PLUS V CEMENT	650	SK	17.58	11,427.00	47%	6,056.31
100005053	CALCIUM CHLORIDE	16	SK	122.40	1,958.40	47%	1,037.95
100005049	FLOCELE	163	LB	2.71	441.73	47%	234.12
76400	ZI MILEAGE,CMT MTLs DEL/RET MIN	40	MI	1.51	1,886.90	47%	1,000.05
	NUMBER OF TONS	31.24					
3965	HANDLE&DUMP SVC CHRg, CMT&ADDITIVES,ZI	680	CF	2.47	1,679.60	47%	890.19
	NUMBER OF EACH	1					
	<b>Materials</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>18,009.39</b>	<b>47.0%</b>	<b>9,544.97</b>
100004730	SHOE,GID,13 3/8 8RD,CEM	1	EA	489.00	489.00	42%	283.62
100004705	V ASSY,INSR FLOAT,13 3/8,8RD	1	EA	689.00	689.00	42%	399.62
100004631	CLAMP - LIMIT - 13-3/8 - HINGED -	1	EA	38.00	38.00	42%	22.04
100004487	CENTRALIZER-13 3/8"-CSG-17 1/2"-HINGED	8	EA	186.90	1,495.20	42%	867.22
100005045	HALLIBURTON WELD-A KIT	1	EA	18.43	18.43	42%	10.69
	<b>Float Equipment</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>2,729.63</b>	<b>42.0%</b>	<b>1,583.19</b>
7	ENVIRONMENTAL SURCHARGE,/JOB,ZI	1	JOB	66.24	66.24		66.24
8	IRON SAFETY INSPECTION SURCHARGE /JOB ZI	1	JOB	39.74	39.74		39.74
	<b>Surcharges</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>105.98</b>	<b>0.0%</b>	<b>105.98</b>
	<b>Total</b>			<b>USD</b>			<b>23,810.80</b>
	<b>Discount</b>			<b>USD</b>			<b>11,004.78</b>
	<b>Discounted Total</b>			<b>USD</b>			<b>12,806.01</b>

Primary Plant: VERNAL, UT, USA  
 Secondary Plant: VERNAL, UT, USA

Price Book Ref: 01 Western US  
 Price Date: 4/1/2001

## Job Information

## 9 5/8" Intermediate

---

NDC 3M 32-8-22

Well Intervals:

13 3/8" Surface	0 - 700 ft (MD)
	0 - 700 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.615 in
Linear Weight	48 lbm/ft
Job Excess	0 %
12 1/4" Open Hole	700 - 5364 ft (MD)
	700 - 5364 ft (TVD)
Inner Diameter	12.250 in
Job Excess	50 %
9 5/8" Intermediate	0 - 5364 ft (MD)
	0 - 5364 ft (TVD)
Outer Diameter	9.625 in
Inner Diameter	8.921 in
Job Excess	0 %

## Calculations

## 9 5/8" Intermediate

---

### Spacer:

$$\begin{aligned} \text{Total Spacer} &= 168.44 \text{ ft}^3 \\ &= 30.00 \text{ bbl} \end{aligned}$$

### Cement : (3364.00 ft fill)

$$\begin{aligned} 700.00 \text{ ft} * 0.3627 \text{ ft}^3/\text{ft} * 0 \% &= 253.88 \text{ ft}^3 \\ 2664.00 \text{ ft} * 0.3132 \text{ ft}^3/\text{ft} * 50 \% &= 1251.50 \text{ ft}^3 \\ \text{Total Lead Cement} &= 1505.38 \text{ ft}^3 \\ &= 268.12 \text{ bbl} \\ \text{Sacks of Cement} &= 394 \text{ sks} \end{aligned}$$

### Cement : (2000.00 ft fill)

$$\begin{aligned} 2000.00 \text{ ft} * 0.3132 \text{ ft}^3/\text{ft} * 50 \% &= 939.56 \text{ ft}^3 \\ \text{Tail Cement} &= 939.56 \text{ ft}^3 \\ &= 167.34 \text{ bbl} \end{aligned}$$

### Shoe Joint Volume: (42.00 ft fill)

$$\begin{aligned} 42.00 \text{ ft} * 0.4341 \text{ ft}^3/\text{ft} &= 18.23 \text{ ft}^3 \\ &= 3.25 \text{ bbl} \\ \text{Tail plus shoe joint} &= 957.79 \text{ ft}^3 \\ &= 170.59 \text{ bbl} \\ \text{Total Tail} &= 764 \text{ sks} \end{aligned}$$

### Total Pipe Capacity:

$$\begin{aligned} 5364.00 \text{ ft} * 0.4341 \text{ ft}^3/\text{ft} &= 2328.32 \text{ ft}^3 \\ &= 414.69 \text{ bbl} \end{aligned}$$

### Displacement Volume to Shoe Joint:

$$\begin{aligned} \text{Capacity of Pipe - Shoe Joint} &= 414.69 \text{ bbl} - 3.25 \text{ bbl} \\ &= 411.44 \text{ bbl} \end{aligned}$$

## Job Recommendation

## 9 5/8" Intermediate

---

### Fluid Instructions

Fluid 1: Water Spacer  
Water Ahead

Fluid Density: 8.33 lbm/gal  
Fluid Volume: 30 bbl

Fluid 2: Lead Cement  
Halliburton Hi-Fill

Fluid Weight 11 lbm/gal  
Slurry Yield: 3.82 ft<sup>3</sup>/sk  
Total Mixing Fluid: 22.92 Gal/sk  
Top of Fluid: 0 ft  
Calculated Fill: 3364 ft  
Volume: 268.12 bbl  
Calculated Sacks: 394.08 sks  
Proposed Sacks: 395 sks

### Fluid 3: Tail Cement

50/50 Poz Premium AG

2 % Total Bentonite (Light Weight Additive)  
5 % Salt (Accelerator)BWOW  
0.4 % Halad(R)-322 (Low Fluid Loss Control)  
0.25 lbm/sk Flocele (Lost Circulation Additive)

Fluid Weight 14.20 lbm/gal  
Slurry Yield: 1.25 ft<sup>3</sup>/sk  
Total Mixing Fluid: 5.56 Gal/sk  
Top of Fluid: 3364 ft  
Calculated Fill: 2000 ft  
Volume: 170.59 bbl  
Calculated Sacks: 764.40 sks  
Proposed Sacks: 765 sks

Fluid 4: Water Spacer  
Displacement

Fluid Density: 8.33 lbm/gal  
Fluid Volume: 411.44 bbl

### Fluid 5: Top Out Cement

Premium Plus Cement

2 % Calcium Chloride (Accelerator)  
(On The Side)

Fluid Weight 15.60 lbm/gal  
Slurry Yield: 1.18 ft<sup>3</sup>/sk  
Total Mixing Fluid: 5.26 Gal/sk  
Proposed Sacks: 200 sks

### Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Water Ahead	8.3	5.0	30 bbl
2	Cement	Hi Fill	11.0	5.0	395 sks
3	Cement	50/50 Poz	14.2	5.0	765 sks
4	Spacer	Displacement	8.3	5.0	411.44 bbl
5	Cement	Premium Plus V	15.6		200 sks

# HALLIBURTON

## Cost Estimate

## 9 5/8" Intermediate

### SAP Quote #0

Mtrl Nbr	Description	Qty	U/M	Unit Price	Gross Amt	Discount	Net Amt
7522	PSL - CMT INTERMEDIATE CASING - BOM	1	JOB	0.00	0.00	47%	0.00
1	"ZI-MILEAGE FROM NEAREST HES BASE,/UNIT"	80	MI	4.41	705.60	47%	373.97
	Number of Units	2					
2	MILEAGE FOR CEMENTING CREW,ZI	80	MI	2.60	208.00	47%	110.24
	Number of Units	1					
16091	ZI - PUMPING CHARGE	1	EA	3,556.00	3,556.00	47%	1,884.68
	DEPTH	5364					
	FEET/METRES (FT/M)	FT					
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI	1	EA	320.00	320.00	47%	169.60
	DAYS OR PARTIAL DAY(WHOLE NO.)	1					
139	ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI	1	JOB	1,109.00	1,109.00	47%	587.77
	NUMBER OF UNITS	1					
132	PORT. DAS W/CEMWIN;ACQUIRE W/HES, ZI	1	JOB	916.00	916.00	47%	485.48
	NUMBER OF DAYS	1					
	<b>Equipment &amp; Services</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>6,814.60</b>	<b>47.0%</b>	<b>3,611.74</b>
100003164	PLUG - CMTG - TOP PLASTIC - 9-5/8	1	EA	239.00	239.00	47%	126.67
21832	HALLIBURTON HI-FILL	395	SK	29.43	11,624.85	47%	6,161.17
12302	SBM 50-50 POZ (PREMIUM AG)	765	SK	14.35	10,977.75	47%	5,818.21
100003652	SALT	1773	LB	0.22	390.06	47%	206.73
100003646	HALAD(R)-322	252	LB	9.21	2,320.92	47%	1,230.09
100005049	FLOCELE	192	LB	2.71	520.32	47%	275.77
100003684	PREMIUM PLUS V ( TOP OUT SIDE)	200	SK	17.58	3,516.00	47%	1,863.48
100005053	CALCIUM CHLORIDE ( TOP OUT)	5	SK	122.40	612.00	47%	324.36
76400	ZI MILEAGE,CMT MTLs DEL/RET MIN	40	MI	1.51	4,057.07	47%	2,150.25
	NUMBER OF TONS	67.17					
3965	HANDLE&DUMP SVC CHRg, CMT&ADDITIVES,ZI	1643	CF	2.47	4,058.21	47%	2,150.85
	NUMBER OF EACH	1					
	<b>Materials</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>38,316.18</b>	<b>47.0%</b>	<b>20,307.58</b>
100004728	SHOE,GID,9-5/8 8RD	1	EA	346.00	346.00	42%	200.68
100004823	CLR,FLOAT,9-5/8 8RD,29.3-40#/FT,2 3/4	1	EA	792.00	792.00	42%	459.36
100004629	COLLAR-STOP-9 5/8"-FRICTION-HINGED	1	EA	30.00	30.00	42%	17.40
100004485	CENTRALIZER-9-5/8"-CSG-12 1/4"-HINGED	12	EA	98.70	1,184.40	42%	686.95
100005045	HALLIBURTON WELD-A KIT	2	EA	18.43	36.86	42%	21.38
	<b>Float Equipment</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>2,389.26</b>	<b>42.0%</b>	<b>1,385.77</b>
7	ENVIRONMENTAL SURCHARGE,/JOB,ZI	1	JOB	66.24	66.24		66.24
8	IRON SAFETY INSPECTION SURCHARGE /JOB ZI	1	JOB	39.74	39.74		39.74
	<b>Surcharges</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>105.98</b>	<b>0.0%</b>	<b>105.98</b>
	<b>Total</b>			<b>USD</b>			<b>47,626.02</b>

# HALLIBURTON

<u>Mtrl Nbr</u>	<u>Description</u>	<u>Qty</u>	<u>U/M</u>	<u>Unit Price</u>	<u>Gross Amt</u>	<u>Discount</u>	<u>Net Amt</u>
	Discount			USD			22,214.95
	Discounted Total			USD			25,411.07

Primary Plant: VERNAL, UT, USA  
Secondary Plant: VERNAL, UT, USA

Price Book Ref: 01 Western US  
Price Date: 4/1/2001

## Job Information

## 4 1/2" Production

---

NDC 3M 32-8-22

### Well Intervals:

9 5/8" Intermediate	0 - 5364 ft (MD)
	0 - 5364 ft (TVD)
Outer Diameter	9.625 in
Inner Diameter	8.921 in
Job Excess	0 %
7 7/8" Open Hole	5364 - 12050 ft (MD)
	5364 - 12050 ft (TVD)
Inner Diameter	7.875 in
Job Excess	25 %
4 1/2" Production	0 - 12050 ft (MD)
	0 - 12700 ft (TVD)
Outer Diameter	4.500 in
Inner Diameter	4.000 in
Linear Weight	11.60 lbm/ft
Job Excess	0 %

## Calculations

## 4 1/2" Production

---

Spacer:

$$\begin{aligned} 347.00 \text{ ft} * 0.3236 \text{ ft}^3/\text{ft} * 0 \% &= 112.30 \text{ ft}^3 \\ \text{Total Spacer} &= 112.29 \text{ ft}^3 \\ &= 20.00 \text{ bbl} \end{aligned}$$

Spacer:

$$\begin{aligned} 173.00 \text{ ft} * 0.3236 \text{ ft}^3/\text{ft} * 0 \% &= 55.99 \text{ ft}^3 \\ \text{Total Spacer} &= 56.15 \text{ ft}^3 \\ &= 10.00 \text{ bbl} \end{aligned}$$

Cement : (7186.00 ft fill)

$$\begin{aligned} 500.00 \text{ ft} * 0.3236 \text{ ft}^3/\text{ft} * 0 \% &= 161.81 \text{ ft}^3 \\ 6686.00 \text{ ft} * 0.2278 \text{ ft}^3/\text{ft} * 25 \% &= 1903.81 \text{ ft}^3 \\ \text{Primary Cement} &= 2065.62 \text{ ft}^3 \\ &= 367.90 \text{ bbl} \end{aligned}$$

Shoe Joint Volume: (42.00 ft fill)

$$\begin{aligned} 42.00 \text{ ft} * 0.0873 \text{ ft}^3/\text{ft} &= 3.67 \text{ ft}^3 \\ &= 0.65 \text{ bbl} \\ \text{Tail plus shoe joint} &= 2069.28 \text{ ft}^3 \\ &= 368.55 \text{ bbl} \\ \text{Total Tail} &= 1610 \text{ sks} \end{aligned}$$

Total Pipe Capacity:

$$\begin{aligned} 12050.00 \text{ ft} * 0.0873 \text{ ft}^3/\text{ft} &= 1051.56 \text{ ft}^3 \\ &= 187.29 \text{ bbl} \end{aligned}$$

Displacement Volume to Shoe Joint:

$$\begin{aligned} \text{Capacity of Pipe - Shoe Joint} &= 187.29 \text{ bbl} - 0.65 \text{ bbl} \\ &= 186.64 \text{ bbl} \end{aligned}$$

## Job Recommendation

## 4 1/2" Production

---

### Fluid Instructions

Fluid 1: Reactive Spacer

Super Flush

Fluid Density: 9.20 lbm/gal

Fluid Volume: 20 bbl

Fluid 2: Water Spacer

Water Spacer

Fluid Density: 8.33 lbm/gal

Fluid Volume: 10 bbl

Fluid 3: Primary Cement

50/50 Poz Premium AG

2 % Total Bentonite (Light Weight Additive)  
0.6 % Halad(R)-322 (Low Fluid Loss Control)  
0.2 % HR-5 (Expander)  
5 % Salt (Salt)BWOW  
0.25 lbm/sk Flocele (Lost Circulation Additive)  
0.3 % Super CBL (Expander)  
2 % Microbond (Expander)

Fluid Weight 14.20 lbm/gal

Slurry Yield: 1.28 ft<sup>3</sup>/sk

Total Mixing Fluid: 5.70 Gal/sk

Top of Fluid: 4864 ft

Calculated Fill: 7186 ft

Volume: 368.55 bbl

Calculated Sacks: 1610.33 sks

Proposed Sacks: 1615 sks

Fluid 4: Water Spacer

Displacement

Fluid Density: 8.33 lbm/gal

Fluid Volume: 186.64 bbl

## Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Super Flush	9.2	5.0	20 bbl
2	Spacer	Water Spacer	8.3	5.0	10 bbl
3	Cement	50/50 Poz	14.2	5.0	1615 sks
4	Spacer	Displacement	8.3	5.0	186.64 bbl

# HALLIBURTON

## Cost Estimate

## 4 1/2" Production

### SAP Quote #0

Mtrl Nbr	Description	Qty	U/M	Unit Price	Gross Amt	Discount	Net Amt
7523	PSL - CMT PRODUCTION CASING - BOM	1	JOB	0.00	0.00	47%	0.00
1	"ZI-MILEAGE FROM NEAREST HES BASE,/UNIT" Number of Units	80 2	MI	4.41	705.60	47%	373.97
2	MILEAGE FOR CEMENTING CREW,ZI Number of Units	80 1	MI	2.60	208.00	47%	110.24
16091	ZI - PUMPING CHARGE DEPTH FEET/METRES (FT/M)	1 12050 FT	EA	10,687.00	10,687.00	47%	5,664.11
132	PORT. DAS W/CEMWIN;ACQUIRE W/HES, ZI NUMBER OF DAYS	1 1	JOB	916.00	916.00	47%	485.48
139	ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI NUMBER OF UNITS	1 1	JOB	1,109.00	1,109.00	47%	587.77
16115	FIELD STORAGE BIN ON SITE >8 HRS,DAY,ZI DAYS OR PARTIAL DAY(WHOLE NO.)	1 1	EA	320.00	320.00	47%	169.60
	<b>Equipment &amp; Services</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>13,945.60</b>	<b>47.0%</b>	<b>7,391.17</b>
100003140	PLUG - CMTG - TOP ALUM - 4-1/2	1	EA	110.00	110.00	47%	58.30
100003639	SUPER FLUSH	20	SK	147.76	2,955.20	47%	1,566.26
12302	SBM 50-50 POZ (PREMIUM AG)	1615	SK	14.35	23,175.25	47%	12,282.88
100003652	SALT	3835	LB	0.22	843.70	47%	447.16
100005050	HR-5	266	LB	5.39	1,433.74	47%	759.88
100003646	HALAD(R)-322	797	LB	9.21	7,340.37	47%	3,890.40
100005049	FLOCELE	404	LB	2.71	1,094.84	47%	580.27
100003668	SUPER CBL	399	LB	35.26	14,068.74	47%	7,456.43
100003669	MICROBOND	2657	LB	1.41	3,746.37	47%	1,985.58
76400	ZI MILEAGE,CMT MTLs DEL/RET MIN NUMBER OF TONS	40 71.92	MI	1.51	4,343.97	47%	2,302.30
3965	HANDLE&DUMP SVC CHRg, CMT&ADDITIVES,ZI NUMBER OF EACH	1821 1	CF	2.47	4,497.87	47%	2,383.87
	<b>Materials</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>63,610.05</b>	<b>47.0%</b>	<b>33,713.33</b>
100004879	SHOE-FLOAT- 4-1/2 8RD - 2-3/4 SUPER	1	EA	292.00	292.00	42%	169.36
100004752	COLLAR-FLOAT- 4-1/2 8RD 9.5-13.5#/FT -	1	EA	341.00	341.00	42%	197.78
100004622	CLAMP - LIMIT - 4-1/2 - HINGED -	1	EA	21.00	21.00	42%	12.18
100004473	CENTRALIZER ASSY - API - 4-1/2 CSG X	25	EA	59.85	1,496.25	42%	867.82
100005045	HALLIBURTON WELD-A KIT	2	EA	18.43	36.86	42%	21.38
	<b>Float Equipment</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>2,187.11</b>	<b>42.0%</b>	<b>1,268.52</b>
7	ENVIRONMENTAL SURCHARGE,/JOB,ZI	1	JOB	66.24	66.24		66.24
8	IRON SAFETY INSPECTION SURCHARGE /JOB ZI	1	JOB	39.74	39.74		39.74
	<b>Surcharges</b>						
	<b>SubTotal</b>			<b>USD</b>	<b>105.98</b>	<b>0.0%</b>	<b>105.98</b>

# HALLIBURTON

<u>Mtrl Nbr</u>	<u>Description</u>	<u>Qty</u>	<u>U/M</u>	<u>Unit Price</u>	<u>Gross Amt</u>	<u>Discount</u>	<u>Net Amt</u>
	Total			USD			79,848.74
	Discount			USD			37,369.74
	Discounted Total			USD			42,479.00

Primary Plant: VERNAL, UT, USA  
Secondary Plant: VERNAL, UT, USA

Price Book Ref: 01 Western US  
Price Date: 4/1/2001

## **Conditions**

---

The cost in this analysis is good for the materials and/or services outlined within. These prices are based on Halliburton being awarded the work on a first call basis. Prices will be reviewed for adjustments if awarded on 2<sup>nd</sup> or 3<sup>rd</sup> call basis and/or after 30 days of this written analysis. This is in an effort to schedule our work and maintain a high quality of performance for our customers.

The unit prices stated in the proposal are based on our current published prices. The projected equipment, personnel, and material needs are only estimates based on information about the work presently available to us. At the time the work is actually performed, conditions then existing may require an increase or decrease in the equipment, personnel, and/or material needs. Charges will be based upon unit prices in effect at the time the work is performed and the amount of equipment, personnel, and/or material actually utilized in the work. Taxes, if any, are not included. Applicable taxes, if any, will be added to the actual invoice.

It is understood and agreed between the parties that with the exception of the subject discounts, all services performed and equipment and materials sold are provided subject to Halliburton's General Terms and Conditions contained in our current price list, (which include LIMITATION OF LIABILITY and WARRANTY provisions), and pursuant to the applicable Halliburton Work Order Contract (whether or not executed by you), unless a Master Service and/or Sales Contract applicable to the services, equipment, or materials supplied exists between your company and Halliburton, in which case the negotiated Master Contract shall govern the relationship between the parties. A copy of the latest version of our General Terms and Conditions is available from your Halliburton representative or at:

[http://www.halliburton.com/hes/general\\_terms\\_conditions.pdf](http://www.halliburton.com/hes/general_terms_conditions.pdf) for your convenient review, and we would appreciate receiving any questions you may have about them. Should your company be interested in negotiating a Master Contract with Halliburton, our Law Department would be pleased to work with you to finalize a mutually agreeable contract. In this connection, it is also understood and agreed that Customer will continue to execute Halliburton usual field work orders and/or tickets customarily required by Halliburton in connection with the furnishing of said services, equipment, and materials.

Any terms and conditions contained in purchase orders or other documents issued by the customer shall be of no effect except to confirm the type and quantity of services, equipment, and materials to be supplied to the customer.

If customer does not have an approved open account with Halliburton or a mutually executed written contract with Halliburton, which dictates payment terms different than those set forth in this clause, all sums due are payable in cash at the time of performance of services or delivery of equipment, products, or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice.

Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.

# SHENANDOAH ENERGY, INC.

NC #3M-32-8-22

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 32, T8S, R22E, S.L.B.&M.

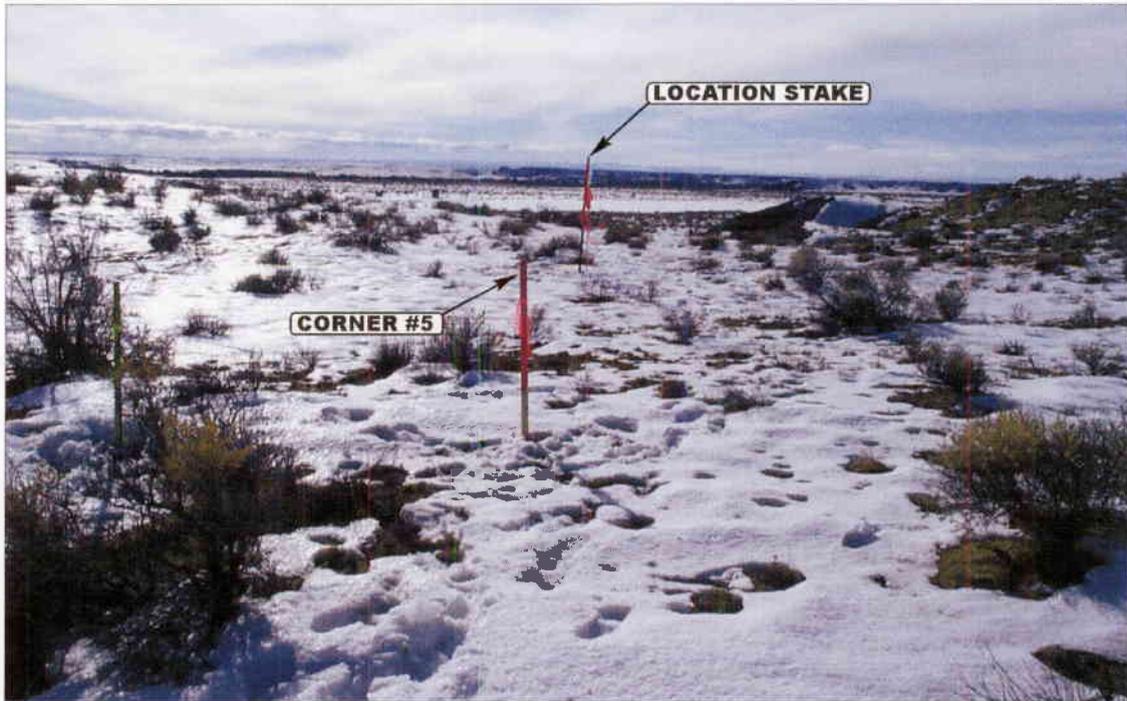


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY



- Since 1964 -

UELS

Uintah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

02 04 03  
MONTH DAY YEAR

PHOTO

TAKEN BY: S.H.

DRAWN BY: P.M.

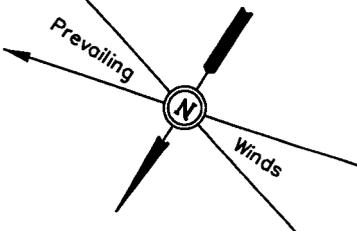
REVISED: 00-00-00

# SHENANDOAH ENERGY, INC.

FIGURE #1

## LOCATION LAYOUT FOR

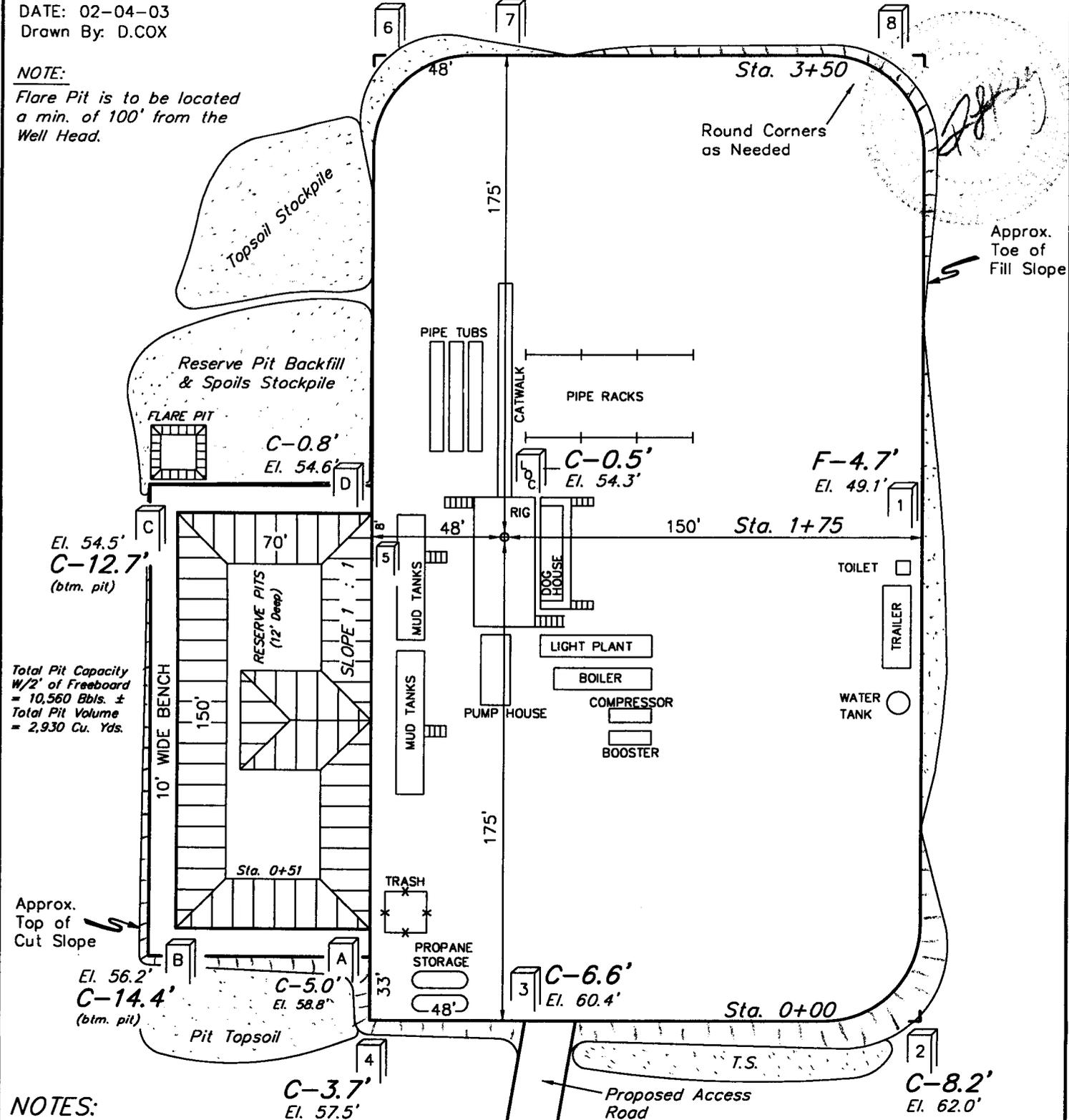
NC #3M-32-8-22  
SECTION 32, T8S, R22E, S.L.B.&M.  
620' FNL 1988' FWL



SCALE: 1" = 50'  
DATE: 02-04-03  
Drawn By: D.COX

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

**F-7.8'**  
El. 46.0'
**F-2.0'**  
El. 51.8'
**C-2.6'**  
El. 56.4'



Total Pit Capacity  
W/2' of Freeboard  
= 10,560 Bbls. ±  
Total Pit Volume  
= 2,930 Cu. Yds.

**NOTES:**

Elev. Ungraded Ground At Loc. Stake = 4754.3'  
FINISHED GRADE ELEV. AT LOC. STAKE = 4753.8'

SHENANDOAH ENERGY, INC.

TYPICAL CROSS SECTIONS FOR

NC #3M-32-8-22

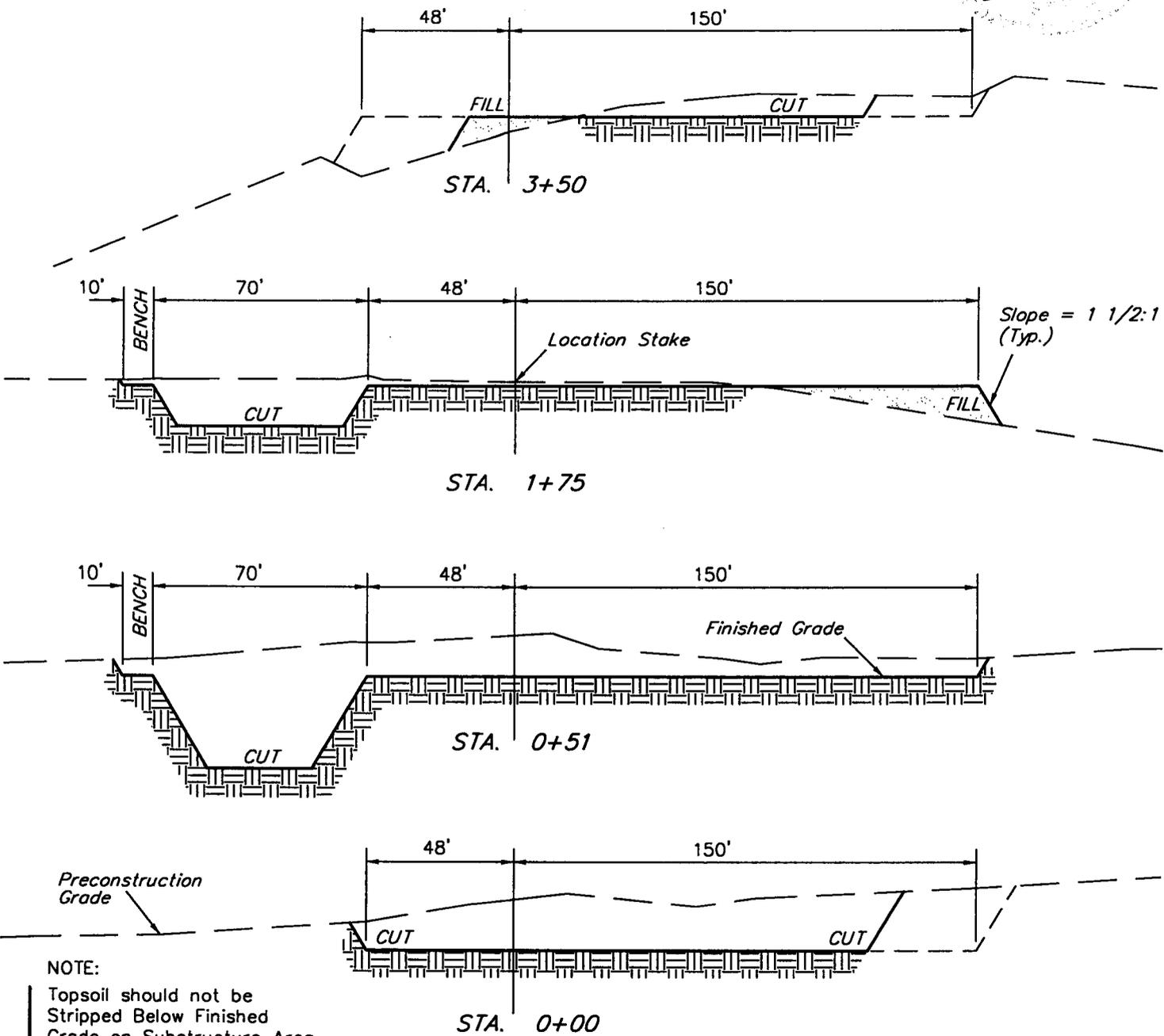
SECTION 32, T8S, R22E, S.L.B.&M.

620' FNL 1988' FWL

FIGURE #2

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

DATE: 02-04-03  
Drawn By: D.COX



NOTE:

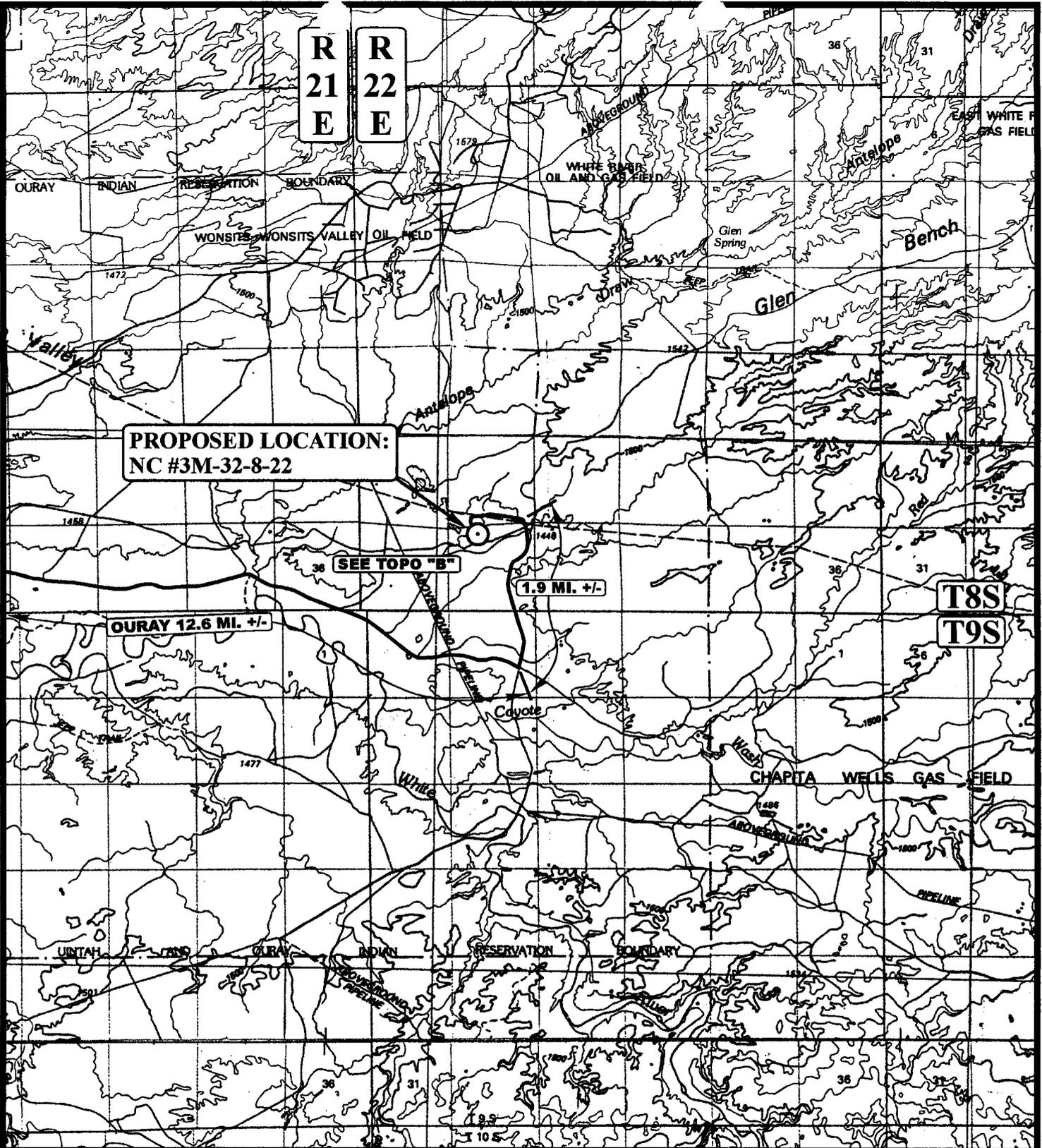
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

CUT	
(12") Topsoil Stripping	= 3,070 Cu. Yds.
Remaining Location	= 7,630 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 10,700 CU.YDS.</b>
<b>FILL</b>	<b>= 2,630 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	= 7,930 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 4,530 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 3,400 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017



**PROPOSED LOCATION:  
NC #3M-32-8-22**

**SEE TOPO "B"**

**1.9 MI. +/-**

**OURAY 12.6 MI. +/-**

**T8S**

**T9S**

**LEGEND:**

⊙ PROPOSED LOCATION

**SHENANDOAH ENERGY, INC.**

**NC #3M-32-8-22  
SECTION 32, T8S, R22E, S.L.B.&M.  
620' FNL 1988' FWL**



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

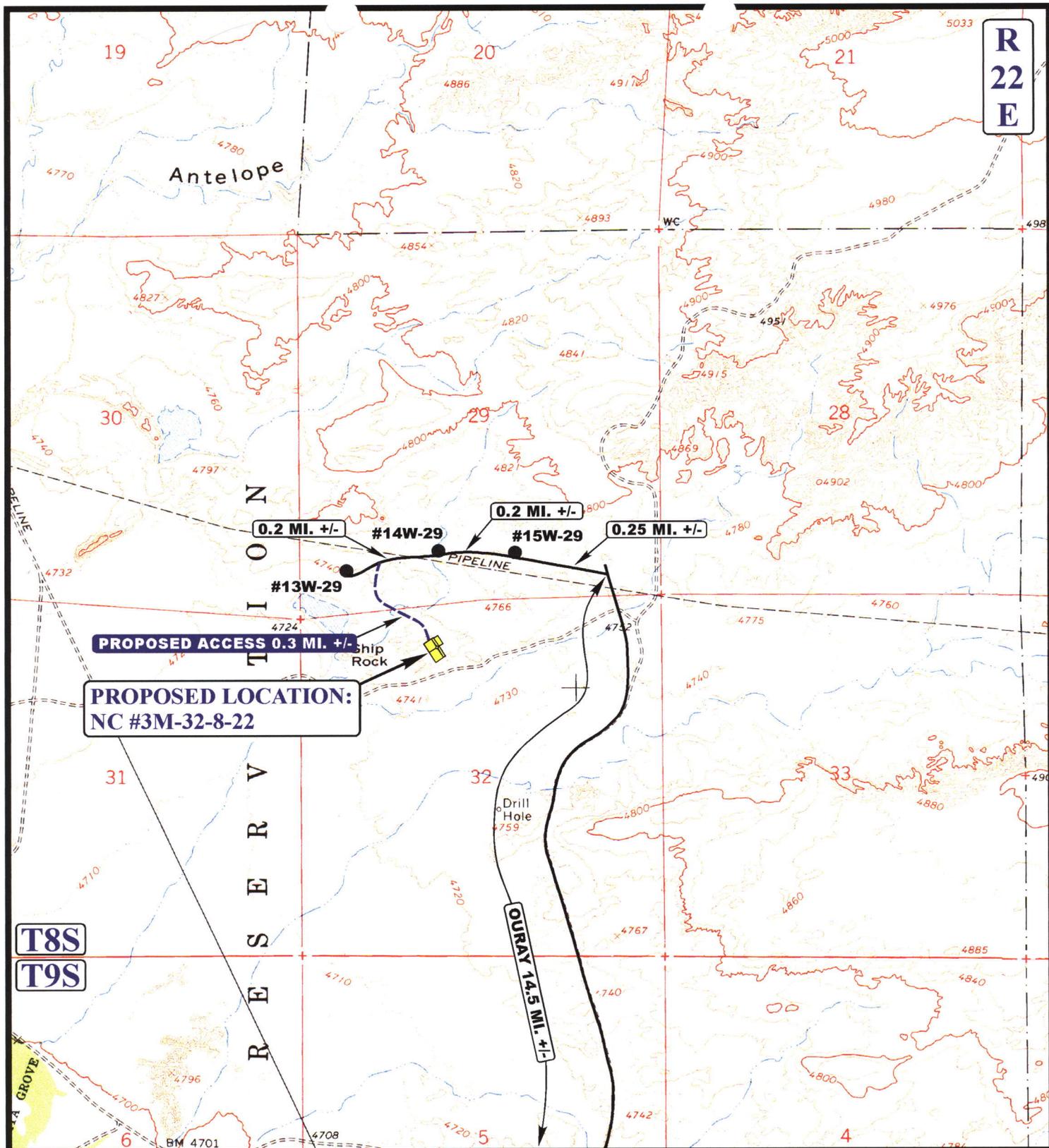


**TOPOGRAPHIC MAP**

<b>02</b>	<b>04</b>	<b>03</b>
MONTH	DAY	YEAR

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





**LEGEND:**

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD

**SHENANDOAH ENERGY INC.**

NC #3M-32-8-22  
SECTION 32, T8S, R22E, S.L.B.&M.  
620' FNL 1988' FWL



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



**TOPOGRAPHIC  
MAP**

**02 04 03**  
MONTH DAY YEAR

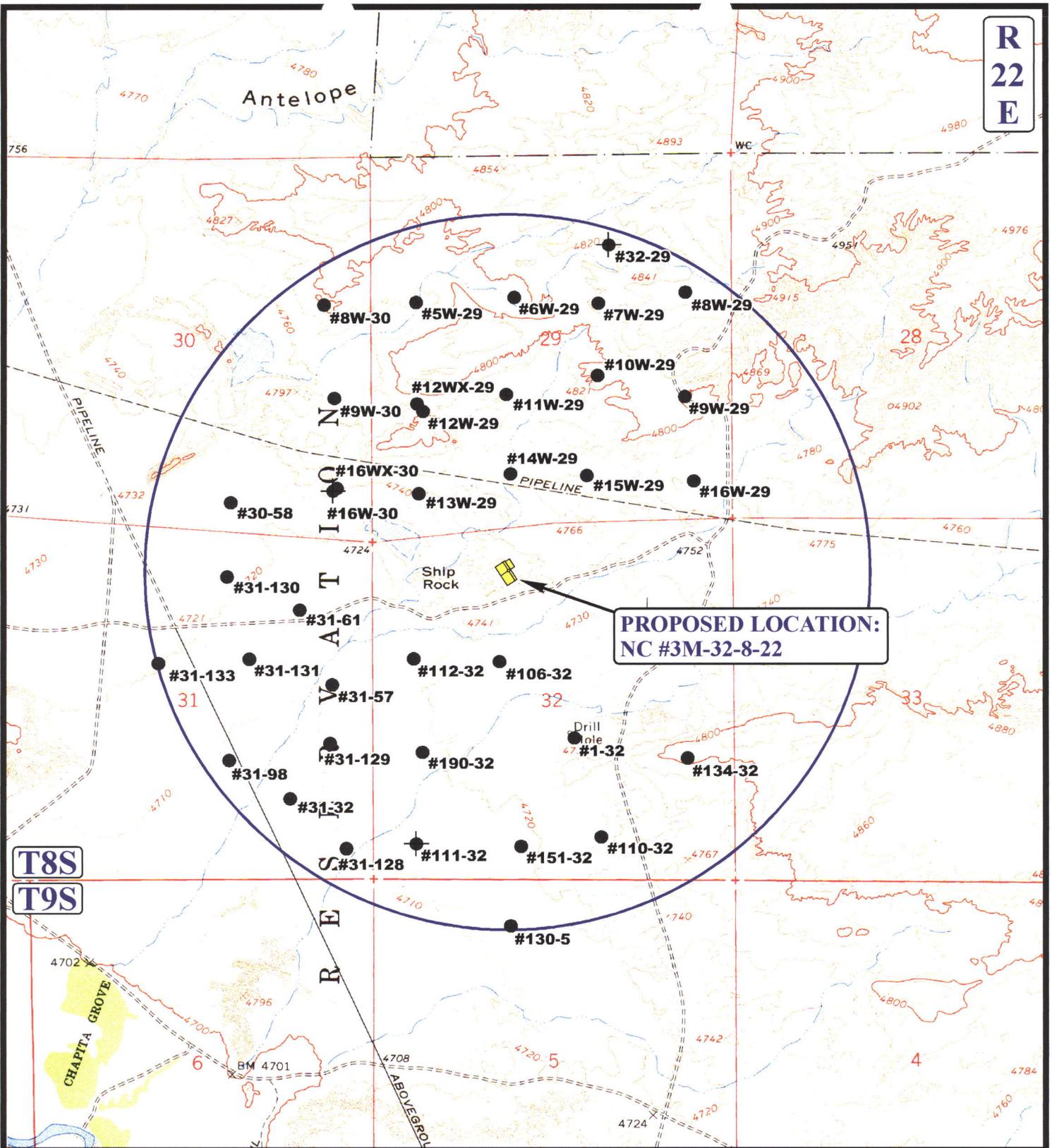
SCALE: 1" = 2000'

DRAWN BY: P.M.

REVISED: 00-00-00

**B**  
TOPO

R  
22  
E



**PROPOSED LOCATION:  
NC #3M-32-8-22**

**LEGEND:**

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

**SHENANDOAH ENERGY INC.**

**NC #3M-32-8-22  
SECTION 32, T8S, R22E, S.L.B.&M.  
620' FNL 1988' FWL**



**Uintah Engineering & Land Surveying**  
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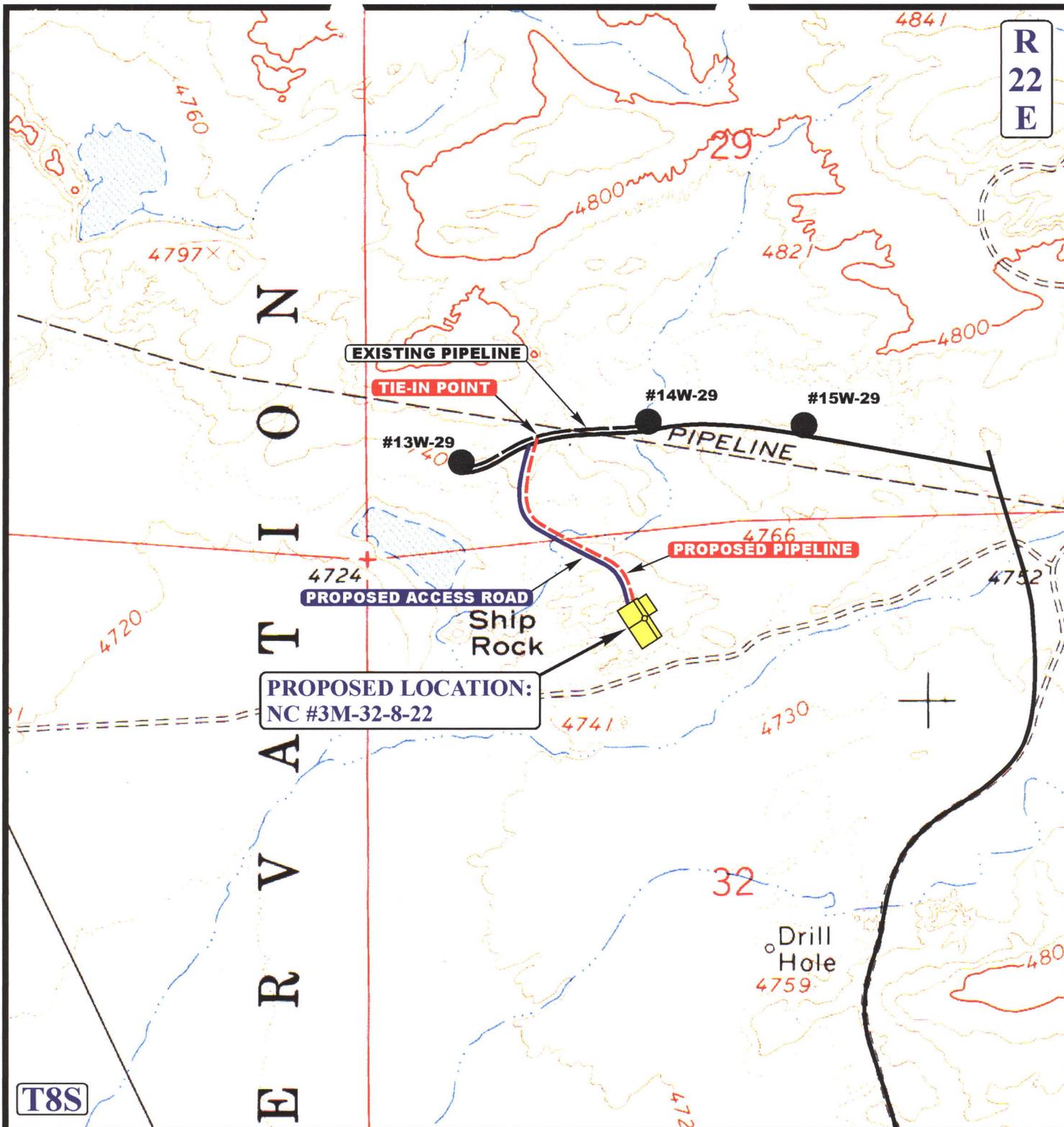


**TOPOGRAPHIC  
MAP**

**02 04 03**  
MONTH DAY YEAR

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





**APPROXIMATE TOTAL PIPELINE DISTANCE = 1,555' +/-**

**LEGEND:**

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE



**SHENANDOAH ENERGY INC.**

NC #3M-32-8-22  
 SECTION 32, T8S, R22E, S.L.B.&M.  
 620' FNL 1988' FWL



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

**TOPOGRAPHIC MAP** 02 04 03  
MONTH DAY YEAR  
 SCALE: 1" = 1000' DRAWN BY: P.M. REVISED: 00-00-00



WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 02/18/2003

API NO. ASSIGNED: 43-047-34899

WELL NAME: NC 3M-32-8-22

OPERATOR: SHENANDOAH ENERGY INC ( N4235 )

CONTACT: JOHN BUSCH

PHONE NUMBER: 435-781-4341

PROPOSED LOCATION:

NENW 32 080S 220E

SURFACE: 0620 FNL 1988 FWL

BOTTOM: 0620 FNL 1988 FWL

UINTAH

UNDESIGNATED ( 2 )

LEASE TYPE: 3 - State

LEASE NUMBER: ML-3085

SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: MNCS

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DKD	3/3/03
Geology		
Surface		

LATITUDE: 40.08433

LONGITUDE: 109.46560

RECEIVED AND/OR REVIEWED:

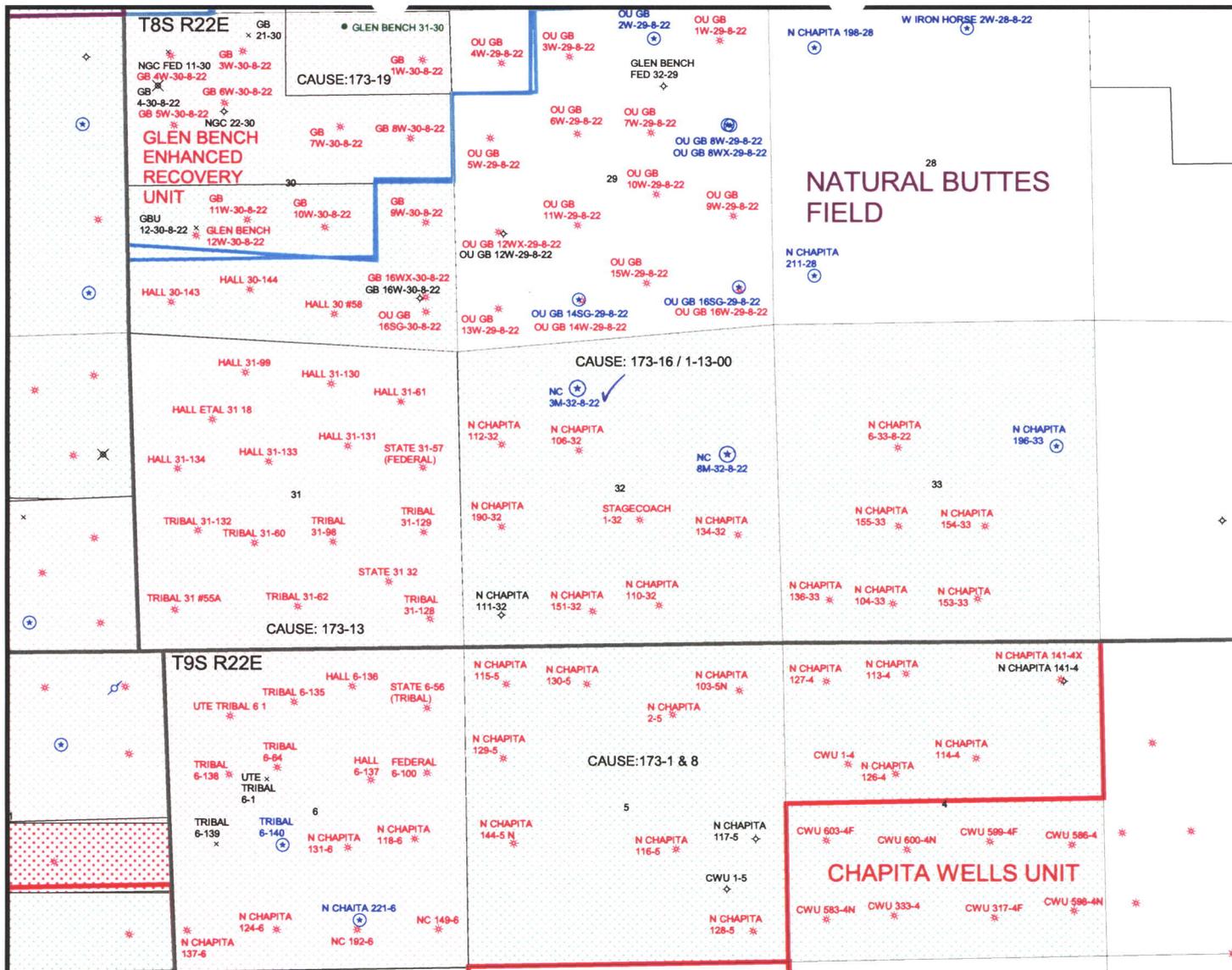
- Plat
- Bond: Fed[] Ind[] Sta[3] Fee[]  
(No. ~~159261960~~ 04,27294)
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 36125 )
- RDCC Review (Y/N)  
(Date: )
- Fee Surf Agreement (Y/N)

LOCATION AND SITING:

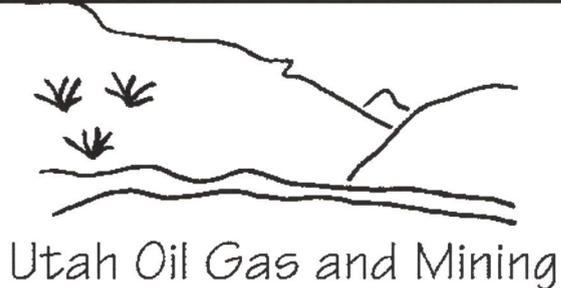
- R649-2-3.  
Unit \_\_\_\_\_
- R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit  
Board Cause No: 173-16 (8/320)  
Eff Date: 1-13-00  
Siting: 400' fr U boundary & 920' fr other wells.
- R649-3-11. Directional Drill

COMMENTS:

- STIPULATIONS: ① Surface Casing Cement stip  
② Production Casing Cement should be brought up inside intermediate casing ( $\pm 5200'$ )  
③ STATEMENT OF BASIS

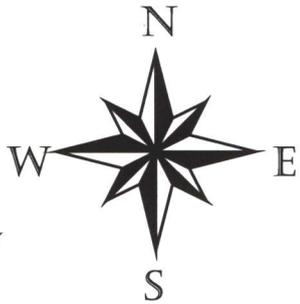


OPERATOR: SHENANDOAH ENERGY (N4235)  
 SEC. 32 T8S, R22E  
 FIELD: NATURAL BUTTES (630)  
 COUNTY: UINTAH  
 CAUSE: 173-16 / 1-13-00



WELLS		UNIT STATUS	
⚡	GAS INJECTION	□	EXPLORATORY
⊙	GAS STORAGE	□	GAS STORAGE
×	LOCATION ABANDONED	□	NF PP OIL
⊕	NEW LOCATION	□	NF SECONDARY
◇	PLUGGED & ABANDONED	□	PENDING
*	PRODUCING GAS	□	PI OIL
•	PRODUCING OIL	□	PP GAS
⊖	SHUT-IN GAS	□	PP GEOTHERML
+	SHUT-IN OIL	□	PP OIL
×	TEMP. ABANDONED	□	SECONDARY
○	TEST WELL	□	TERMINATED
△	WATER INJECTION		
◆	WATER SUPPLY		
⚡	WATER DISPOSAL		

FIELD STATUS	
□	ABANDONED
□	ACTIVE
□	COMBINED
□	INACTIVE
□	PROPOSED
□	STORAGE
□	TERMINATED
□	COUNTY BOUNDARY
□	SECTION LINES
□	TOWNSHIP LINES



PREPARED BY: DIANA MASON  
 DATE: 21-FEBRUARY-2003

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

**OPERATOR:** SHENANDOAH ENERGY, INC.  
**WELL NAME & NUMBER:** NC 3M-32-8-22  
**API NUMBER:** 43-047-34899  
**LOCATION:** 1/4,1/4 NE/NW Sec: 32 TWP: 8S RNG: 22E 620' FNL 1988' FWL

**Geology/Ground Water:**

Shenandoah proposes to set 700' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 800'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of section 32. This well is owned by R.N. Industries. This well produces water from 1-300' with its use listed as other. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement program should adequately protect any useable ground water at this location.

**Reviewer:** Brad Hill **Date:** 03/05/2003

**Surface:**

Surface rights at the proposed location are owned by the Ute Indian Tribe. Shenandoah is responsible for obtaining any rights-of-way or surface permits needed from the Ute Tribe.

**Reviewer:** Brad Hill **Date:** 03/05/2003

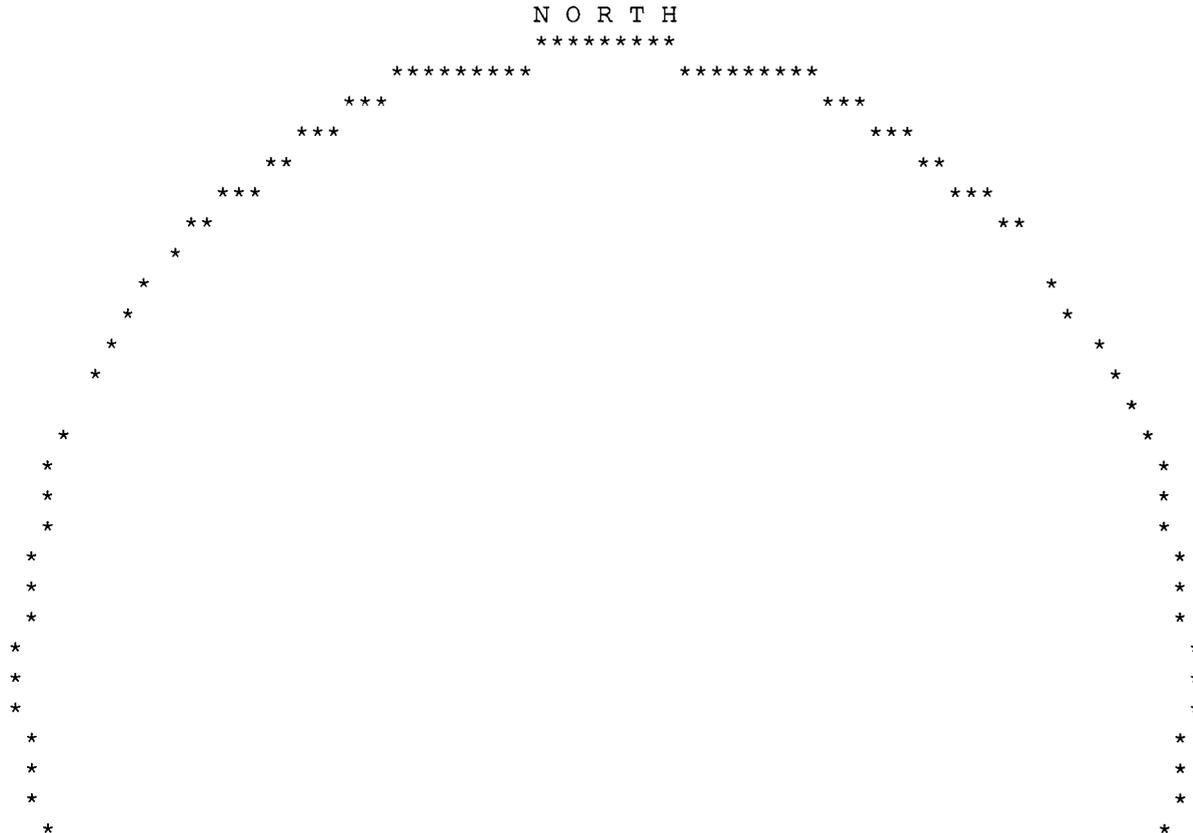
**Conditions of Approval/Application for Permit to Drill:**

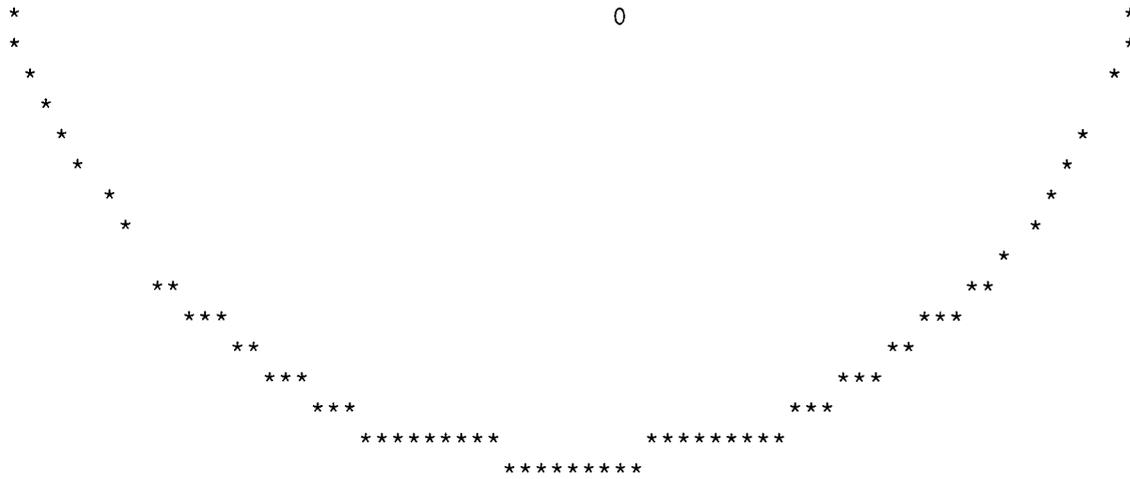
None.

UTAH DIVISION OF WATER RIGHTS  
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, MAR 5, 2003, 9:49 AM  
PLOT SHOWS LOCATION OF 1 POINTS OF DIVERSION

PLOT OF AN AREA WITH A RADIUS OF 10000 FEET FROM A POINT  
FEET, FEET OF THE CT CORNER,  
SECTION 32 TOWNSHIP 8S RANGE 22E SL BASE AND MERIDIAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 4000 FEET



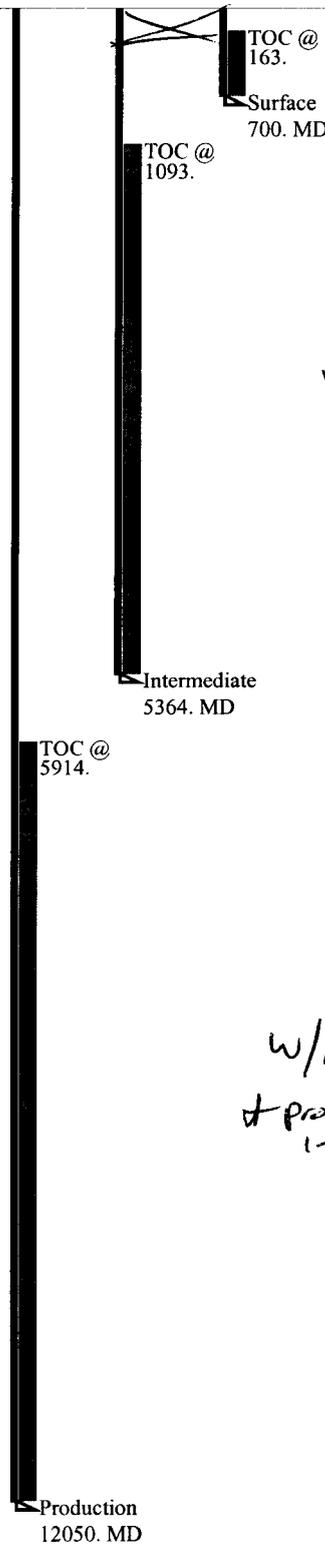
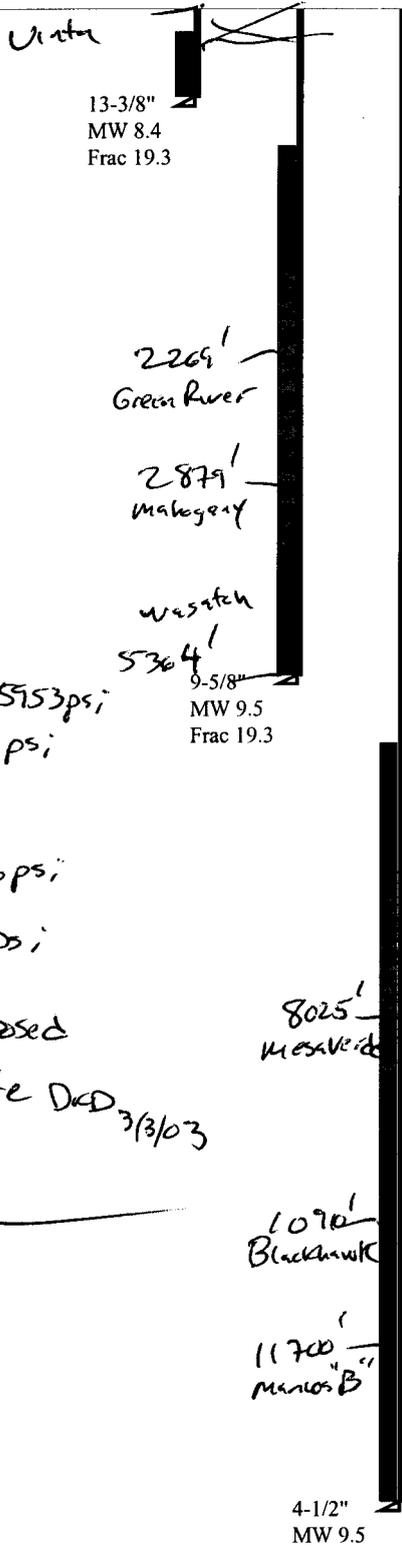


UTAH DIVISION OF WATER RIGHTS  
 NWPLAT POINT OF DIVERSION LOCATION PROGRAM

MAP CHAR	WATER RIGHT	QUANTITY CFS AND/OR	AC-FT	SOURCE DESCRIPTION or WELL INFO DIAMETER	DEPTH	YEAR LOG	POINT OF DIVERSION DESCRIPTION NORTH	EAST	CNR	SEC	TWN	RNG	B&
0	49 1645	.0700 OR	50.00	6	10	- 300	S	100	E	850	N4 5	9S	22E S
		WATER USE(S): OTHER											PRIORITY DATE: 04/10/2
		R.N. Industries				P.O. Box 98							Roosevelt

Casing Schematic

Surface



w/20% washout  
\* Surface Step

w/15% washout

w/15% washout  
+ prod casing cont step (+ 5200')  
inside intermed. csg.

BOP  
 $(0.052)(12050)(9.5) = 5953 \text{ psi}$   
 Anticipated = 4820 psi

Gas  
 $(0.12)(12050) = 1446 \text{ psi}$

MASP = 4507 psi

SM BOPE proposed

Adequate DCD 3/3/03



Well name:	<b>03-03 Shenandoah NC 3M-32-8-22</b>	
Operator:	<b>Shenandoah Energy Inc.</b>	Project ID:
String type:	Surface	43-047-34899
Location:	Uintah County	

**Design parameters:**

**Collapse**

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

**Burst**

Max anticipated surface pressure: 0 psi  
 Internal gradient: 0.494 psi/ft  
 Calculated BHP: 345 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.

Neutral point: 614 ft

**Environment:**

H2S considered? No  
 Surface temperature: 65 °F  
 Bottom hole temperature: 75 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 450 ft

Cement top:

163 ft  
 \* Surface Slip

Non-directional string.

**Re subsequent strings:**

Next setting depth: 5,364 ft  
 Next mud weight: 9.500 ppg  
 Next setting BHP: 2,647 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 700 ft  
 Injection pressure: 700 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	700	13.375	48.00	H-40	ST&C	700	700	12.59	65.7

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	305	740	2.42	345	1730	5.01	34	322	9.58 J

Prepared by: Dustin K. Doucet  
 Utah Dept. of Natural Resources

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

Date: March 3, 2003  
 Salt Lake City, Utah

**ENGINEERING STIPULATIONS:**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>03-03 Shenandoah NC 3M-32-8-22</b>	
Operator:	<b>Shenandoah Energy Inc.</b>	Project ID:
String type:	Intermediate	43-047-34899
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 9.500 ppg  
 Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 0 psi  
 Internal gradient: 0.494 psi/ft  
 Calculated BHP: 2,647 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.

Neutral point: 4,606 ft

**Environment:**

H2S considered? No  
 Surface temperature: 65 °F  
 Bottom hole temperature: 127 °F  
 Temperature gradient: 1.15 °F/100ft  
 Minimum section length: 1,500 ft

Cement top: 1,093 ft

Non-directional string.

**Re subsequent strings:**

Next setting depth: 12,050 ft  
 Next mud weight: 9.500 ppg  
 Next setting BHP: 5,947 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 5,364 ft  
 Injection pressure: 5,364 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
2	4400	9.625	40.00	N-80	LT&C	4400	4400	8.75	350
1	964	9.625	40.00	S-95	LT&C	5364	5364	8.75	76.7

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	2171	3054	<u>1.41</u>	2171	5750	<u>2.65</u>	215	737	3.43 J
1	2647	4230	<u>1.60</u>	2647	6820	<u>2.58</u>	39	858	<u>22.25</u> J

Prepared by: Dustin K. Doucet  
 Utah Dept. of Natural Resources

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

Date: March 3, 2003  
 Salt Lake City, Utah

**ENGINEERING STIPULATIONS:**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name:	<b>03-03 Shenandoah NC 3M-32-8-22</b>	
Operator:	<b>Shenandoah Energy Inc.</b>	Project ID:
String type:	Production	43-047-34899
Location:	Uintah County	

**Design parameters:**

**Collapse**

Mud weight: 9.500 ppg  
 Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 0 psi  
 Internal gradient: 0.494 psi/ft  
 Calculated BHP: 5,947 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 10,415 ft

**Environment:**

H2S considered? No  
 Surface temperature: 65 °F  
 Bottom hole temperature: 204 °F  
 Temperature gradient: 1.15 °F/100ft  
 Minimum section length: 1,500 ft

Cement top: 5,914 ft

Non-directional string.

\* Step inside confirmed.  
 (± 5200')

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
2	11400	4.5	11.60	HCP-110	LT&C	11400	11400	3.875	264.3
1	650	4.5	13.50	P-110	LT&C	12050	12050	3.795	17.3

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	5626	8595	1.53	5626	10690	1.90	141	279	1.98 J
1	5947	10680	1.80	5947	12410	2.09	9	338	38.52 J

Prepared by: Dustin K. Doucet  
 Utah Dept. of Natural Resources

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

Date: March 3, 2003  
 Salt Lake City, Utah

**ENGINEERING STIPULATIONS:**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 telephone

(801) 359-3940 fax

(801) 538-7223 TTY

[www.nr.utah.gov](http://www.nr.utah.gov)

Michael O. Leavitt  
Governor

Robert L. Morgan  
Executive Director

Lowell P. Braxton  
Division Director

March 5, 2003

Shenandoah Energy, Inc.  
11002 East 17500 South  
Vernal, UT 84078

Re: North Chapita 3M-32-8-22 Well, 620' FNL, 1988' FWL, NE NW, Sec. 32, T. 8 South,  
R. 22 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 43-047-34899.

Sincerely,

A handwritten signature in black ink that reads "John R. Baza". The signature is fluid and cursive, with a large initial "J" and "B".

John R. Baza  
Associate Director

pb

Enclosures

cc: Uintah County Assessor  
SITLA

**Operator:** Shenandoah Energy, Inc.  
**Well Name & Number** North Chapita 3M-32-8-22  
**API Number:** 43-047-34899  
**Lease:** ML 3085

**Location:** NE NW      **Sec.** 32      **T.** 8 South      **R.** 22 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**

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

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

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

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

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. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. Surface casing shall be cemented to the surface.

7. Production casing cement should be brought up inside intermediate casing ( $\pm 5200'$ ).



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

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

In Reply Refer To:  
3106  
(UT-924)

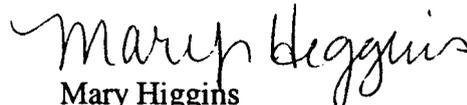
July 21, 2003

### Memorandum

To: Vernal Field Office  
From: **ACTING** Chief, Branch of Minerals Adjudication  
Subject: Name Change Approval

Attached is an approved copy of the name change from BLM-Eastern States, which is recognized by the Utah State Office. We have updated our records to reflect:

The name change from Shenandoah Energy Incorporated into QEP Uinta Basin, Incorporated is effective July 23, 1999. The BLM Bond Number is ESB000024.

  
Mary Higgins  
Acting Chief, Branch of  
Minerals Adjudication

### Enclosure

1. Eastern States Letter
2. List of leases

cc: MMS, James Sykes, PO Box 25165, M/S 357 B1, Denver CO 80225  
State of Utah, DOGM, Earlene Russell (Ste. 1210), Box 145801, SLC UT 84114  
Teresa Thompson (UT-922)  
Joe Incardine (UT-921)

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JUL 29 2003

DIV. OF OIL, GAS & MINING

### Exhibit of Leases

UTSL-065342	UTU-0825	UTU-65472	UTU-74971
UTSL-065429	UTU-0826	UTU-65632	UTU-74972
UTSL-066409-A	UTU-0827	UTU-67844	UTU-75079
UTSL-066446	UTU-0828	UTU-68217	UTU-75080
UTSL-066446-A	UTU-0829	UTU-68218	UTU-75081
UTSL-066446-B	UTU-0830	UTU-68219	UTU-75082
UTSL-066791	UTU-0933	UTU-68220	UTU-75083
UTSL-069330	UTU-0971	UTU-68387	UTU-75084
UTSL-070932-A	UTU-0971-A	UTU-68620	UTU-75085
UTSL-071745	UTU-01089	UTU-69001	UTU-75086
UTSL-071963	UTU-02025	UTU-70853	UTU-75087
UTSL-071964	UTU-02030	UTU-70854	UTU-75088
UTSL-071965	UTU-02060	UTU-70855	UTU-75102
	UTU-02148	UTU-70856	UTU-75103
UTU-046	UTU-02149	UTU-71416	UTU-75116
UTU-055	UTU-02510-A	UTU-72066	UTU-75243
UTU-057	UTU-09613	UTU-72109	UTU-75503
UTU-058	UTU-09617	UTU-72118	UTU-75678
UTU-059	UTU-09809	UTU-72598	UTU-75684
UTU-080	UTU-011225-B	UTU-72634	UTU-76278
UTU-081	UTU-011226	UTU-72649	UTU-75760
UTU-082	UTU-011226-B	UTU-73182	UTU-75939
UTU-093	UTU-012457	UTU-73443	UTU-76039
UTU-0116	UTU-012457-A	UTU-73456	UTU-76482
UTU-0558	UTU-018260-A	UTU-73680	UTU-76507
UTU-0559	UTU-022158	UTU-73681	UTU-76508
UTU-0560	UTU-025960	UTU-73684	UTU-76721
UTU-0561	UTU-025962	UTU-73686	UTU-76835
UTU-0562	UTU-025963	UTU-73687	UTU-77063
UTU-0566	UTU-029649	UTU-73698	UTU-77301
UTU-0567	UTU-65471	UTU-73699	UTU-77308
UTU-0568	UTU-65472	UTU-73700	UTU-78021
UTU-0569	UTU-103144	UTU-73710	UTU-78028
UTU-0570	UTU-140740	UTU-73914	UTU-78029
UTU-0571	UTU-14219	UTU-73917	UTU-78214
UTU-0572	UTU-14639	UTU-74401	UTU-78215
UTU-0629	UTU-16551	UTU-74402	UTU-78216
UTU-0802	UTU-28652	UTU-74407	UTU-80636
UTU-0803	UTU-42050	UTU-74408	UTU-80637
UTU0804	UTU-43915	UTU-74419	UTU-80638
UTU0805	UTU-43916	UTU-74493	UTU-80639
UTU0806	UTU-43917	UTU-74494	UTU-80640
UTU0807	UTU-43918	UTU-74495	
UTU0809	UTU-56947	UTU-74496	
UTU0810	UTU-65276	UTU-74836	
UTU-0823	UTU-65404	UTU-74842	
UTU-0824	UTU-65471	UTU-74968	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

006

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. Lease Designation and Serial No.	ML-3085
6. If Indian, Allottee or Tribe Name	UTE TRIBE
7. If Unit or CA, Agreement Designation	N/A
8. Well Name and No.	NC 3M-32-8-22
9. API Well No.	43-047-34899
10. Field and Pool, or Exploratory Area	NATURAL BUTTES
11. County or Parish, State	UINTAH, UTAH

**SUBMIT IN TRIPLICATE**

1. Type of Well  
 Oil  Gas   
 Well  Well  Other

2. Name of Operator: QEP UINTA BASIN, INC. Contact: John Busch  
 Email: john.busch@questar.com

3. Address and Telephone No  
 11002 E. 17500 S. VERNAL, UT 84078-8526 (435) 781-4341

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
 620'FNL 1988' FWL NENW SEC 32 T8S R22E

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

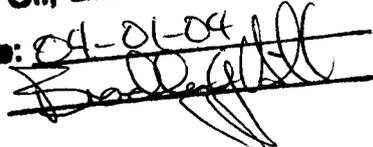
TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>APD Extension</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)

QEP Uinta Basin, Inc. hereby requests a 1 year extension on the APD for the NC 3M-32-8-22.

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

Date: 04-01-04  
By: 

**RECEIVED**  
**MAR 29 2004**  
DIV. OF OIL, GAS & MINING

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

Signed John Busch Title OPERATIONS Date 3/25/2004

(This space for Federal or State office use)

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

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

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

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

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

**API:** 43-047-34899  
**Well Name:** NC 3M-32-8-22  
**Location:** 620'FNL 1988' FWL NENW SEC 32 T8S R22E  
**Company Permit Issued to:** QEP UINTA BASIN, INC.  
**Date Original Permit Issued:** 3/5/2003

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

John Bunch  
Signature

3/25/2004  
Date

Title: OPERATIONS

Representing: QEP UINTA BASIN, INC.

RECEIVED  
MAR 29 2004  
DIV. OF OIL, GAS & MINING



State of Utah

Department of  
Natural Resources

MICHAEL R. STYLER  
*Executive Director*

Division of  
Oil, Gas & Mining

MARY ANN WRIGHT  
*Acting Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

April 13, 2005

Jan Nelson  
QEP Uinta Basin Inc.  
11002 East 17500 South  
Vernal, Utah 84078

Re: APD Rescinded – N Chapita 3M-32-8-22, Sec. 32, T. 8S, R. 22E  
Uintah County, Utah API No. 43-047-34899

Dear Ms. Nelson:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on March 5, 2003. On April 1, 2004 the Division granted a one-year APD extension. On April 12, 2005, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective April 12, 2005.

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

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

Sincerely,

Diana Whitney  
Engineering Technician

cc: Well File  
SITLA, Ed Bonner

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

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

Change of Operator (Well Sold)

**X - Operator Name Change/Merger**

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

1/1/2007

<b>FROM:</b> (Old Operator): N2460-QEP Uinta Basin, Inc. 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 672-6900	<b>TO:</b> ( New Operator): N5085-Questar E&P Company 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 672-6900
---	--

CA No.

Unit:

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

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

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

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 4/30/2007 and 5/15/2007
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 4/30/2007 and 5/15/2007
- Bond information entered in RBDMS on: 4/30/2007 and 5/15/2007
- Fee/State wells attached to bond in RBDMS on: 4/30/2007 and 5/15/2007
- Injection Projects to new operator in RBDMS on: 4/30/2007 and 5/15/2007
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: ESB000024
- Indian well(s) covered by Bond Number: 799446
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965003033
- b. The **FORMER** operator has requested a release of liability from their bond on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

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

**COMMENTS: THIS IS A COMPANY NAME CHANGE.**

SOME WELL NAMES HAVE BEEN CHANGED AS REQUESTED

Original Well Name	Well Name & No.	Q/Q	SEC	TWP	RNG	API	Entity	Lease	Well Type	Status
GB 6W-25-8-21	GB 6W-25-8-21	SENW	25	080S	210E	4304734121	13440	fee	GW	P
GB 7W-25-8-21	GB 7W-25-8-21	SWNE	25	080S	210E	4304734122	13436	fee	GW	P
GB 11W-30-8-22	<b>OU GB 11W 30 8 22</b>	NESW	30	080S	220E	4304734392	13433	fee	GW	P
UTAH STATE 1	<b>STATE 1</b>	NENE	36	070S	240E	4304715128	5878	State	GW	P
KAYE STATE 1-16	KAYE STATE 1-16	NWNW	16	100S	230E	4304730609	5395	State	GW	P
TOLL STATION ST 8-36-8-21	TOLL STATION ST 8-36-8-21	SENE	36	080S	210E	4304732724	12361	State	GW	S
GLEN BENCH ST 8A-36-8-21	<b>GB 8A 36 8 21</b>	SENE	36	080S	210E	4304733037	12377	State	GW	P
GLEN BENCH ST 6-36-8-21	<b>GB 6 36 8 21</b>	SENW	36	080S	210E	4304733038	12378	State	GW	P
GLEN BENCH ST 2-36-8-21	<b>GB 2 36 8 21</b>	NWNE	36	080S	210E	4304733252	12527	State	GW	P
GH 1W-32-8-21	GH 1W-32-8-21	NENE	32	080S	210E	4304733570	12797	State	GW	P
GH 3W-32-8-21	GH 3W-32-8-21	NENW	32	080S	210E	4304733571	12796	State	GW	P
GH 5W-32-8-21	GH 5W-32-8-21	SWNW	32	080S	210E	4304733572	12828	State	GW	P
GH 7W-32-8-21	GH 7W-32-8-21	SWNE	32	080S	210E	4304733573	12872	State	GW	P
GH 2W-32-8-21	GH 2W-32-8-21	NWNE	32	080S	210E	4304733744	13029	State	GW	P
GH 4W-32-8-21	GH 4W-32-8-21	NWNW	32	080S	210E	4304733745	13035	State	GW	P
GH 8W-32-8-21	GH 8W-32-8-21	SENE	32	080S	210E	4304733746	13030	State	GW	P
GB 3W-16-8-22	<b>OU GB 3W 16 8 22</b>	NENW	16	080S	220E	4304733751	13577	State	GW	P
GB 5W-16-8-22	<b>OU GB 5W 16 8 22</b>	SWNW	16	080S	220E	4304733752	13570	State	GW	P
GH 6W-32-8-21	GH 6W-32-8-21	SENW	32	080S	210E	4304733753	13036	State	GW	P
GB 11W-16-8-22	<b>OU GB 11W 16 8 22</b>	NESW	16	080S	220E	4304733754	13582	State	GW	P
GH 5G-32-8-21	GH 5G-32-8-21	SWNW	32	080S	210E	4304733866	13037	State	OW	P
GB 1W-36-8-21	GB 1W-36-8-21	NENE	36	080S	210E	4304733944	13439	State	GW	P
WV 7W-36-7-21	WV 7W-36-7-21	SWNE	36	070S	210E	4304734065	13334	State	GW	TA
WV 9W-36-7-21	WV 9W-36-7-21	NESE	36	070S	210E	4304734066	13331	State	GW	TA
WV 9W-16-7-21	WV 9W-16-7-21	NESE	16	070S	210E	4304734324		State	GW	LA
OU GB 4W-16-8-22	OU GB 4W-16-8-22	NWNW	16	080S	220E	4304734598	13579	State	GW	P
OU GB 10W-16-8-22	OU GB 10W-16-8-22	NWSE	16	080S	220E	4304734616		State	GW	LA
OU GB 12W-16-8-22	OU GB 12W-16-8-22	NWSW	16	080S	220E	4304734617	13697	State	GW	P
OU GB 13W-16-8-22	OU GB 13W-16-8-22	SWSW	16	080S	220E	4304734618	13611	State	GW	P
GB 14MU-16-8-22	GB 14MU-16-8-22	SESW	16	080S	220E	4304734619	14196	State	GW	P
OU GB 15W-16-8-22	OU GB 15W-16-8-22	SWSE	16	080S	220E	4304734622	13595	State	GW	P
OU GB 16W-16-8-22	OU GB 16W-16-8-22	SESE	16	080S	220E	4304734655	13815	State	GW	P
OU GB 2W-16-8-22	OU GB 2W-16-8-22	NWNE	16	080S	220E	4304734657	13721	State	GW	P
OU GB 6W-16-8-22	OU GB 6W-16-8-22	SENW	16	080S	220E	4304734658	13592	State	GW	P
OU GB 8W-16-8-22	OU GB 8W-16-8-22	SENE	16	080S	220E	4304734660	13769	State	GW	TA
OU GB 9W-16-8-22	OU GB 9W-16-8-22	NESE	16	080S	220E	4304734692		State	GW	LA
OU GB 15G-16-8-22	OU GB 15G-16-8-22	SWSE	16	080S	220E	4304734829	13777	State	OW	S
GB 7MU-36-8-21	GB 7MU-36-8-21	SWNE	36	080S	210E	4304734893	14591	State	GW	P
GB 3W-36-8-21	GB 3W-36-8-21	NENW	36	080S	210E	4304734894	13791	State	GW	P
NC 8M-32-8-22	NC 8M-32-8-22	SENE	32	080S	220E	4304734897		State	GW	LA
NC 3M-32-8-22	NC 3M-32-8-22	NENW	32	080S	220E	4304734899		State	GW	LA

Original Well Name	Well Name & No.	Q/Q	SEC	TWP	RNG	API	Entity	Lease	Well Type	Status
GB 5W-36-8-21	GB 5W-36-8-21	SWNW	36	080S	210E	4304734925	13808	State	GW	P
GB 4MU-36-8-21	GB 4MU-36-8-21	NWNW	36	080S	210E	4304734926	14589	State	GW	P
NC 11M-32-8-22	NC 11M-32-8-22	NESW	32	080S	220E	4304735040		State	GW	LA
GB 5SG-36-8-21	GB 5SG-36-8-21	SWNW	36	080S	210E	4304735155	14015	State	GW	P
SC 13ML-16-10-23	SC 13ML-16-10-23	SWSW	16	100S	230E	4304735281	14036	State	GW	P
SC 3M-16-10-23	<b>SC 3ML 16 10 23</b>	NENW	16	100S	230E	4304735282	14014	State	GW	P
SC 11ML-16-10-23	SC 11ML-16-10-23	NESW	16	100S	230E	4304735311	14035	State	GW	P
BB E 15G-16-7-21	<b>BBE 15G 16 7 21</b>	SWSE	16	070S	210E	4304735408	14070	State	OW	P
WH 13G-2-7-24	WH 13G-2-7-24	SWSW	02	070S	240E	4304735484	14176	State	GW	TA
FR 9P-36-14-19	FR 9P-36-14-19	NWSW	31	140S	200E	4304735880	14310	State	GW	S
CB 13G-36-6-20	CB 13G-36-6-20	SWSW	36	060S	200E	4304735969		State	OW	LA
WH 2G-2-7-24	WH 2G-2-7-24	NWNE	02	070S	240E	4304736259		State	GW	APD
WH 4G-2-7-24	WH 4G-2-7-24	NWNW	02	070S	240E	4304736261		State	GW	APD
FR 1P-36-14-19	FR 1P-36-14-19	NWNW	31	140S	200E	4304736300	14859	State	GW	S
WK 3ML-2-9-24	WK 3ML-2-9-24	NENW	02	090S	240E	4304736723		State	GW	APD
WK 7ML-2-9-24	WK 7ML-2-9-24	SWNE	02	090S	240E	4304736724		State	GW	APD
SC 5ML-16-10-23	SC 5ML-16-10-23	SWNW	16	100S	230E	4304736877	15125	State	GW	P
SC 12ML-16-10-23	SC 12ML-16-10-23	NWSW	16	100S	230E	4304736878	15053	State	GW	P
SC 14ML-16-10-23	SC 14ML-16-10-23	SESW	16	100S	230E	4304736908	15070	State	GW	P
SC 4ML-16-10-23	SC 4ML-16-10-23	NWNW	16	100S	230E	4304736912	15208	State	GW	P
FR 3P-36-14-19	FR 3P-36-14-19	NWNW	36	140S	190E	4304737376	15736	State	GW	DRL
BBE 9W-16-7-21	BBE 9W-16-7-21	NESE	16	070S	210E	4304737745		State	GW	APD
GB 10ML-16-8-22	GB 10ML-16-8-22	NWSE	16	080S	220E	4304737943		State	GW	APD
GB 9ML-16-8-22	GB 9ML-16-8-22	NESE	16	080S	220E	4304737944	15851	State	GW	DRL
FR 11P-36-14-19	FR 11P-36-14-19	NWSW	36	140S	190E	4304738349		State	GW	DRL
GB 4SG-36-8-21	GB 4SG-36-8-21	NWNW	36	080S	210E	4304738764		State	GW	APD
GB 7SG-36-8-21	GB 7SG-36-8-21	SWNE	36	080S	210E	4304738765		State	GW	APD

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

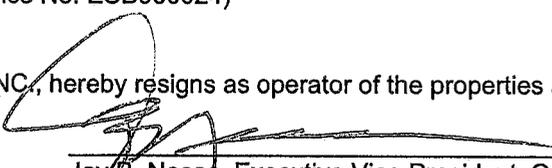
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____	5. LEASE DESIGNATION AND SERIAL NUMBER: see attached
2. NAME OF OPERATOR: <b>QUESTAR EXPLORATION AND PRODUCTION COMPANY</b>	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: see attached
3. ADDRESS OF OPERATOR: 1050 17th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

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

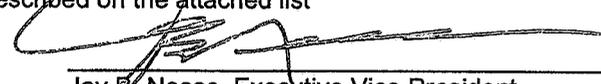
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: <u>1/1/2007</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Operator Name Change</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

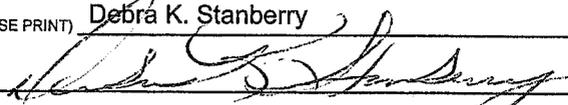
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective January 1, 2007 operator of record, QEP Uinta Basin, Inc., will hereafter be known as QUESTAR EXPLORATION AND PRODUCTION COMPANY. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:  
 Federal Bond Number: 965002976 (BLM Reference No. ESB000024)  
 Utah State Bond Number: 965003033  
 Fee Land Bond Number: 965003033  
 Current operator of record, QEP UINTA BASIN, INC., hereby resigns as operator of the properties as described on the attached list.

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

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

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

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

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APR 19 2007

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

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

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> (Submit in Duplicate)  Approximate date work will start: <u>1/1/2007</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion:	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Well Name Changes</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

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

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

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**RECEIVED**

**APR 19 2007**

DIV. OF OIL, GAS & MINING

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

ROUTING  
 CDW

Change of Operator (Well Sold)

**X - Operator Name Change**

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

**6/14/2010**

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

CA No.

Unit:

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

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/28/2010
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/28/2010
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/24/2010
- 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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached
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: See attached
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: See attached
2. NAME OF OPERATOR: Questar Exploration and Production Company <i>N5085</i>		8. WELL NAME and NUMBER: See attached
3. ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 <small>CITY</small> Denver <small>STATE</small> CO <small>ZIP</small> 80265		9. API NUMBER: Attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See attached		10. FIELD AND POOL, OR WILDCAT: See attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		COUNTY: Attached
		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: <u>6/14/2010</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Operator Name Change</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

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

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

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

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

DIV. OF OIL, GAS & MINING

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

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

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

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

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

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

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695