

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

FORM 3

AMENDED REPORT
(highlight changes)

APPLICATION FOR PERMIT TO DRILL			5. MINERAL LEASE NO: ML-49755	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA	
B. TYPE OF WELL: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. UNIT OR CA AGREEMENT NAME: NA	
2. NAME OF OPERATOR: Newfield Production Company			9. WELL NAME and NUMBER: State 1-36-6-20	
3. ADDRESS OF OPERATOR: Route #3 Box 3630 CITY Myton STATE UT ZIP 84052			PHONE NUMBER: (435) 646-3721	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: NE/NE 723' FNL 490' FEL 618265X 40.260145 AT PROPOSED PRODUCING ZONE: 4457349Y -109.609278			10. FIELD AND POOL, OR WILDCAT: Horseshoe Bend Under State of	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: Approximately 17.5 miles southwest of Vernal, Utah			12. COUNTY: Uintah	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) Approx. 490' f/lse line, NA f/unit	16. NUMBER OF ACRES IN LEASE: 640.00 acres	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40 acres		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) NA	19. PROPOSED DEPTH: 7,650	20. BOND DESCRIPTION: Hartford Accident #4471291		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 4777' GL	22. APPROXIMATE DATE WORK WILL START: 1st Qtr. 2009	23. ESTIMATED DURATION: (7) days from SPUD to rig release		

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			
12 1/4	8 5/8	J-55	24.0	300	Class G w/2% CaCl	155 sx +/-	1.17	15.8
7 7/8	5 1/2	J-55	15.5	7,650	Lead(Prem Lite II)	275 sx +/-	3.26	11.0
					Tail (50/50 Poz)	450 sx +/-	1.24	14.3

25. ATTACHMENTS

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

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

NAME (PLEASE PRINT) Mandie Crozier TITLE Regulatory Specialist

SIGNATURE *Mandie Crozier* DATE 10/30/08

(This space for State use only)

Approved by the Utah Division of Oil, Gas and Mining

API NUMBER ASSIGNED: 43047-40420

APPROVAL: _____

Date: 01-12-09

By: *[Signature]*

RECEIVED

NOV 20 2008

DIV OF OIL, GAS & MINING

(11/2001)

T6S, R20E, S.L.B.&M.

S89°44'W - 40.15 (G.L.O.)

2649.56' (Measured)

S89°44'W G.L.O. (Basis of Bearings)

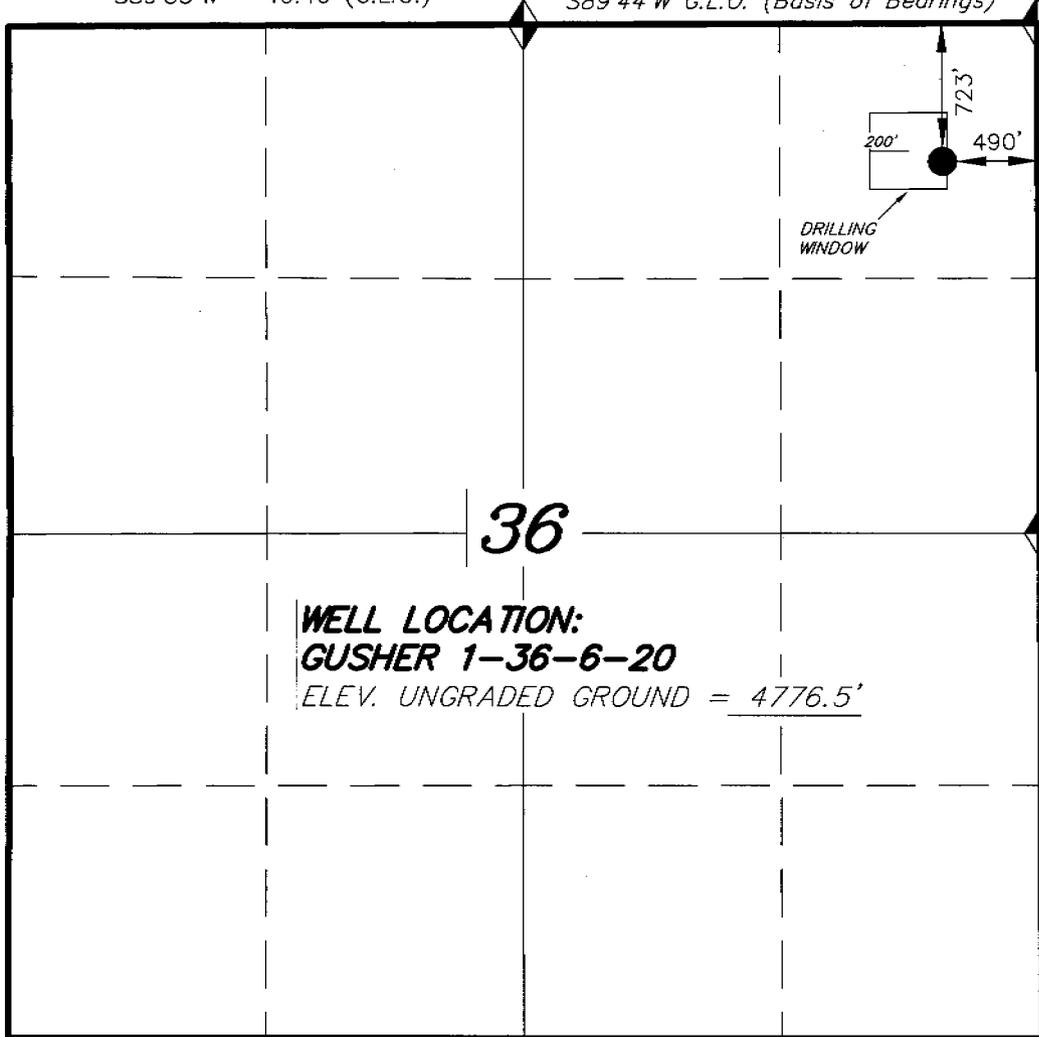
S89°35'W - 40.40 (G.L.O.)

N00°21'W
19.91 (G.L.O.)

N00°28'W
20.50 (G.L.O.)

N00°02'E - 40.02 (G.L.O.)

N00°24'33"W - 2680.17' (Meas.)
N00°26'W - 80.71 (G.L.O.)

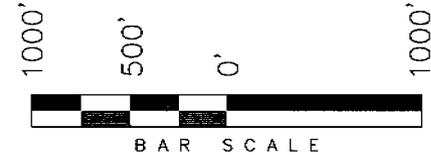


WELL LOCATION:
GUSHER 1-36-6-20
ELEV. UNGRADED GROUND = 4776.5'

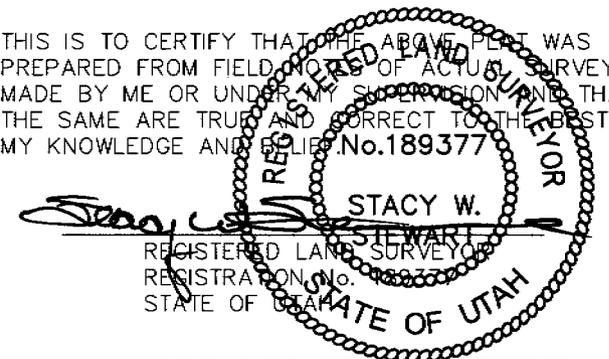
S89°52'W - 80.88 (G.L.O.)

NEWFIELD PRODUCTION COMPANY

WELL LOCATION, GUSHER 1-36-6-20,
LOCATED AS SHOWN IN THE NE 1/4 NE
1/4 OF SECTION 36, T6S, R20E,
S.L.B.&M. UINTAH COUNTY, UTAH.



THIS IS TO CERTIFY THAT THE ABOVE PLOT 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. No. 189377



STACY W. STEWART
REGISTERED LAND SURVEYOR
REGISTRATION No. 189377
STATE OF UTAH

◆ = SECTION CORNERS LOCATED

BASIS OF ELEV;
U.S.G.S. 7-1/2 min QUAD (VERNAL SE)

GUSHER 1-36-6-20
(Surface Location) NAD 83
LATITUDE = 40° 15' 36.73"
LONGITUDE = 109° 36' 35.72"

TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078
(435) 781-2501

DATE SURVEYED: 4-21-08	SURVEYED BY: C.M.
DATE DRAWN: 4-24-08	DRAWN BY: M.W.
REVISED:	SCALE: 1" = 1000'

NEWFIELD



Route #3 Box 3630
Myton, Utah 84052
(435) 646-4825, FAX: (435) 646-3031

October 30, 2008

State of Utah
Division of Oil, Gas & Mining
Attn: Diana Mason
1594 West North Temple - Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Application for Permit to Drill
State 1-36-6-20

Dear Diana:

Enclosed find an APD on the above referenced well. Please Contact Dave Allred to set up an On-Site inspection date. If you have any questions, feel free to give either Dave Allred or myself a call.

Sincerely,

Mandie Crozier
Regulatory Specialist

mc
enclosures

cc: SITLA

NEWFIELD PRODUCTION COMPANY
STATE 1-36-6-20
NE/NE SECTION 36, T6S, R20E
UINTAH COUNTY, UTAH

TEN POINT DRILLING PROGRAM

1. **GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

2. **ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:**

Uinta	0 – 4080'
Green River	4080'
Wasatch	7650'

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

Green River Formation (Oil) 4080' – 7650'

Fresh water may be encountered in the Uinta Formation, but would not be expected below about 350'. All water shows and water bearing geologic units shall be reported to the geologic and engineering staff of the Vernal Office prior to running the next string of casing or before plugging orders are requested. All water shows must be reported within one (1) business day after being encountered.

All usable (<10,000 PPM TDS) water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling will be recorded by depth and adequately protected. This information shall be reported to the Vernal Office.

Detected water flows shall be sampled, analyzed, and reported to the geologic & engineering staff of the Vernal Office. The office may request additional water samples for further analysis. Usage of the State of Utah form *Report of Water Encountered* is acceptable, but not required.

The following information is requested for water shows and samples where applicable:

Location & Sampled Interval	Date Sampled
Flow Rate	Temperature
Hardness	pH
Water Classification (State of Utah)	Dissolved Calcium (Ca) (mg/l)
Dissolved Iron (Fe) (ug/l)	Dissolved Sodium (Na) (mg/l)
Dissolved Magnesium (Mg) (mg/l)	Dissolved Carbonate (CO ₃) (mg/l)
Dissolved Bicarbonate (NaHCO ₃) (mg/l)	Dissolved Chloride (Cl) (mg/l)
Dissolved Sulfate (SO ₄) (mg/l)	Dissolved Total Solids (TDS) (mg/l)

4. **PROPOSED CASING PROGRAM:**

a. Casing Design: State 1-36-6-20

Size	Interval		Weight	Grade	Coupling	Design Factors		
	Top	Bottom				Burst	Collapse	Tension
Surface casing 8-5/8"	0'	300'	24.0	J-55	STC	2,950	1,370	244,000
						17.53	14.35	33.89
Prod casing 5-1/2"	0'	7,650'	15.5	J-55	LTC	4,810	4,040	217,000
						1.98	1.66	1.83

Assumptions:

- 1) Surface casing max anticipated surface press (MASP) = Frac gradient – gas gradient
- 2) Prod casing MASP (production mode) = Pore pressure – gas gradient
- 3) All collapse calculations assume fully evacuated casing w/ gas gradient
- 4) All tension calculations assume air weight

Frac gradient at surface casing shoe = 13.0 ppg
 Pore pressure at surface casing shoe = 8.33 ppg
 Pore pressure at prod casing shoe = 8.33 ppg
 Gas gradient = 0.115 psi/ft

All casing shall be new or, if used, inspected and tested. Used casing shall meet or exceed API standards for new casing.

All casing strings shall have a minimum of 1 (one) centralizer on each of the bottom three (3) joints.

b. Cementing Design: State 1-36-6-20

Job	Fill	Description	Sacks	OH Excess*	Weight (ppg)	Yield (ft ³ /sk)
			ft ³			
Surface casing	300'	Class G w/ 2% CaCl	138	30%	15.8	1.17
			161			
Prod casing Lead	5,650'	Prem Lite II w/ 10% gel + 3% KCl	390	30%	11.0	3.26
			1273			
Prod casing Tail	2,000'	50/50 Poz w/ 2% gel + 3% KCl	363	30%	14.3	1.24
			451			

- *Actual volume pumped will be 15% over the caliper log
- Compressive strength of lead cement: 1800 psi @ 24 hours, 2250 psi @ 72 hours
 - Compressive strength of tail cement: 2500 psi @ 24 hours

Hole Sizes: A 12-1/4" hole will be drilled for the 8-5/8" surface casing. A 7-7/8" hole will be drilled for the 5-1/2" production casing.

Waiting On Cement: A minimum of four (4) hours shall elapse prior to attempting any pressure testing of the BOP equipment which would subject the surface casing cement to pressure, and a minimum of six (6) hours shall elapse before drilling out of the wiper plug, cement, or shoe is begun. WOC time shall be recorded in the Driller's Log. Compressive Strength shall be a minimum of 500 psi prior to drilling out.

The 8-5/8" surface casing shall in all cases be cemented back to surface. In the event that during the primary surface cementing operation the cement does not circulate to surface, or if the cement level should fall back more than 8 feet from surface, then a remedial surface cementing operation shall be performed to insure adequate isolation and stabilization of the surface casing.

The production casing cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals.

As a minimum, usable water zones shall be isolated and/or protected by having a cement top for the production casing at least 200 feet above the base of the usable water. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc., shall be utilized to help isolate the cement from contamination by the mud being displaced ahead of the cement slurry.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or to 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield. If pressure declines more than 10% in 30 minutes, corrective action shall be taken.

Setting of each string of casing showing the size, grade, weight of casing set, depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of the cementing tools used, casing test method and results, and the date of the work done. Spud date will be shown on the first reports submitted.

5. **MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

The operator's minimum specifications for pressure control equipment are as follows:

An 8" Double Ram Hydraulic unit with a closing unit will be utilized. Function test of BOP's will be check daily.

Refer to **Exhibit C** for a diagram of BOP equipment that will be used on this well.

6. **TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:**

From surface to ±350 feet will be drilled with an air/mist system. The air rig is equipped with a 6 ½" blooie line that is straight run and securely anchored. The blooie line is used with a discharge less than 100 ft from the wellbore in order to minimize the well pad size. The blooie line is not equipped with an automatic igniter or continuous pilot light and the compressor is located less than 100 ft from the well bore due to the low possibility of combustion with the air dust mixture. The trailer mounted compressor (capacity of 2000 CFM) has a safety shut-off valve which is located 15 feet from the air rig. A truck with 70 bbls of water is on stand by to be used as kill fluid, if necessary. From about ±350 feet to TD, a fresh water system will be utilized. Clay inhibition and hole stability will be achieved with a KCl substitute additive. This additive will be identified in the APD and reviewed to determine if the reserve pit shall be lined. This fresh water system will typically contain Total Dissolved Solids (TDS) of less than 3000 PPM. Anticipated mud weight is 8.4 lbs/gal. If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant, with barite.

No chromate additives will be used in the mud system on Federal and/or Indian lands without prior BLM approval to ensure adequate protection of fresh aquifers.

No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of this well.

Hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

Newfield Production will visually monitor pit levels and flow from the well during drilling operations.

7. **AUXILIARY SAFETY EQUIPMENT TO BE USED:**

Auxiliary safety equipment will be a Kelly Cock, bit float, and a TIW valve with drill pipe threads.

8. **TESTING, LOGGING AND CORING PROGRAMS:**

The logging program will consist of a Dual Induction, Gamma Ray and Caliper log from TD to base of surface casing @ 290' +/-, and a Compensated Neutron-Formation Density Log from TD to 3500' +/- . A cement bond log will be run from PBTD to cement top. No drill stem testing or coring is planned for this well.

9. **ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

No abnormal temperatures or pressures are anticipated. No hydrogen sulfide has been encountered or is known to exist from previous drilling in the area at this depth. Maximum anticipated bottomhole pressure will approximately equal total depth in feet multiplied by a 0.433 psi/foot gradient.

10. **ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:**

It is anticipated that the drilling operations will commence the first quarter of 2009, and take approximately seven (7) days from spud to rig release.

NEWFIELD PRODUCTION COMPANY
STATE 1-36-6-20
NE/NE SECTION 36, T6S, R20E
UINTAH COUNTY, UTAH

THIRTEEN POINT SURFACE PROGRAM

1. EXISTING ROADS

See attached **Topographic Map "A"**

To reach Newfield Production Company well location site State 1-36-6-20 located in the NE¼ NE¼ Section 36, T6S, R20E, S.L.B. & M., Uintah County, Utah:

Proceed southwesterly out of Vernal, Utah along Highway 40 – 10.3 miles ± to the junction of this highway and an existing road to the southeast; proceed southeasterly – 5.3 miles ± to it's junction with an existing road to the southwest; proceed southwesterly – 1.7 miles ± to it's junction with the beginning of the proposed access road to the northwest; proceed northwesterly along the proposed access road – 870' ± to the proposed well location.

The aforementioned dirt oil field service roads and other roads in the vicinity are constructed out of existing native materials that are prevalent to the existing area they are located in and range from clays to a sandy-clay shale material.

The roads for access during the drilling, completion and production phase will be maintained at the standards required by the State of Utah, or other controlling agencies. This maintenance will consist of some minor grader work for smoothing road surfaces and for snow removal.

2. PLANNED ACCESS ROAD

Approximately 870' of access road is proposed. See attached **Topographic Map "B"**.

The proposed access road will be an 18' crown road (9' either side of the centerline) with drainage ditches along either side of the proposed road whether it is deemed necessary in order to handle any run-off from normal meteorological conditions that are prevalent to this area. The maximum grade will be less than 8%.

There will be no culverts required along this access road. There will be barrow ditches and turnouts as needed along this road.

There are no fences encountered along this proposed road. There will be no new gates or cattle guards required.

All construction material for this access road will be borrowed material accumulated during construction of the access road.

3. LOCATION OF EXISTING WELLS

Refer to **EXHIBIT B**.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

There are no existing facilities that will be used by this well.

It is anticipated that this well will be a producing oil well.

Upon construction of a tank battery, the well pad will be surrounded by a dike of sufficient capacity to contain at minimum 110% of the largest tank volume within the facility battery.

Tank batteries will be built to State specifications.

All permanent (on site for six (6) months or longer) structures, constructed or installed (including pumping units), will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities will be painted within six months of installation.

5. **LOCATION AND TYPE OF WATER SUPPLY**

Newfield Production will transport water by truck for drilling purposes from the following water sources:

Johnson Water District
Water Right: 43-7478

Neil Moon Pond
Water Right: 43-11787

Maurice Harvey Pond
Water Right: 47-1358

Newfield Collector Well
Water Right: 41-3530 (A30414DV, contracted with the Duchesne County Conservancy District).

There will be no water well drilled at this site

6. **SOURCE OF CONSTRUCTION MATERIALS**

All construction material for this location shall be borrowed material accumulated during construction of the location site and access road.

A mineral material application is not required for this location.

7. **METHODS FOR HANDLING WASTE DISPOSAL**

A small reserve pit (90' x 40' x 8' deep, or less) will be constructed from native soil and clay materials. The reserve pit will receive the processed drill cutting (wet sand, shale & rock) removed from the wellbore. Any drilling fluids, which do accumulate in the pit as a result of shale-shaker carryover, cleaning of the sand trap, etc., will be promptly reclaimed. All drilling fluids will be fresh water based, typically containing Total Dissolved Solids of less than 3000 PPM. No potassium chloride, chromates, trash, debris, nor any other substance deemed hazardous will be placed in this pit. A 16 mil liner with felt will be required. Newfield requests approval that a flare pit be constructed and utilized on this location.

A portable toilet will be provided for human waste.

A trash basket will be provided for garbage (trash) and hauled away to an approved disposal site at the completion of the drilling activities.

Immediately upon first production, all produced water will be confined to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Newfield's secondary recovery project.

Water not meeting quality criteria, is disposed at Newfield's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

8. **ANCILLARY FACILITIES:**

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. **WELL SITE LAYOUT:**

See attached Location Layout Sheet.

Fencing Requirements

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

- a) A 39-inch net wire shall be used with at least one strand of barbed wire on top of the net.
- b) The net wire shall be no more than two (2) inches above the ground. The barbed wire shall be three (3) inches above the net wire. Total height of the fence shall be at least forty-two (42) inches.
- c) Corner posts shall be centered and/or braced in such a manner to keep tight at all times
- d) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than sixteen (16) feet.
- e) All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.

The reserve pit fencing will be on three (3) sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

10. **PLANS FOR RESTORATION OF SURFACE:**

a) **Producing Location**

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

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximated natural contours. Weather permitting, the reserve pit will be reclaimed within one hundred twenty (120) days from the date of well completion. Before any dirt work takes place, the reserve pit must have all fluids and hydrocarbons removed.

b) **Dry Hole Abandoned Location**

At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment and the State of Utah will attach the appropriate surface rehabilitation conditions of approval.

11. **SURFACE OWNERSHIP:** State of Utah

12. **OTHER ADDITIONAL INFORMATION:**

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #08-140, 7/23/08. Paleontological Resource Survey prepared by, Wade Miller, 6/11/08. See attached report cover pages, Exhibit "D".

- a) Newfield Production Company is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, Newfield is to immediately stop work that might further disturb such materials and contact the Authorized Officer.
- b) Newfield Production will control noxious weeds along rights-of-way for roads, pipelines, well sites or other applicable facilities. On State administered land it is required that a Pesticide Use Proposal shall be submitted and given approval prior to the application of herbicides or other possible hazardous chemicals.
- c) Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on State Lands after the conclusion of drilling operations or at any other time without State authorization. However, if State authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities.

Additional Surface Stipulations

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws and regulations, Onshore Oil and Gas Orders, the approved plan of operations and any applicable Notice to Lessees. A copy of these conditions will be furnished to the field representative to ensure compliance.

Hazardous Material Declaration

Newfield Production Company guarantees that during the drilling and completion of the State 1-36-6-20, Newfield will not use, produce, store, transport or dispose 10,000# annually of any of the hazardous chemicals contained in the Environmental Protection Agency's consolidated list of chemicals subject to reporting under Title III Superfund Amendments and Reauthorization Act (SARA) of 1986. Newfield also guarantees that during the drilling and completion of the State 1-36-6-20 Newfield will use, produce, store, transport or dispose less than the threshold planning quantity (T.P.Q.) of any extremely hazardous substances as defined in 40 CFR 355.

A complete copy of the approved APD, if applicable, shall be on location during the construction of the location and drilling activities.

Newfield Production Company or a contractor employed by Newfield Production shall contact the State office at (801) 722-3417, 48 hours prior to construction activities.

The State office shall be notified upon site completion prior to moving on the drilling rig.

13. **LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:**

Representative

Name: Dave Allred
Address: Newfield Production Company
Route 3, Box 3630
Myton, UT 84052
Telephone: (435) 646-3721

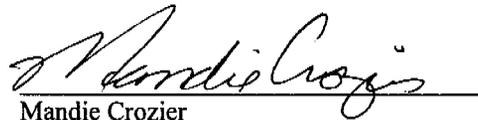
Certification

Please be advised that Newfield Production Company is considered to be the operator of well #1-36-6-20, NE/NE Section 36, T6S, R20E, Uintah County, Utah and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4471291.

I hereby certify that the proposed drill site and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Newfield Production Company and 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 the 18 U.S.C. 1001 for the filing of a false statement.

10/30/08

Date

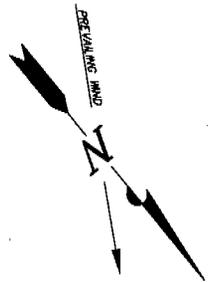


Mandie Crozier
Regulatory Specialist
Newfield Production Company

NEWFIELD PRODUCTION COMPANY

GUSHER 1-36-6-20

Section 36, T6S, R20E, S.L.B.&M.



PROPOSED ACCESS ROAD (Max. 6% Grade)

F/6.9

C/3.8

C/7.8

2

3

4

STA. 2+90

ROUND CORNER TO AVOID EXCESS FILL

R=50'

PIT TOPSOIL STOCKPILE

STA. 2+20

130'

2' Berm Around Fill Portion of Location

A C/10.2

B C/11.0

1:1 Slopes

70'

80'

10' WIDE BENCH

C C/10.0

F/3.0

120'

C/5.9

5

STA. 1+60

29'

10'

D C/7.4

TOPSOIL STOCKPILE

10'

FLARE PIT

WELL HEAD:
UNGRADED = 4776.5'
FIN. GRADE = 4770.6'

Note:
Flare pit is to be located a minimum of 80' from well head.

EXCESS MATERIAL

Top of Cut Slope

R=50'

ROUND CORNER TO AVOID EXCESS FILL

ROUND CORNER TO AVOID EXCESS FILL

R=25'

STA. 0+00

F/12.5

160'

140'

Toe of Fill Slope

8 F/15.0

6 F/12.9

TOPSOIL STOCKPILE

REFERENCE POINTS

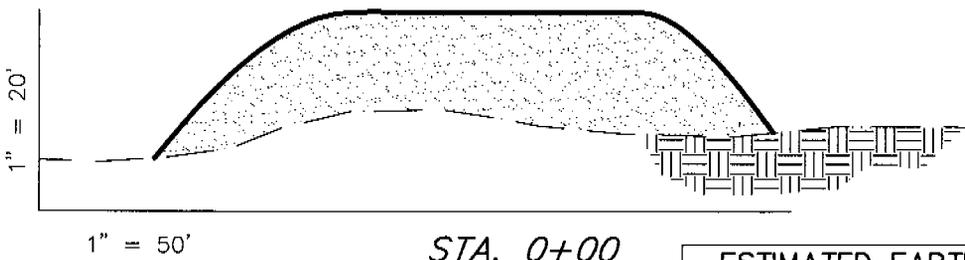
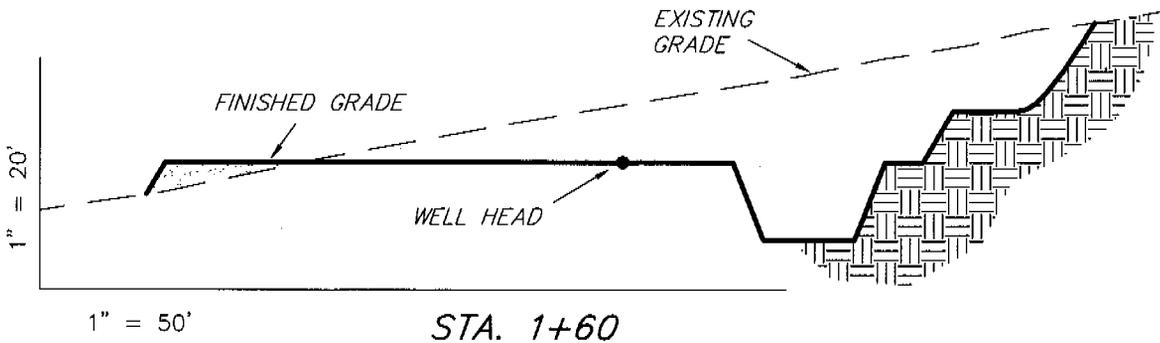
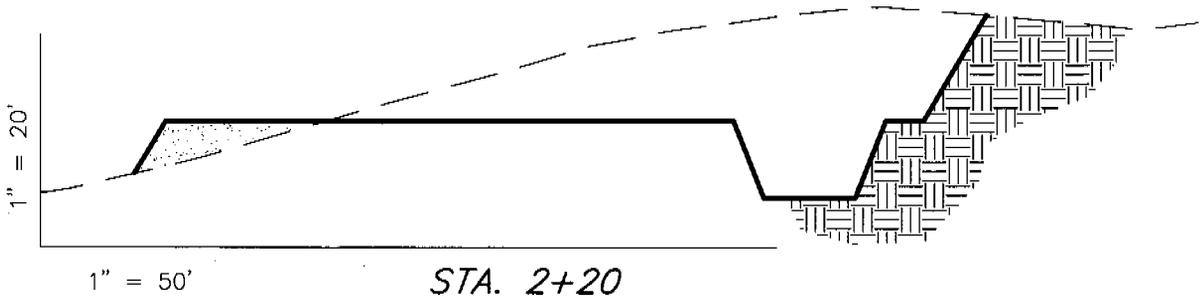
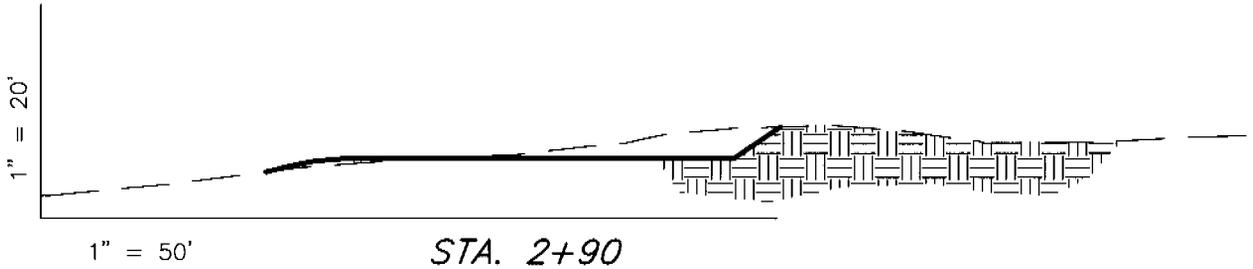
- 210' NORTHEAST - 4755.8'
- 260' NORTHEAST - 4753.0'
- 170' SOUTHEAST - 4764.7'
- 220' SOUTHEAST - 4762.0'

SURVEYED BY: C.M.	DATE SURVEYED: 4-21-08
DRAWN BY: M.W.	DATE DRAWN: 4-24-08
SCALE: 1" = 50'	REVISED:

Tri State Land Surveying, Inc. (435) 781-2501
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

NEWFIELD PRODUCTION COMPANY

CROSS SECTIONS GUSHER 1-36-6-20



NOTE:
UNLESS OTHERWISE
NOTED ALL CUT/FILL
SLOPES ARE AT 1.5:1

ESTIMATED EARTHWORK QUANTITIES (No Shrink or swell adjustments have been used) (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	5,060	5,060	Topsoil is not included in Pad Cut	0
PIT	640	0		640
TOTALS	5,700	5,060	1,100	640

SURVEYED BY: C.M.

DATE SURVEYED: 4-21-08

DRAWN BY: M.W.

DATE DRAWN: 4-24-08

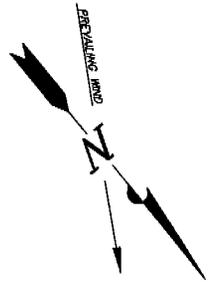
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REVISED:

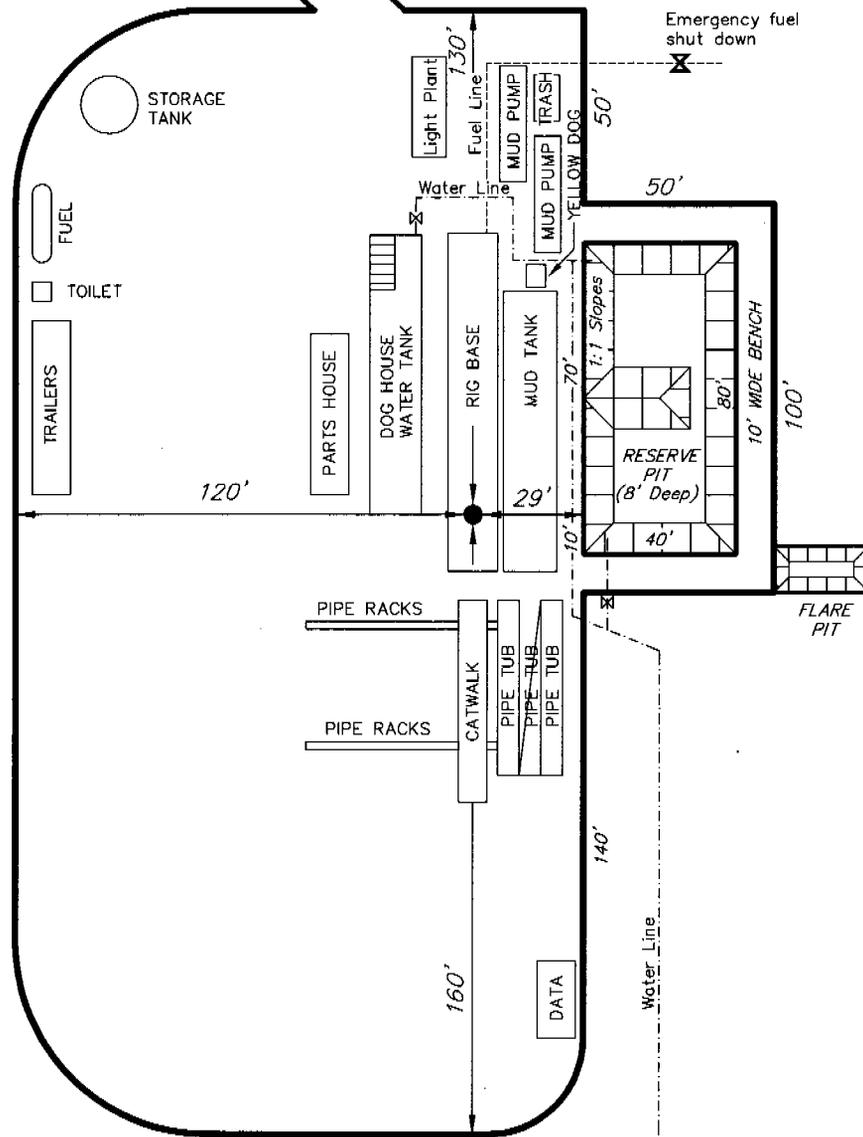
Tri State (435) 781-2501
Land Surveying, Inc.
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

NEWFIELD PRODUCTION COMPANY

TYPICAL RIG LAYOUT GUSHER 1-36-6-20

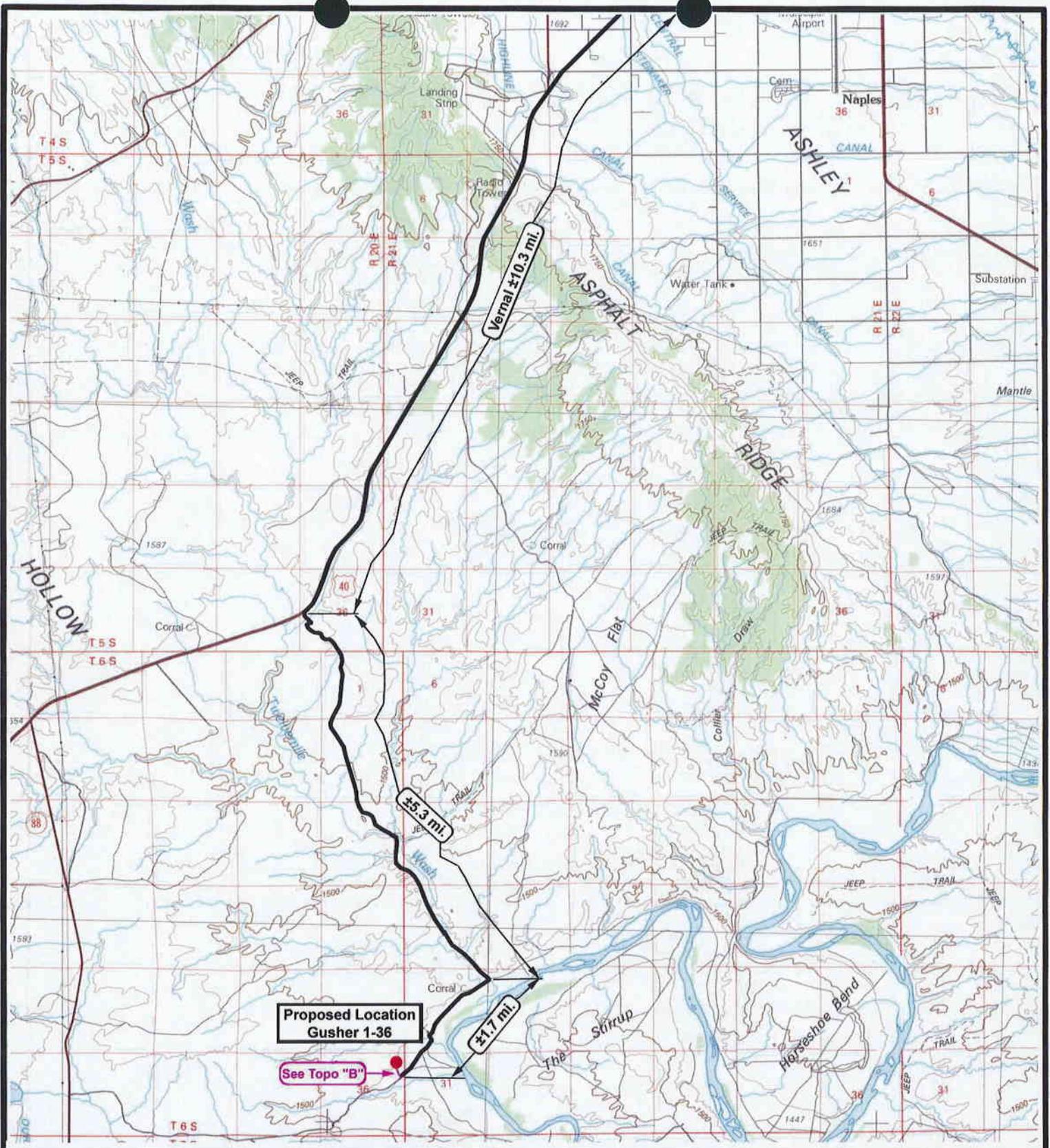


PROPOSED ACCESS
ROAD (Max. 6% Grade)



SURVEYED BY: C.M.	DATE SURVEYED: 4-21-08
DRAWN BY: M.W.	DATE DRAWN: 4-24-08
SCALE: 1" = 50'	REVISED:

Tri State (435) 781-2501
Land Surveying, Inc.
 180 NORTH VERNAL AVE. VERNAL, UTAH 84078



**Proposed Location
Gusher 1-36**

See Topo "B"



NEWFIELD
Exploration Company

**Gusher 1-36-6-20E
SEC. 36, T6S, R20E, S.L.B.&M.**




Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

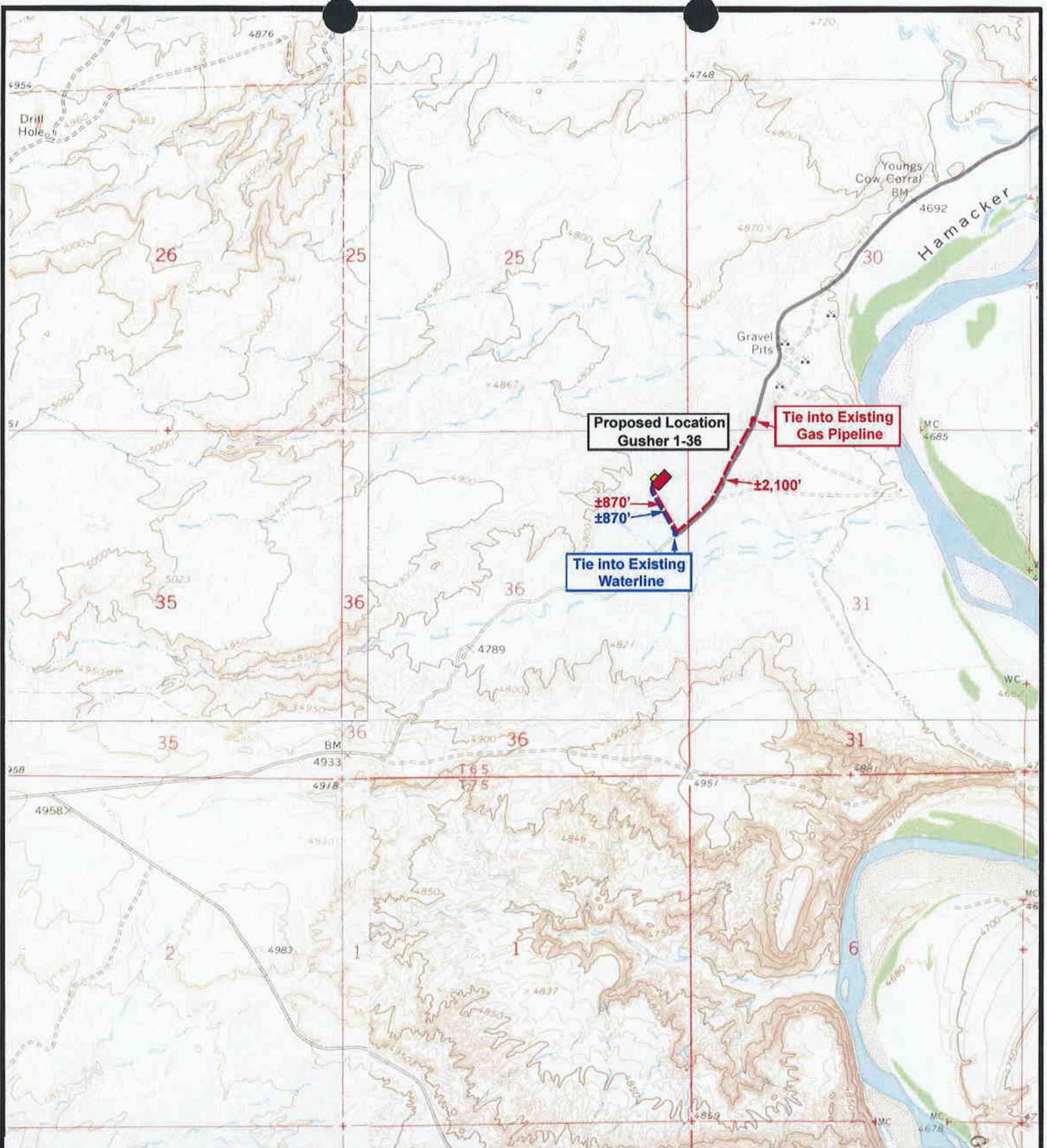
SCALE: 1: 100,000
DRAWN BY: nc
DATE: 05-08-2008

Legend

-  Existing Road
-  Proposed Access

TOPOGRAPHIC MAP

"A"




NEWFIELD
Exploration Company

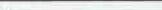
Gusher 1-36-6-20E
SEC. 36, T6S, R20E, S.L.B.&M.




Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

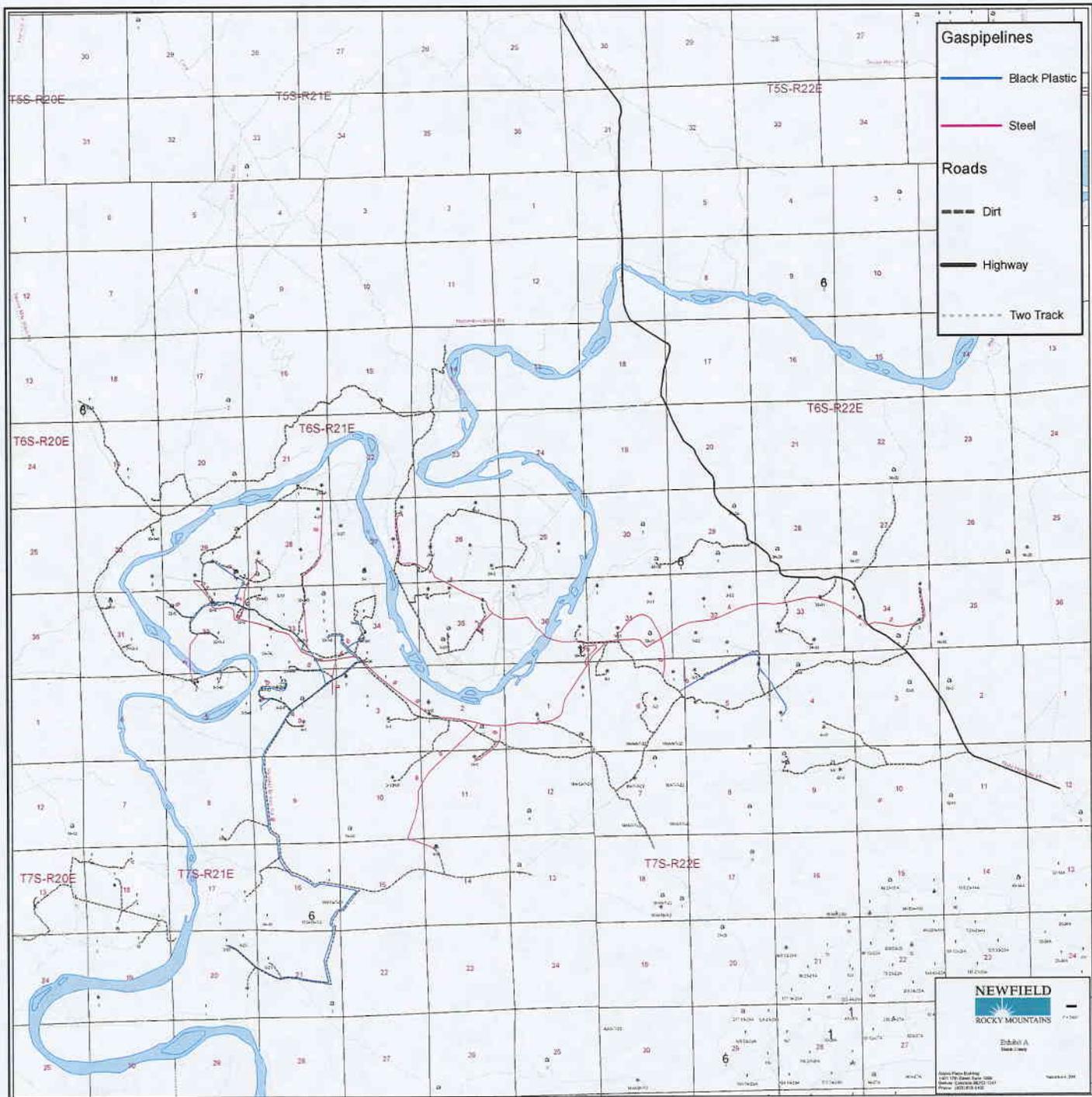
SCALE: 1" = 2,000'
DRAWN BY: nlc
DATE: 05-08-2008

Legend

-  Roads
-  Proposed Gas Line
-  Proposed Water Line

TOPOGRAPHIC MAP

"C"



Gaspipelines

- Black Plastic
- Steel

Roads

- Dirt
- Highway
- Two Track

NEWFIELD
ROCKY MOUNTAINS

Station A
Road Study

Station A Road Study
10/17/19 (Draft) Date: 10/19/19
Station: Station A (R21) 10/19/19
Project: 10/19/19

2-M SYSTEM

Blowout Prevention Equipment Systems

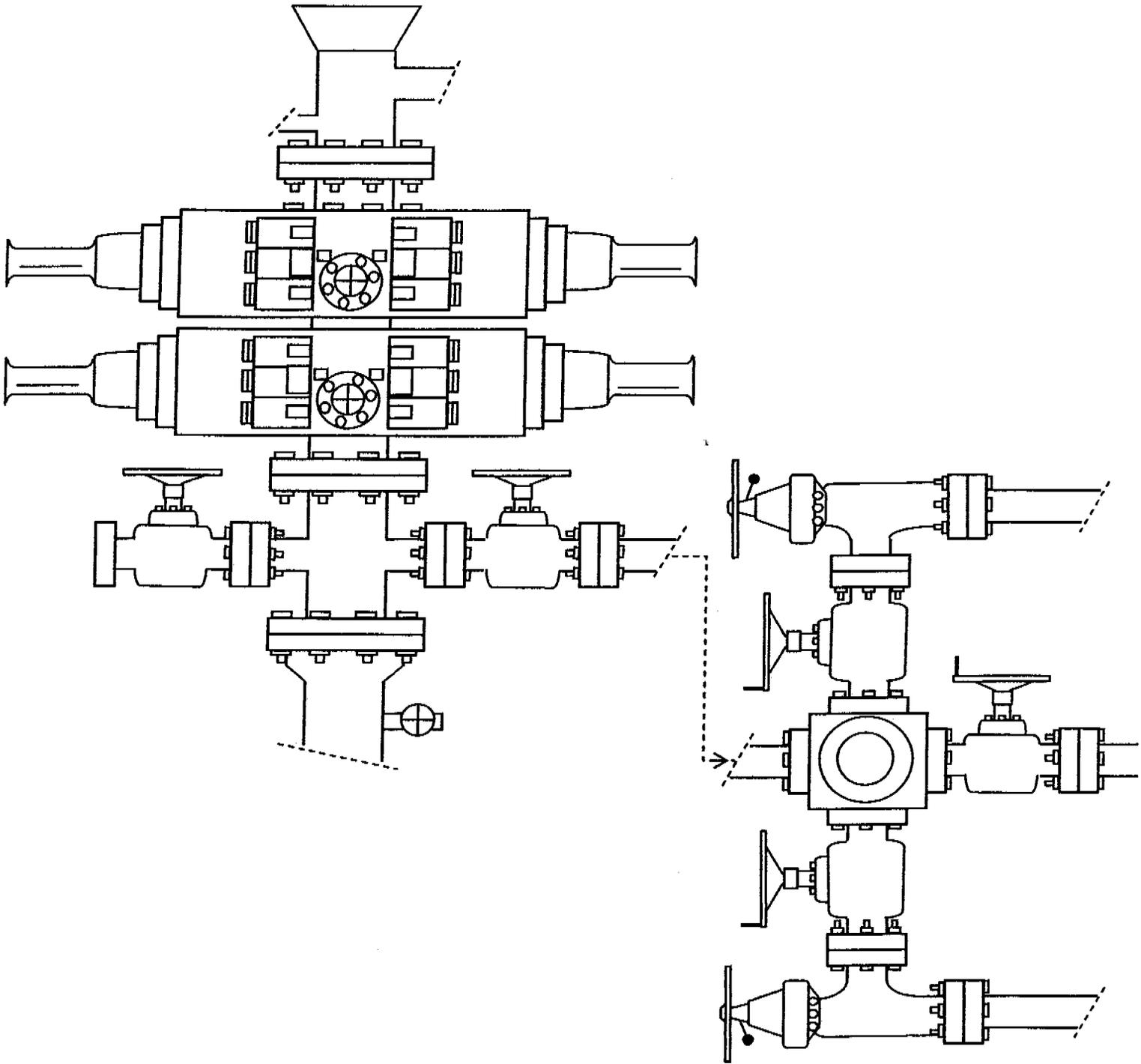


EXHIBIT C

CULTURAL RESOURCE INVENTORY OF
NEWFIELD EXPLORATION'S NINE PROPOSED
GUSHER WELL LOCATIONS #12-5-6-20, #12-6-6-20,
#16-6-6-20, #4-9-6-20, #16-9-6-20, #2-17-6-20,
#2-26-6-20, #1-36-6-20 AND #12-7-6-21
UINTAH COUNTY, UTAH

By:

Jacki Montgomery

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional
Trust Lands Administration

Prepared Under Contract With:

Newfield Exploration Company
Rt. 3 Box 3630
Myton, UT 84052

Submitted By:

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

MOAC Report No. 08-140

July 23, 2008

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

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

State of Utah Antiquities Project (Survey)
Permit No. U-08-MQ-0455b,s

NEWFIELD EXPLORATION COMPANY

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED DEVELOPMENT
AREAS AND WATER PIPELINE TIE-INS,
DUCHESNE & UINTA COUNTIES, UTAH**

Pariette Draw and Greater Boundary Areas

NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18);
NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17)

Horseshoe Bend Area

NW 1/4, NW 1/4, & SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (4 & 16-9-6-20); NW 1/4, NE 1/4,
Section 26, T 6 S, R 20 E (2-26-6-20); NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20);
NW 1/4, SW 1/4, & SE 1/4, SE 1/4 Section 6, T 6 S, R 20 E (12 & 16-6-20); NW 1/4, SW 1/4,
Section 5, T 6 S, R 20 E (12-5-6-20); NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20);
NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21)

REPORT OF SURVEY

Prepared for:

Newfield Exploration Company

Prepared by:

Wade E. Miller
Consulting Paleontologist
June 11, 2008

NEWFIELD EXPLORATION COMPANY

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED DEVELOPMENT
AREAS AND WATER PIPELINE TIE-INS,
DUCHESNE & UINTA COUNTIES, UTAH**

Pariette Draw and Greater Boundary Areas

NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18);
NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17)

Horseshoe Bend Area

NW 1/4, NW 1/4, & SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (4 & 16-9-6-20); NW 1/4, NE 1/4,
Section 26, T 6 S, R 20 E (2-26-6-20); NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20);
NW 1/4, SW 1/4, & SE 1/4, SE 1/4 Section 6, T 6 S, R 20 E (12 & 16-6-20); NW 1/4, SW 1/4,
Section 5, T 6 S, R 20 E (12-5-6-20); NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20);
NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21)

REPORT OF SURVEY

Prepared for:

Newfield Exploration Company

Prepared by:

Wade E. Miller
Consulting Paleontologist
June 11, 2008

INTRODUCTION

A list of seven 40 acre parcels in the Horseshoe Bend area, and three sites in the Pariette Draw and Greater Boundary areas were sent to Wade Miller, Consulting Paleontologist, by Mandie Crozier of Newfield Exploration Company's Myton, Utah, office on two separate dates. These dates were May 15 and 29, 2008. Actually one of these sites, the SE 1/4, NE 1/4, Section 34, T 8 S, R 18 E (42-34D-8-18) in the Greater Boundary area had been done earlier, and contained in a report dated May 29, 2008. The surveyed units included in this report are the NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18), and NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17), Pariette Draw and Greater Boundary Areas, as well as the NW 1/4, NW 1/4, & SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (4 & 16-9-6-20); NW 1/4, NE 1/4, Section 26, T 6 S, R 20 E (2-26-6-20); NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20); NW 1/4, SW 1/4, & SE 1/4, SE 1/4 Section 6, T 6 S, R 20 E (12 & 16-6-20); NW 1/4, SW 1/4, Section 5, T 6 S, R 20 E (12-5-6-20); NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20); NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21) in the Horseshoe Bend Area. Dates in which the field work was done on the project reported here were June 4th, and on June 9 & 10th, 2008. All work was done by Wade E. Miller, paleontological consultant. The survey begun on June 4th was cut short due to heavy rains which prevented further field work. This work was then continued and completed on June 9th and 10th.

Reports of paleontological surveying from 1999 through 2003, included general paleontological procedures used in field work, so they are not reported in detail here. The work for the areas of this report followed these same procedures. The earlier reports containing procedures should be on file in the Newfield Production Company's office as ones submitted to Newfield's precursor, the Inland Production Company. These reports should also be on file with the Salt Lake City and Vernal, Utah offices of the Bureau of Land Management (BLM).

It is the Uinta Formation that occupies much of the surface sediment and rock in the Uinta Basin where the Newfield Production Company has leased oil and gas land from the BLM. This formation ranks as one of Utah's most paleontologically sensitive geologic formations. It is for this reason that the BLM requires paleontological surveys for any type of land disturbance affecting this formation. Newfield, as well as the Inland Production Company before them, has been complying with the regulations involved. Fossils from the Uinta Formation have provided a wealth of scientifically important information regarding past animal life and its history, as well as the ancient environmental conditions that existed about 45 million years ago in the Uinta Basin and surrounding areas. As has earlier been reported, a Mammalian Age has been erected for all North America based on the Eocene fossils from the Uinta Basin.

Some of the specific types of fossil plants and animals found on Newfield's oil and gas leased land have been cited in earlier reports by the present author. The importance of protecting scientifically significant fossils and the Federal and State laws regarding their protection have also been cited in earlier reports. All the significant fossils collected during paleontological field surveys have been brought to the paleontological laboratory at Brigham Young University where they are prepared and curated into the fossil collections there. Whenever important fossils are collected on BLM lands, a Paleontological Report form is filled in and submitted to the Salt Lake City and local BLM offices. In the case of the Uinta Basin, this Regional Office is in Vernal, Utah. Fossils thus collected, prepared and curated are available to any qualified scientist. Some of the specimens are displayed at BYU's Earth Science Museum in Provo, Utah.

Two types of maps were used for the paleontological survey reported here, as has been true for all other surveys. One type is the planimetric map showing the roads through the oil and gas fields as provided by the Newfield Exploration/Production Company. The other is the topographic map. This is useful in determining specific areas, with their surface features. Ones used in the present survey work were the Pariette Draw SW, Uteland Butte, Vernal SW and Vernal SE 7.5' maps produced by the United States Geological Survey. These four maps covered all the area where the presently reported paleontological survey work took place. All were published in 1964.

PALEONTOLOGICAL FIELD SURVEY

Again, the paleontological field survey procedures are the same as those done earlier and reported. All areas receiving a survey are walked out on foot, with the exception of cliffs and steep escarpments where just the top and base of these structures are examined. This of course is just in areas where the Uinta Formation is exposed. All proposed access roads and pipeline routes are also walked out regardless of length. Care is taken to make sure that even small or very low exposures are checked. Notes are kept as the field survey progresses regarding the terrain, soil, plant growth and any fossils discovered. Digital photos are taken of significant fossils and their locations. Any collected fossils are plotted on the relevant USGS topographic map, and a GPS reading is taken at the site. Field numbers are also given for each. While in many instances the reporting unit is one quarter, quarter section, where two to four have no important fossils and are juxtaposed, the reporting unit may be up to one quarter section. In a few rare cases, more than one quarter section is reported as a unit if there is little or no exposure of the Uinta Formation and no important fossils are found within the unit.

The survey completed for this report, like all earlier ones, includes coverage of the staked (and sometimes not yet staked) proposed well pad sites in addition to the ancillary access road, water, gas, and fuel lines. Where no staking for these are present when the request is made for a survey, then the entire quarter, quarter section involved is all carefully surveyed. When staking is present, the staked areas receive close scrutiny, and with closely adjacent areas in the unit more casually examined.

REPORT OF AREAS SURVEYED

Section 34, T 8 S, R 18 E

Pariette Draw Area

NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18)

The survey for this unit consisted of surveying a proposed 690 feet of water pipeline to be tied into an existing well. Terrain in the immediate area is nearly flat, sloping upward somewhat to the south. Soil is mostly rocky, and supports a sparse low-growing vegetation. A few low-lying discontinuous exposures of Uinta Formation sandstone and mudstone occur here. Although the site was carefully checked, no stakes marking the proposed water line were seen. According to the plot map of this site provided by Newfield, the 690 feet line should run from the well to the south. In case a mistake was made, the well site was checked in all directions. No staking was present at the time of the paleontological survey. However, the area was checked sufficiently to cover wherever this line will eventually be placed (assuming it is not longer than indicated). The Uinta formation exposures within 690 feet of the well only show a few invertebrate borings/burrowings in sandstones, and a few weathered fossil turtle shell fragments.

Section 34, T 8 S, R 17 E

Greater Boundary Area

NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17)

The proposed water injection pipeline at this operating well runs only 70 feet to the east. Although Uinta Formation beds are exposed in the vicinity, with fossil vertebrate material earlier reported from the area, this short proposed line is entirely situated on previously disturbed land. In fact it covers only developed road areas leading to the well site.

Horseshoe Bend Area

Section 9, T 6 S, R 20 E

NW 1/4, NW 1/4, Section 9, T 6 S, R 20 E (4-9-6-20)

According to the provided site map, the proposed access road leading to this proposed well site location begins at State Highway 40. It proceeds south for a little more than half of its 3,210 feet of length, then turns to the southwest to its terminus. Over this entire distance the terrain is relatively flat. Soil conditions vary slightly from very fine-grained to sandy. The vegetation over roughly the first half of this proposed route is primarily low-growing and relatively sparse. However, the height and abundance increases closer to the proposed well pad site. Uinta Formation mudstones and sandstones are encountered throughout the access road route as broad and very low exposures. They are more numerous along the first half of the route. Some of these exposures are present at the proposed well site itself. In fact adjacent to the flat-lying area of this site the land slopes downward on both the east and west sides. Here, interbedded sandstones and mudstones are present. Even after a careful search of all exposed Uinta beds, along the access road corridor and the well site, no trace of fossils were seen. The proposed gas line route ties into the proposed access road about one-fifth of the distance from State Highway 40, and then continues along it to the well pad site. The proposed gas line begins in a large arroyo (Halfway Hollow) and runs east about 700 to 800 feet until it ties into the said access road. The gas pipeline route crosses a large number of Uinta sandstone and mudstone exposures along this distance. The only fossils seen consist of a few invertebrate borings in sandstone.

SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (16-9-6-20)

An existing road runs from State Route 88 to the proposed well pad site at this location. A proposed gas pipeline parallels this route. All were checked as part of the present paleontological survey. The gas pipeline runs a distance of 2.1 miles south along State Route 88 from State Highway 40. While some Uinta Formation strata were crossed along this distance, only some invertebrate boring/burrowing structures were noted in sandstones. The proposed gas line turns east on a dirt road for a distance of 0.6 mile. No fossils were seen along this segment although Uinta beds do intermittently occur in the area. From this point the proposed route turns north, then east near its end. This 6,300 feet of line was surveyed in its entirety as well. The land covered is almost all sandy desert soil. An exception is the low, narrow bands of Uinta sandstone beds that

were crossed. No fossils were found in them along the proposed gas line route. The proposed well site proper is located atop a broad ridge that has mostly a sandy soil coverage. However, some low outcroppings of sandstone exist along the western border of this site. Vegetation encountered throughout the surveyed area is moderate in coverage, and dominated by sage brush. All the exposed Uinta Formation sandstones showed no signs of fossils, not even the common (elsewhere) invertebrate trace fossils.

Section 26, T 6 S, R 20 E

NW 1/4, NE 1/4, Section 26, T 6 S, R 20 E (2-26-6-20)

A proposed access road and gas pipeline route extend essentially east from State Highway 88 to the proposed well pad site. This site lies about 2.7 miles from the above highway. The road and pipeline route follows an existing jeep trail until about 0.7 mile before the well site. It then separates from the jeep trail. Mostly the route runs across sage flats and slopes. Occasionally this route crosses low outcrops of Uinta Formation sandstones, shales and mudstones. A few invertebrate borings and burrowings occur in some sandstones. No other fossils were noted along this portion of the corridor. The proposed well pad site is located in an opening bounded by a sandstone ridge on the west, south and east. Mostly the site is on sandy soil with a sparse low-growing vegetation. However, it also rests on some deeply weathered Uinta Formation mudstone. Some invertebrate trace fossils in sandstones represent the only fossils seen.

Section 17, T 6 S, R 20 E

NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20)

This proposed well pad site includes a short proposed access road and gas pipeline, extending west from State Highway 88. It also includes two long segments of a proposed gas pipeline. The first runs 5,200 feet south from the proposed well pad site alongside State Route 88 to the

northwest corner of Section 21, T 6 S, R 20 E. The second segment heads east to northeast from this juncture 15,410 feet to a point in the north-central part of Section 14, T 6 S, R 20 E.

The proposed well pad site is located on basically flat terrain immediately west of State Highway 88, and a vertical pipe marking a dry well hole. A fine to gravelly soil covers the entire staked area of the proposed well site, access road and gas pipeline to it. Vegetation is moderate, composed of bunch grass, Compositae, and low-growth brush. No outcrops of Uinta Formation occur on the proposed site. However, the deep arroyo close to the site on the west and north does expose Uinta Formation sandstones and mudstones. No fossils occur at the well site proper. The 5,200 feet of proposed gas pipeline running south from the proposed well pad site abuts State Highway 88, and traverses only a soil and brush cover until it 90 turns degree eastward in Section 21. At this turn east from the highway Uinta Formation beds are moderately exposed. The only fossils here, though, are probable trails/burrows of small invertebrates (weathering of sandstones here has made identification difficult). From this point the proposed gas pipeline runs east along an existing dirt road. The proposed line is on the south side of this dirt road. It continues to run through a soil and brush cover. Nearly 1.0 mile along this route some low outcroppings of Uinta Formation sandstone are present, extending eastward about 0.2 mile. No fossil evidence was seen in this sandstone. About 0.1 mile further east, sandstones and mudstones once more occur along the projected route in a discontinuous manner. Mostly the route is over a soil. The sandstones do show some invertebrate markings, but nothing significant.

Section 6, T 6 S R 20 E

NW 1/4, SW 1/4, Section 6, T 6 S, R 20 E (12-6-6-20)

This proposed well pad site is staked in an open sage flat, with very low-growing Compositae. Soil is mostly fine sand, but gravelly in spots. The well site at this location is bordered on the north by a low sandstone ridge, but is open on all other sides. The sandstone ridge is of the Uinta Formation, and contains the ubiquitous mollusc boring and fill features. Other, smaller,

invertebrate markings are also present in some sandstones. The short proposed access road and gas pipeline route extend over sandy soil as they run from an existing dirt road. This short route does cross some sandstone outcrops, but no fossils were found in them.

SE 1/4, SE 1/4, Section 6, T 6 S, R 20 E (16-6-6-20)

This quarter, quarter section lies on an extensive flat area. The soil is rocky to sandy, and supports a low-growth vegetation which is sparse to moderate in abundance. The proposed access road and gas pipeline into this site extend east from a north-south trending jeep trail. They run about one-quarter mile to the well site. No Uinta Formation beds are present in the immediate area. Therefore no fossils would be expected, or are present.

Section 5, T 6 S, R 20 E

NW 1/4, SW 1/4, Section 5, T 6 S, R 20 E (12-5-6-20)

An existing circuitous dirt road initially runs north to this proposed well pad site from State Highway 40. It crosses a sage flat area on to the well site. About 1.0 mile away a new, short proposed access road runs roughly west to this well pad site. A proposed gas pipeline also follows this route. The well site here is situated on flat terrain that is comprised of sandy to rocky soil, and sage-dominated vegetation. Uinta Formation outcrops of low sandstones, and steep escarpments of interbedded sandstones and mudstones lie just to the west of this site. No fossils were seen along the proposed road and pipeline corridor or at the site proper.

Section 36, T 6 S, R 20 E

NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20)

A proposed access road, water and gas pipeline run to this proposed well pad site. The 2,100 feet

of proposed gas pipeline joins the proposed access road and water pipeline at County Road 2891. To this point the gas line runs southwest alongside said County Road. It only crosses desert soil along its length paralleling this road. The combined proposed access road, water and gas pipelines run roughly north 870 feet from 2891 to the 1-36-6-20 proposed well pad site. Mostly this route traverses just soil and low-growing vegetation to the site. The minor Uinta Formation exposures that are crossed exhibit only a few invertebrate borings and burrowings. The proposed well site exists on a small hill covered in soil. However, some low Uinta sandstones occur at the northern boundary of this site. Again, only a few ichnites are present here.

Section 7, T 6 S R 21 E

NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21)

The proposed access road and gas pipeline route leading to this proposed well pad site starts at Twelve Mile Wash Road. Here in the east-central part of Section 13, T 6 S, R 20 E, a jeep trail intersects the road. The proposed access road and pipeline corridor follow this jeep trail northeast a little more than 1.0 mile. This corridor then leaves the jeep trail heading to the proposed well pad site about 1.0 mile to the west. While following the jeep trail, the access road and gas pipeline route are located in a narrow canyon. This route is on a mostly alluvial soil that contains a sparse to moderate vegetative growth, dominated by low to medium height brush. Occasionally this route passes over relatively narrow outcrops of sandstone and mudstone. The only fossils seen were the invertebrate borings and burrowings in sandstones. The section of proposed route that branches from the jeep trail passes up and across a wide ridge. A sandy soil with some rocks covers this ridge. The vegetation consists of low bunch grasses, cactus and Compositae, with brush again being dominant. Near the access road and pipeline route terminus, they drop off the ridge ending at the proposed well pad site. Mostly this site is on soil. However, a portion located on the ridge slope rests on Uinta Formation sandstone and mudstone. More invertebrate trace fossils are present in sandstone here.

RESULTS OF SURVEY

The sections included for the present report were dispersed over a distance of many miles. Some of the proposed access roads and pipeline routes necessitated lengthy walks. In places no existing roads led into areas of investigation. While exposures of the Uinta Formation were relatively common, at least intermittently, fossils were surprisingly scarce aside from those made by invertebrate burrowers. In total very few fossils were encountered at any of the proposed well pad sites or along their accompanying proposed access roads, water, and gas pipeline routes. And even many of these were indistinct due to weathering. While the 42-32D-8-18 (SE 1/4, NE 1/4, Section 34, T 8 S, R 18 E) proposed water injection pipeline had been surveyed earlier, it was again rechecked. This is the one area of all surveyed that has significant fossils as reported on 5/29/08.

RECOMMENDED MITIGATION

It is recommended that the 42-32D-8-18 site be paleontologically monitored during any excavating activity. The other sites surveyed in this report would not require any paleontological monitoring. However, there is one change that is here suggested. As noted for 12-7-6-21, the planned pit for this well pad site does partially rest on Uinta Formation strata on its east end. Since the area for this proposed well site appears to allow for realigning somewhat without causing problems, the portion on the Uinta formation should be positioned to avoid this. Wherever the Uinta Formation is excavated, the possibility exists for contacting fossils.

Wade E. Miller
Wade E. Miller
6/11/08

CULTURAL RESOURCE INVENTORY OF
NEWFIELD EXPLORATION'S NINE PROPOSED
GUSHER WELL LOCATIONS #12-5-6-20, #12-6-6-20,
#16-6-6-20, #4-9-6-20, #16-9-6-20, #2-17-6-20,
#2-26-6-20, #1-36-6-20 AND #12-7-6-21
UINTAH COUNTY, UTAH

By:

Jacki Montgomery

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional
Trust Lands Administration

Prepared Under Contract With:

Newfield Exploration Company
Rt. 3 Box 3630
Myton, UT 84052

Submitted By:

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

MOAC Report No. 08-140

July 23, 2008

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

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

State of Utah Antiquities Project (Survey)
Permit No. U-08-MQ-0455b,s

ABSTRACT

A cultural resource inventory was conducted by Montgomery Archaeological Consultants, Inc. (MOAC) of Newfield Exploration's proposed nine well locations (40 acre parcels) in 2008. The Gusher wells are designated: 12-5-6-20, 12-6-6-20, 16-6-6-20, 4-9-6-20, 16-9-6-20, 2-17-6-20, 2-26-6-20, 1-36-6-20 and 12-7-6-21 with associated access/pipeline corridors. The project is located near Halfway Hollow, southwest of the town of Vernal, Uintah County, Utah. Newfield Exploration proposes to develop gas wells with associated access and pipelines in these areas. The legal description is Township 6S, Range 20E Sections 4, 5, 6, 7, 9, 13, 14, 15, 16, 17, 20, 21, 22, 26, 27, 28, and 36; Township 6S, Range 21E Sections 7, 18, 30 and 31. A total of 694.3 acres was inventoried of which 607.4 acres occur on BLM administered land and 86.9 acres is on SITLA property.

The cultural resource inventory resulted in the location of two previously recorded sites (42Un5485 and 42Un5486) and the documentation or update of 18 additional archaeological sites (42Un5274, 42Un6704-42Un6712, 42Un6921-42Un6925 and 42Un7024-42Un7026). Seven sites (42Un5274, 42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) are recommended eligible to the NRHP. Site 42Un5274 is a portion of abandoned US 40 which has previously been evaluated as eligible to the NRHP under Criterion A because it is associated with the construction of a transnational highway system, an event which has made a significant contribution to the broad patterns of our history. The six prehistoric sites (42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) exhibit a diversity of artifacts or features and lie in depositional environments yielding potential for significant buried cultural remains. Therefore, these sites are recommended eligible to the NRHP under Criterion D because they are likely to address such research domains as cultural affiliation/chronology, technology, subsistence strategies, and land use patterns. The remaining 13 historic sites consist of trash dumps or scatters (42Un5485, 42Un5486, 42Un6706, 42Un6707, 42Un6708, 42Un6710, 42Un6924, 42Un6925, 42Un7024, and 42Un7025) or temporary camps (42Un6705, 42Un6921, and 42Un6923); each containing a restricted class and quantity of cultural materials and no significant features. Therefore, these sites are recommended not eligible for the NRHP since they fail to contribute to the prehistory of the area (Criterion D). In addition, the sites are not associated with any known significant event(s) or person(s) (Criteria A and B), nor do they represent the work of a master (Criterion C)

In summary, the inventory of Newfield Exploration's nine proposed Gusher well locations with access/pipeline corridors resulted in the update of one historic site (42Un5274) previously evaluated as eligible to the NRHP under Criterion A, and the documentation of six prehistoric sites (42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) considered eligible to the NRHP under Criterion D. All of the prehistoric sites should be avoided by ground disturbance activities related to this undertaking. Based on the adherence to this recommendation, a determination of "no adverse impact" pursuant to Section 106, CFR 800 is proposed for this project.

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INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants, Inc. (MOAC) of Newfield Exploration's proposed nine well locations (40 acre parcels) in 2008. The Gusher wells are designated: 12-5-6-20, 12-6-6-20, 16-6-6-20, 4-9-6-20, 16-9-6-20, 2-17-6-20, 2-26-6-20, 1-36-6-20 and 12-7-6-21 with associated access/pipeline corridors. The project is located near Halfway Hollow, southwest of the town of Vernal, Uintah County, Utah. Newfield Exploration proposes to develop gas wells with associated access and pipelines in these areas. Land status is public land administered by the Bureau of Land Management (BLM), and State of Utah School and Institutional Trust Lands Administration (SITLA) property.

The objective of the inventory was to locate, document and evaluate any cultural resources within the project area. This project was carried out in compliance with Federal and State legislation including the Antiquities Act of 1906, the National Historic Preservation Act (NHPA) of 1966, National Environmental and Historic Preservation Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979 and the American Indian Religious Freedom Act of 1978.

The fieldwork was conducted between May 21 and June 18, 2008 under the direction of Mark Lane (Field Supervisor) and assisted by Nicole Shelnut under the auspices of U.S.D.I. (FLPMA) Permit No. 08-UT-60122, State of Utah Public Lands Policy Archaeological Survey Permit No. 117, and State of Utah Antiquities Project (Survey) No. U-08-MQ-0455b,s issued to MOAC, Moab, Utah.

A file search for previous projects and documented cultural resources was conducted by Keith Montgomery at the BLM Vernal Field Office on May 20, 2008. This consultation indicated that several inventories have been completed near the current project area. In May 2006, Montgomery Archaeological Consultants (MOAC) inventoried Newfield Exploration's 6-34-5-20 and 5-13-6-20 well locations resulting in the documentation of a portion of old US 40 (42Un5274) and a corral (42Un5275) (Lower-Eskelson 2006). A new portion of the historic highway was recorded during the current project. Later in 2006, MOAC conducted a cultural resource inventory of Veritas Geophysical Integrity's Uintah Basin 3D Seismic prospect (Lower-Eskelson 2007). The inventory resulted in the documentation of 12 new archaeological sites (42Un5484 through 42Un5495), and the re-visitation of 14 previously documented sites. Sites 42Un5485 (trash dump) and 42Un5486 (trash scatter) occur within the current project area. In November 2006, MOAC surveyed Newfield Exploration's seven 40 acre well parcels in Township 6S, Range 20E, Sections 12, 13 and 14; no cultural resources were found (Jendresen 2006). In 2007, MOAC inventoried Newfield Exploration's proposed Horseshoe Bend 14-29-5-20 well location resulting in the documentation of a portion of US 40 (42Un5274) which is evaluated as eligible to the NRHP under Criterion A (Montgomery 2007). In summary, three previously documented historic sites (42Un5274, 42Un5485 and 42Un5486) occur within the present inventory area.

DESCRIPTION OF PROJECT AREA

The project area is located near Halfway Hollow, southwest of the town of Vernal, Uintah County, Utah (Figure 1). The legal description is Township 6S, Range 20E, Sections 4, 5, 6, 7, 9, 13, 14, 15, 16, 17, 20, 21, 22, 26, 27, 28, and 36; Township 6S, Range 21E Sections 7, 18, 30 and 31. A total of 694.3 acres was inventoried of which 607.4 acres occur on BLM administered land and 86.9 acres is on SITLA property.

Table 1. Newfield Exploration's Nine Proposed Gusher Well Locations

Well Location Designation	Legal Location	Access/Pipeline	Cultural Resources
Gusher 12-5-6-20	NW/SW S. 5 T6S, R20E	Access/Pipeline: 1742 ft	42Un6924
Gusher 12-6-6-20	SW/NW S.6 T6S, R20E	Access: 4899 ft	42Un6704, 42Un6705, 42Un6921, 42Un6922
Gusher 16-6-6-20	SE/SE S. 6 T6S, R20E	Access/Pipeline: 6177 ft	42Un5274, 42Un6706, 42Un6707, 42Un6708
Gusher 4-9-6-20	NW/NW S. 9 T6S, R20E	Access: 3538 ft Pipeline: 4224 ft	None
Gusher 16-9-6-20	SE/SE S. 9 T6S, R20E	Access/Pipeline: 6178 ft	42Un6709, 42Un6710, 42Un6923
Gusher 2-17-6-20	NW/NE S. 17 T6S, R20E	Access: 686 ft Pipeline: 21120 ft	42Un6925, 42Un7024, 42Un7026
Gusher 2-26-6-20	NW/NE S. 26 T6S, R20E	Access/Pipeline: 15840 ft	42Un5485, 42Un5486, 42Un6711, 42Un6712
Gusher 1-36-6-20	NE/NE S. 36 T6S, R20E	Pipeline: 3748 ft	42Un7025
Gusher 12-7-6-21	NW/SW S. 7 T6S, R21E	Access/Pipeline: 10032 ft	None

Environmental Setting

The project area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The area is characterized by steep-sided narrow ridges and benches dissected by intermittent drainages. Outcrops of the Uinta formation are characterized by a dense dendritic drainage pattern and topographic relief. This Eocene-age formation occurs as fluvial deposited interbedded sandstone and mudstone and is well-known for its fossil vertebrate turtles, crocodilians, fish, and mammals. Specifically, the inventory area is situated west of the Green River. Named drainages include Halfway Hollow, Sand Wash, and Twelvemile Wash. Elevation ranges from 4760 to 5360 ft asl. The vegetation is dominated by a Desert Shrub vegetation community dominated by low sagebrush, greasewood, rabbitbrush, yucca, and prickly pear cactus. Disturbances include roads, grazing, and oil and gas development.

Cultural Overview

The cultural-chronological sequence represented in the area includes the Paleoindian, Archaic, Fremont, Protohistoric, and Euro-American stages. The earliest inhabitants of the region are representative of the Paleoindian stage (ca. 12,000-8000 B.P.). This stage is characterized by the adaptation to terminal Pleistocene environments and by the exploitation of big game fauna. The presence of Paleoindian hunters in the Uinta Basin region is implied by the discovery of Clovis and

Folsom fluted points (ca. 12,000 B.P. - 10,000 B.P.), as well as the more recent Plano Complex lanceolate points (ca. 10,000 B.P. - 7000 B.P.). Projectile points from the Agate Basin Complex, Hell Gap Complex, and Alberta/Cody Complex have been found throughout the Uinta Basin, primarily as isolated finds (Spangler 1995). Near the project area, several Paleoindian projectile points have been documented (Goshen, Alberta, and Midland styles) along Wells Draw (Hauck 1998).

The Archaic stage (ca. 8000 B.P.-1500 B.P.) is characterized by the dependence on a foraging subsistence, with peoples seasonally exploiting a wide spectrum of plant and animal species in different ecozones. The shift to an Archaic lifeway was marked by the appearance of new projectile point types, and the development of the atlatl, perhaps in response to a need to pursue smaller and faster game (Holmer 1986). In the Uinta Basin, evidence of Early Archaic presence is relatively sparse compared to the subsequent Middle and Late Archaic periods. Early Archaic (ca. 6000-3000 B.C.) sites in the Basin include sand dune sites and rockshelters primarily clustered in the lower White River drainage (Spangler 1995:373). Early Archaic projectile points recovered from Uinta Basin contexts include Pinto Series, Humboldt, Elko Series, Northern Side-notched, Hawken Side-notched, Sudden Side-notched, and Rocker Base Side-notched points. Excavated sites in the area with Early Archaic components include Deluge Shelter in Dinosaur National Monument, and open campsites along the Green River and on the Diamond Mountain Plateau (Spangler 1995:374).

The Middle Archaic era (ca. 3000-500 B.C.) is characterized by improved climatic conditions and an increase in human population on the northern Colorado Plateau. Several stratified Middle Archaic sites have been excavated and dozens of sites have been documented in the Uinta Basin. Middle Archaic sites in the area reflect cultural influences from the Plains, although a Great Basin and/or northern Colorado Plateau influence is represented in the continuation of the Elko Series projectile points. Subsistence data from Middle Archaic components indicate gathering and processing of plants as well as faunal exploitation (e.g., mule deer, antelope, bighorn sheep, cottontail rabbit, muskrat, prairie dog, beaver, and birds). The Late Archaic period (ca. 500 B.C.-A.D. 550) in the Uinta Basin is distinguished by the continuation of Elko Series projectile points with the addition of semi-subterranean residential structures at base camps. By about A.D. 100, maize horticulture and Rose Springs arrow points had been added to the Archaic lifeway. In the Uinta Basin, the earliest evidence of Late Archaic architecture occurs at the Cockleburr Wash Site (42Un1476) where a temporary structure, probably a brush shelter, yielded a date of 316 B.C. (Tucker 1986). The structure was probably associated with seasonal procurement of wild floral resources gathered along Cliff Creek.

The Formative stage (A.D. 500-1300) is recognized in the area as the Uinta Fremont as first defined by Marwitt (1970). This stage is characterized by a reliance upon domesticated corn and squash, increasing sedentism, and in its later periods, substantial habitation structures, pottery, and bow and arrow weapon technology. Based on the evidence from Caldwell Village, Boundary Village, Deluge Shelter, Mantles Cave, and others, the temporal range of the Uinta Fremont appears to be from A.D. 650 to 950. This variant is characterized by shallow, saucer-shaped pithouse structures with randomly placed postholes and off-center firepits, some of which were adobe-rimmed. Traits considered unique or predominate to the Uinta Basin include calcite-tempered pottery, two-handled wide-mouth vessels, Utah type metates, the use of gilsonite for pottery repair, settlement on tops of buttes, and large-shouldered bifaces (Shields 1970).

Archaeological evidence suggests that Numic peoples appeared in east-central Utah at approximately A.D. 1100 or shortly before the disappearance of Formative-stage peoples (Reed 1994). The archaeological remains of Numic-speaking Utes consist primarily of lithic scatters with low quantities of brownware ceramics, rock art, and occasional wickiups. Rock art has been defined by Cole (1990) as either Early Historic Ute Indian Style (A.D. 1600 to 1830) or Late Historic Ute Indian Style (A.D. 1830 to 1880). The brownware ceramics appear to be the most reliable indicator of cultural affiliation, as Desert Side-notched and Cottonwood Triangular points were manufactured by other cultural groups beside the Ute (Horn, Reed, and Chandler 1994:130). The Ute appear to have been hunters and gatherers who exploited various fauna and flora resources. According to macrobotanical and faunal data from dated components, deer, elk, pronghorn, bison, and small game were acquired (Reed 1994:191). Plant materials thought to have been exploited for food include goosefoot, grass seeds, pinyon nuts, juniper berries, squawbush berries and leaves, hackberry seeds, and possibly saltbush seeds, knotweed, chokecherry, and chickweed (Reed 1994:191).

The historic settlement of Duchesne County is somewhat unique in the state of Utah in that it was not settled by Mormon pioneers, as early scouting parties had deemed the area unfit for settlers. Thus, the earliest permanent European settlements and associated developments within the Uinta Basin were established by the U.S. Army during the 1880s. The two most significant settlements built during this time were Fort Thornburg (in Uintah County) and Fort Duchesne, and soldiers were quickly put to work in the construction of freight roads that connected these forts to established settlements in Wyoming, and also to the towns and markets of northern Utah. During the 1880s, the area was gradually opened up for settlement with the granting of 160 acre parcels under the Homestead Act. Myton, located northeast of the project area, started as a trading post on the Uintah Indian Reservation sometime in the mid-1880s. The trading post served a small segment of the Indian population until 1886, when the army constructed a bridge over the Duchesne River (Barton 1998:154). Myton, originally known as Bridge, quickly changed from a small bustling way-station and Indian trading post –to a town of tents and a few wooden buildings– prior to the opening of the Uintah Indian Reservation around 1905. The growth of Myton was facilitated by the completion of the supply route that ran through the natural corridor of Nine Mile Canyon; the settlement attracted people from various parts of the world including Denmark, England, Switzerland, Sweden, Wales, and Germany, as well as many states of the Union (Ibid.: 156).

The Price-Myton Freight Road originated with the establishment of Fort Duchesne in 1886. The 300 or so troops stationed at this remote fort required a means of acquiring supplies and, as a result, a service route was chosen that essentially linked the fort to the developing market center of Price. Initially, supplies for the fort were obtained from Union Pacific Railroad stations in Wyoming, following a route that crossed the Uinta Mountains. However, traversing these mountains in the winter time proved hazardous. Thus, soldiers constructed a wagon road and telegraph line to Price, ensuring a year-round supply of provisions for the fort. At Price, goods awaiting shipment to the fort were stored in a warehouse monitored by an army quartermaster (Geary 1981:138). One year after the establishment of Fort Duchesne, records from the army quartermaster indicate that a contract for the haul of two million pounds of supplies (at \$1.12 per hundred) was written (Geary 1981:141). With such large government contracts, a busy freighting business was soon established. The use of the road, however, was not restricted to the shipment of government freight, as the road also serviced the communities of Ashley Valley, the Ute Indian

Reservation, and Vernal (Watt 1997:31). Furthermore, a regular mail service between Price and Vernal was established in the late 1880s, with a stagecoach departing Price two times in 1888, and then three times a week by 1889 (Burton 1996:216). According to Geary (1981: 141), the road was one of the most heavily traveled in eastern Utah for some twenty years.

The business of freighting was given an added boost with the establishment of the Uinta Basin's gilsonite industry. Gilsonite occurs in both a solid and semi-solid state having the structure of hydrocarbon, but is more specifically a bitumen, and is a mineral that has a wide variety of uses (Remington 1959:283). The versatility of gilsonite is perhaps where its greatest value lies; the mineral has been commonly used in the manufacture of paints and varnish, insulation for electrical wires, lubricants for machinery, rubber for boots and shoes, and even for chewing gum. The gilsonite mines that developed within the Uinta Basin enabled Price-Myton freighters to capitalize on a two-way commerce system, as Watt (1997:32) states "Freighters could load their empty [supply] wagons with 200-pound burlap bags of gilsonite for the return trip to Price, where the bags were loaded onto rail cars and shipped east." In 1905, the Uintah Railway set out to capture the gilsonite trade and so constructed a spur from Mack, Colorado, to Dragon, Utah. This new rail network supplied most of Uinta Basin's transportation needs, signaling the beginning of the end for the freight trade along the Price-Myton route. However, the road was still used for another ten years or so, albeit at lesser scale, with the government's decision to open the Ute Indian reservation to settlement. Furthermore, Duchesne residents, unhappy with their mail service provided by the Uintah Railway, pushed for the reestablishment of a Vernal - Price route through Nine Mile Canyon. As a result of this request, postal officials began operating a mail and stage line that followed the old freight trade route. However, this lasted for only two years when an alternate route between Vernal and Colton (via Indian Canyon further to the north) was established (Burton 1996:219). The fort itself was dismantled in 1910.

Livestock was a primary industry in the region from early on, along with agriculture, timbering, mining, beekeeping, and freighting (Burton 1996). Most of the early Mormon settlers had only a few head of cattle, that were grazed in cooperative herds on shared pasture lands, however, large herds of cattle had been seasonally grazed in the region from as early as the 1850s (Ibid: 108). Before the early 1930s, grazing in the Tavaputs Plateau region, at the southern edge of the Uinta Basin, was mostly unregulated. This, combined with the lush grassland environment of the area at the time, attracted many ranchers with their cattle, horses, and sheep (Barton 1998). By 1893, a record number of cattle were being sold. Sheep quickly became an important commodity, after their introduction to the region in 1879, and by the early 1890s, more sheep were being ranged in the region than cattle (Burton 1996). By 1935, herds of both cattle and sheep were being decreased to halt overgrazing. In 1996, only two large, year-round herds remained in Uintah County, although small farms and ranches in the region still keep small quantities of stock animals.

The Civilian Conservation Corps (CCC) contributed to local agricultural economy by constructing several dams and irrigation ditches during the 1930s. The Vernal camp was the first CCC camp established in the Uinta Basin in 1933. Two more camps were established at Moon Lake and Bridgeland in 1934. Four temporary camps were established in Yellowstone Canyon, near Altonah, in Myton, and in the Uinta Canyon. The CCC program not only alleviated drought concerns for local farmers and ranchers, but also provided employment for Duchesne County residents, as well as unemployed young men from Virginia. The program continued from 1933 through 1942 (Barton 1998:248-250).

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. The project area was examined for cultural resources by the archaeologists walking parallel transects spaced no more than 10 m (33 ft) apart. Ground visibility was considered good. A total of 694.3 was inventoried of which 607.4 acres occur on BLM administered land and 86.9 acres is on SITLA property.

Archaeological sites are defined as spatially definable areas with ten or more artifacts and/or features. Sites were documented by the archaeologists walking transects across the site, spaced no more than 3 m (10 ft) apart and marking the locations of cultural materials with pin flags. This procedure allowed clear definition of site boundaries and artifact concentrations. Maps were generated employing a Trimble GeoExplorer (NAD27) to point-provenience diagnostic artifacts and other relevant features in reference to the site datum, a steel rebar stamped with a temporary site number. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, and documented with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A).

INVENTORY RESULTS

The inventory of Newfield Exploration's nine proposed Gusher well locations resulted in the location of two previously documented sites (42Un5485 and 42Un5486) and the documentation or update of 18 sites (42Un5274, 42Un6704-42Un6712, 42Un6921-42Un6925 and 42Un7024-42Un7026).

Smithsonian Site No.: 42Un5274
Temporary Site No.: 06-110-1
Well Location: Gusher 16-6-6-20
NRHP Eligibility: Eligible, Criterion A

Description: This is an abandoned and partially dismantled section of US 40 situated along the north side of the current highway. The inspected portion of the road measures approximately 2300 ft and averages 18 ft wide. The roadbed is slightly raised and exhibits surface cracking and deteriorated asphalt as well as vegetation. The center of the road displays a single solid yellow line. Highway features consist of two dislodged cement culverts headwalls that measure 48 inch wide with 20 inch long wingwalls. In addition, remnants of corrugated galvanized steel culvert are present.

Smithsonian Site No.: 42Un5485
Temporary Site No.: 06-399-02
Well Location: Gusher 2-26-6-20
NRHP Eligibility: Not Eligible

Description: This is a historic trash scatter situated on the southwestern trending slope of a ridge on the south side of a two track road. Artifacts located on the site include 100+ shards of clear glass; three clear bottles embossed with the "Owens Illinois" trademark (1929-1954); three bottles embossed with the "Duraglas" trademark (post 1940); eight hole-in-top cans, five of which date from 1930-1975; two coffee cans; twenty-one sanitary cans; and a meat tin. The site likely represents a dumping episode during the 1940s or 1950s. Many of the artifacts have been burned on-site and charcoal litters the area suggesting the trash was probably a burned barrel dump.

Smithsonian Site No.: 42Un5486
Temporary Site No.: 06-399-03
Well Location: Gusher 2-26-6-20
NRHP Eligibility: Not Eligible

Description: This is a historic trash scatter spanning a two-track road. Glass artifacts located on the site include 150+ shards of clear bottle/jar glass; two bottles embossed with "Owens Illinois" (1929-1954), one also with "Duraglas (post 1940), one bottle embossed with "MV" which reads "Made in Mexico", and a milk bottle. Tin cans located on the site include 47 sanitary food cans, six hole-in-top cans (1930-1975), a lard can embossed with "Canco" (1910-1930), four rectangular cans, two coffee cans, three oil cans, a shaker top spice can, and one external friction lid. Other artifacts present consist of a caulking gun, a water color paint case, 10+ bullet casings marked with "U" indicating they were manufactured at the Utah Ordnance Plant during World War II, two pieces of wire, a bottle cap, 22 various canning jar lids, a metal spring hinge, mesh wire, an enameled metal wash basin, and a jar lid which reads "On NBC Day Time Mon Thru Fri Marriage for Two". Marriage for Two was a soap opera, sponsored by Kraft Cheese, which was aired during 1949 and 1950. This site likely represents a multi-episode dump used between 1910 and the 1950s.

Smithsonian Site No.: 42Un6704
Temporary Site No.: 08-140-ML4
Well Location: Gusher 12-6-6-20
NRHP Eligibility: Eligible, Criterion D

Description: The site is a prehistoric temporary camp located in a sand dune on the north facing slope of a small ridge. Vegetation includes low sagebrush and greasewood. Tools consist of a tan chert Stage II and III biface and one tan chert unprepared core. Lithic debitage (n=14) is dominated by secondary flakes of quartzite and chert. Firecracked rock is scattered throughout the site in no definable pattern.

Smithsonian Site No.: 42Un6705
Temporary Site No.: 08-140-ML3
Well Location: Gusher 12-6-6-20
NRHP Eligibility: Not Eligible

Description: This is a small historic temporary camp located at the base of a small ridge just northeast of Sand Wash. Vegetation includes low sagebrush, greasewood, rabbitbrush, and yucca. Historic items consist of hole-in-top milk cans, two hole-in-cap cans, three sanitary cans, a coffee can, a tea can, and a small axe cut wood chip scatter.

Smithsonian Site No.: 42Un6706
Temporary Site No.: 08-140-ML3
Well Location: Gusher 16-6-6-20
NRHP Eligibility: Not Eligible

Description: The site is a large historic artifact scatter with two borrow pit features located along the edge of a mesa overlooking Sand Wash. Features A and B are barrow pit with associated tailing piles. Artifacts consists of tin cans, glass containers and miscellaneous items. Tin cans include pocket tobacco tins (n=12), sanitary food cans (n=87), hole-in-top milk cans (n=108) some of which date 1930-1975, a tea can, a lard pail, and motor oil cans. Glass items consist of three medicine bottles manufactured by Owens-Illinois Glass Co. (1929-1954), seven liquor bottles (Owens-Illinois Glass Co., Obear-Nester Glass Co., and Glass Container Inc.), a Mentholatum jar, window glass (amethyst and clear), and soda bottle fragments. Miscellaneous items include a hacksaw blade, a shell button, a crown bottle opener, wire cut nails, a boot heel, stove pipe section,

a cylindrical machine part embossed EMBURY MFG, milled lumber, an overall metal button embossed PAY DAY, metal external friction lid embossed Blasting Caps, and one square metal lid stamped with Leadership Perfect Circle Integrity Service.

Smithsonian Site No.: 42Un6707
Well Location: Gusher 16-6-6-20
Temporary Site No.: 08-140-ML2
NRHP Eligibility: Not Eligible

Description: This is a small trash dump located on a bench alongside Sand Wash bounded by dissected ridges. Sediments consist of light brown silt sand with sandstone pebbles, cobbles, and boulders. Vegetation includes greasewood, low sagebrush and bunch grass. Artifacts include 331 motor oil cans, 22 sanitary food cans, eight "Punch Here" milk cans (1935-1945), two 1lb. coffee cans, 11 "church key" opened beer cans, two sanitary juice cans, one "Duffys" soda bottle dated 1953, and 10 clear glass bottle fragments.

Smithsonian Site No.: 42Un6708
Well Location: Gusher 16-6-6-20
Temporary Site No.: 08-140-ML1
NRHP Eligibility: Not Eligible

Description: This a trash scatter situated along a terrace of Sand Wash surrounded by dissected ridges. Soil is light brown sand and vegetation includes low sagebrush and greasewood. Cultural materials include tin cans, glass, ceramics, and miscellaneous items. Glass items are mainly broken and include food jars, a Mentholatum jar, three Clorox bottles, five liquor bottles, a wine bottle, two beverage bottles, three soda bottles (one is dated 1947), a milk bottle, and miscellaneous clear and brown glass. Tin cans consist of Punch Here hole-in-top milk cans (n=7), sanitary food cans (n=37), a paint can, two tall rectangular fuel cans, a 1lb. key strip coffee can, three motor oil cans, one oval sardine can, and three church key opened beverage cans. Ceramics are limited to sherds from a bowl exhibiting a pink and green floral pattern. Miscellaneous items include a tire chain, a porcelain wash basin, a crushed metal bucket, a piece of red garden hose, and a hook scale.

Smithsonian Site No.: 42Un6709
Well Location: Gusher 16-9-6-20
Temporary Site No.: 08-140-ML6
NRHP Eligibility: Eligible, Criterion D

Description: This is a small lithic scatter of unknown aboriginal affiliation located on a north facing ridge slope. Soil is brown silt sand with sandstone pebbles while vegetation includes low sagebrush, shadscale, bunch grasses, and rabbitbrush. Cultural materials consist of 15 pieces of lithic debitage dominated by secondary reduction and manufactured from various types of chert.

Smithsonian Site No.: 42Un6710
Well Location: Gusher 16-9-6-20
Temporary Site No.: 08-140-ML7
NRHP Eligibility: Not Eligible

Description: This is a small historic trash scatter located on a ledge at the base of a cliff. Cultural materials consist of tin cans, glass, and ceramic items. Tin cans (n=7) include three hole in top milk cans, two sanitary food cans, a sanitary meat can, and a church key opened beverage can. Glass consists of four broken jars (one of which dates 1953), five broken bottles, and fragments of clear and amber glass. Trademarks include Brockway Glass Co. (1933-1971+), Owens-Illinois Glass Co.

(1929-1954), and Hazel-Atlas Glass Co. Ceramics are limited to a ceramic plate with the hallmark "Doric U.S.A." in a shell motif. Miscellaneous items are metal cushion springs, a threaded metal canning jar lid, and an internal friction lid.

Smithsonian Site No.: 42Un6711
Well Location: Gusher 2-26-6-20
Temporary Site No.: 08-140-ML9
NRHP Eligibility: Eligible, Criterion D

Description: This is a prehistoric temporary camp located in a sand dune on a north facing ridge slope. Debitage (n=43) is dominated by secondary reduction followed by tertiary flakes manufactured from chert, siltstone, and quartzite. Tools consist of five unprepared cores, a test cobble core, a slab metate, a mano fragment; a Stage IV biface fragment, and a chopper. Two firecracked rock concentrations (Features A and B) and a hearth exhibits cultural fill of unknown depth.

Smithsonian Site No.: 42Un6712
Well Location: Gusher 2-26-6-20
Temporary Site No.: 08-140-ML9
NRHP Eligibility: Eligible, Criterion D

Description: This is a prehistoric temporary camp of unknown aboriginal affiliation situated on a sand dune along a ridge. Soil is tan silt sand with small pebbles while vegetation includes low sagebrush, shadscale, and rabbitbrush. Cultural material consists of seven pieces of chert debitage, four test cobble cores, a prepared core, and a single handed mano. Feature A is a hearth (60 cm N-S by 40 cm E-W) exposed in a small rill containing nine fire-altered rocks and dark soil with charcoal flecking.

Smithsonian Site No.: 42Un6921
Well Location: Gusher 12-6-6-20
Temporary Site No.: 08-140-ML10
NRHP Eligibility: Not Eligible

Description: This is a historic temporary camp located on a ridge top northeast of Sand Wash. Cultural material consist of tin cans, glass, and miscellaneous items. Tin cans consists of hole in top milk cans (n=21), a hole in cap food can (1885-1903), tobacco tins (n=6), sanitary food cans (n=17), and two syrup cans (one stamped CANCO). Glass includes a cobalt medicine bottle, two amber beverage bottles with a "Duraglas" trademark (1940-1963), an amber colored crown beer bottle, a clear bottle, an amber beverage bottle manufactured by Brockway Glass (1943), and a clear bottle made Owens-Illinois Glass Co. (1929-1954). Miscellaneous items include axe cut wood chips, a metal strap, a jar lid, a key strip coffee can lid, and metal crown caps.

Smithsonian Site No.: 42Un6922
Well Location: Gusher 12-6-6-20
Temporary Site No.: 08-140-ML11
NRHP Eligibility: Eligible, Criterion D

Description: This is a prehistoric temporary camp of unknown aboriginal affiliation situated in a dune adjacent to an outcrop along a ridge. Debitage (n=8) is represented by all stages of reduction and manufactured from various types of chert and quartzite. Feature A (1.5 m N-S by 80 cm E-W) is a firecracked rock concentration exposed in a small drainage. It contains 12 pieces of fire-altered sandstone and lacks surface evidence of cultural fill.

Smithsonian Site No.: 42Un6923
Well Location: Gusher 16-9-6-20
Temporary Site No.: 08-140-ML12
NRHP Eligibility: Not Eligible

Description: This is a historic temporary camp located on a ridge south of Halfway Hollow. Cultural materials include tin cans, glass, and miscellaneous items. Tin cans consist of tobacco cans (n=13), three sardine cans, 25 hole in top milk cans (n=25, several stamped with Punch Here), and sanitary food cans (n=18). Glass consists of two clear food jars (manf. Owen-Illinois Glass Co.), a clear "Karo" syrup bottle (made by Owen-Illinois Glass Co.), two clear canning jars embossed with "Ball", a clear ketchup bottle embossed with "Duraglas" (made by Owen-Illinois Glass Co.). Miscellaneous items include wire, axe cut wood chips, wire nails, an external friction can lid, a shaker spice can lid, and a baking powder lid (Clabber Girl Double Acting Baking Powder). Feature A is an axe cut wood chip concentration measuring 9 ft N-S by 6 ft E-W.

Smithsonian Site No.: 42Un6924
Well Location: Gusher 12-5-6-20
Temporary Site No.: 08-140-ML13
NRHP Eligibility: Not Eligible

Description: The site is a historic temporary camp located on a low ridge top that slopes gently towards the east. Cultural materials consists of tin cans, glass, and miscellaneous items. Tin cans include tobacco tins, sanitary food cans (one stamped SANITARY 1904-1908), and a paint can (internal friction). Glass is limited to a clear food jar (Hazel-Atlas Glass Co. 1920-1964). Miscellaneous items include axe cut wood chips, a bundle of wire and wire fragments.

Smithsonian Site No.: 42Un6925
Well Location: Gusher 2-17-6-20
Temporary Site No.: 08-140-ML14
NRHP Eligibility: Not Eligible

Description: This is a trash scatter located on a ridge slope above an intermittent drainage that flows into Sand Wash. Cultural materials are dominated by hole in cap cans: three with a 1 inch cap (1903-1914), six with a 1 9/16 inches cap (1885-1903), one with a 2 12/16 inches cap (1885-1903), and five crushed hole in cap food cans embossed "16 OZ. NET" "T". Other artifacts consist of a wire bail handle and three crockery sherds.

Smithsonian Site No.: 42Un7024
Well Location: Gusher 2-17-6-20
Temporary Site No.: 08-140-ML15
NRHP Eligibility: Not Eligible

Description: This is a trash scatter located on a small hill top that slopes gently towards the east towards Sand Wash. Cultural material on the site consists of sanitary food cans (n=11) most with cut around openings; one tobacco tin; a syrup can; and three hole in top milk cans (few date 1915-1930). Other items consist of a metal cap stamped with "Pry Out Front Lugs and Lift" and a metal stovepipe section.

Smithsonian Site No.: 42Un7025
Well Location: Gusher 1-36-6-20
Temporary Site No.: 08-140-ML16
NRHP Eligibility: Not Eligible

Description: This is a trash dump located on the top of a broad ridge west of the Green River. Cultural material on the site consists of tin cans, glass, and miscellaneous items. Tin cans consist of 10 mainly crushed sanitary food cans, a motor oil can (embossed CONOCO), two large meat cans, and a beverage can. Glass includes a clear beverage bottle made by Owens- Illinois Glass Co. with a factory number of "20" and a year date of "1" (1931, 1941, or 1951); a clear beverage bottle manufactured by the Glass Containers, Inc. (1945-1971+); a clear baby bottle embossed "4" "PYRAMID" "3" "9" on the base and "EVENFLO" on the side; and a milk glass cup embossed "Fire King Oven Glass" on the base. Miscellaneous items include a metal stove pipe, a broken wooden box, wire nails, and eight can lids.

Smithsonian Site No.: 42Un7026
Well Location: Gusher 2-17-6-20
Temporary Site No.: 08-140-ML17
NRHP Eligibility: Eligible, Criterion D

Description: This is a prehistoric and historic temporary camp located on a dune covered hill above an intermittent drainage that flows east into Sand Wash. The prehistoric component consists of 16 pieces of debitage dominated by secondary reduction manufactured from siltstone and quartzite. Feature A is a firecracked rock concentration eroding from the dune. It measures 1 m by 1 m and contains nine pieces of fire-altered sandstone lacking evidence of soil discoloration. The historic component is a range camp situated mainly on the hill top. Tin cans include sanitary food cans, a tobacco tin, a lard can, and a hole in top can. Glass consists of an aqua semi-automatic container embossed "Masons Patent..." with "CFJC" on the side and "198" on the base (dates 1885-1920) and an amethyst kerosene lamp chimney. Feature B is a stone ringed hearth defined by four sandstone and contains charcoal chunks.

Table 2. Listing of Archaeological Sites and Recommendations

Smithsonian No.	Legal Description	Site Type	NRHP Evaluation	Recommendations
42Un5274	T6S, R20E S. 7	Highway	Eligible, Criterion A	None
42Un5485	T6S, R20E S. 28	Trash Dump	Not Eligible	None
42Un5486	T6S, R20E S. 28	Trash Scatter	Not Eligible	None
42Un6704	T6S, R20E S. 6	Prehistoric Temporary Camp	Eligible, Criterion D	Avoid
42Un6705	T6S, R20E S. 6	Historic Temporary Camp	Not Eligible	None
42Un6706	T6S, R20E S. 7	Trash Scatter/Borrow Pits	Not Eligible	None
42Un6707	T6S, R20E S. 7	Trash Dump	Not Eligible	None
42Un6708	T6S, R20E S. 7	Trash Scatter	Not Eligible	None
42Un6709	T6S, R20E S. 16	Lithic Scatter	Eligible, Criterion D	Avoid
42Un6710	T6S, R20E S. 22	Trash Scatter	Not Eligible	None
42Un6711	T6S, R20E S. 27	Prehistoric Temporary Camp	Eligible, Criterion D	Avoid
42Un6712	T6S, R20E S. 26	Prehistoric Temporary Camp	Eligible, Criterion D	Avoid
42Un6921	T6S, R20E S. 6	Historic Temporary Camp	Not Eligible	None
42Un6922	T6S, R20E S. 6	Prehistoric Temporary Camp	Eligible, Criterion D	Avoid
42Un6923	T6S, R20E S. 9, 10	Historic Temporary Camp	Not Eligible	None
42Un6924	T6S, R20E S. 5	Trash Scatter	Not Eligible	None
42Un6925	T6S, R20E S. 17	Trash Scatter	Not Eligible	None
42Un7024	T6S, R20E S. 17	Trash Scatter	Not Eligible	None
42Un7025	T6S, R21E S. 31	Trash Dump	Not Eligible	None
42Un7026	T6S, R20E S. 17	Preh/Hist Temporary Camp	Eligible, Criterion D	Avoid

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d)...have yielded or may be likely to yield information important in prehistory or history.

The cultural resource inventory resulted in the location of two previously recorded sites (42Un5485 and 42Un5486) and the documentation or update of 18 additional archaeological sites (42Un5274, 42Un6704-42Un6712, 42Un6921-42Un6925 and 42Un7024-42Un7026). Seven sites (42Un5274, 42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) are recommended eligible to the NRHP. Site 42Un5274 is a portion of abandoned US 40 which has previously been evaluated as eligible to the NRHP under Criterion A because it is associated with the construction of a transnational highway system, an event which has made a significant contribution to the broad patterns of our history. The six prehistoric sites (42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) exhibit a diversity of artifacts or features and lie in depositional environments yielding potential for significant buried cultural remains. Therefore, these sites are recommended eligible to the NRHP under Criterion D because they are likely to address such research domains as cultural affiliation/chronology, technology, subsistence strategies, and land use patterns. The remaining 13 historic sites consist of trash dumps or scatters (42Un5485, 42Un5486, 42Un6706, 42Un6707, 42Un6708, 42Un6710, 42Un6924, 42Un6925, 42Un7024, and 42Un7025) or temporary camps (42Un6705, 42Un6921, and 42Un6923) containing a restricted class and quantity of cultural materials and no significant features. Therefore, these sites are recommended not eligible for the NRHP since they fail to contribute to the prehistory of the area (Criterion D). In addition, the sites are not associated with any known significant event(s) or person(s) (Criteria A and B), nor do they represent the work of a master (Criterion C)

MANAGEMENT RECOMMENDATIONS

The inventory of Newfield Exploration's nine proposed Gusher well locations with access/pipeline corridors resulted in the update of one historic site (42Un5274) previously evaluated as eligible to the NRHP under Criterion A, and the documentation of six prehistoric sites (42Un6704, 42Un6709, 42Un6711, 42Un6712, 42Un6922, and 42Un7026) considered eligible to the NRHP under Criterion D. The six eligible prehistoric sites should be avoided by ground disturbance activities related to this undertaking. Based on the adherence to this recommendation, a determination of "no adverse impact" pursuant to Section 106, CFR 800 is proposed for this project.

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APPENDIX A

INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS)
SITE INVENTORY FORMS 42Un5274, 42Un6704-42Un6712
42Un6921-42Un6925 and 42Un7024-42Un7026

On File At:

Bureau of Land Management
Vernal Field Office

Utah Division of State History
Salt Lake City, Utah

1-36-6-20

NEWFIELD EXPLORATION COMPANY

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED DEVELOPMENT
AREAS AND WATER PIPELINE TIE-INS,
DUCHESNE & UINTA COUNTIES, UTAH**

Pariette Draw and Greater Boundary Areas

NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18);
NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17)

Horseshoe Bend Area

NW 1/4, NW 1/4, & SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (4 & 16-9-6-20); NW 1/4, NE 1/4,
Section 26, T 6 S, R 20 E (2-26-6-20); NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20);
NW 1/4, SW 1/4, & SE 1/4, SE 1/4 Section 6, T 6 S, R 20 E (12 & 16-6-20); NW 1/4, SW 1/4,
Section 5, T 6 S, R 20 E (12-5-6-20); NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20);
NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21)

REPORT OF SURVEY

Prepared for:

Newfield Exploration Company

Prepared by:

Wade E. Miller
Consulting Paleontologist
June 11, 2008

INTRODUCTION

A list of seven 40 acre parcels in the Horseshoe Bend area, and three sites in the Pariette Draw and Greater Boundary areas were sent to Wade Miller, Consulting Paleontologist, by Mandie Crozier of Newfield Exploration Company's Myton, Utah, office on two separate dates. These dates were May 15 and 29, 2008. Actually one of these sites, the SE 1/4, NE 1/4, Section 34, T 8 S, R 18 E (42-34D-8-18) in the Greater Boundary area had been done earlier, and contained in a report dated May 29, 2008. The surveyed units included in this report are the NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18), and NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17), Pariette Draw and Greater Boundary Areas, as well as the NW 1/4, NW 1/4, & SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (4 & 16-9-6-20); NW 1/4, NE 1/4, Section 26, T 6 S, R 20 E (2-26-6-20); NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20); NW 1/4, SW 1/4, & SE 1/4, SE 1/4 Section 6, T 6 S, R 20 E (12 & 16-6-20); NW 1/4, SW 1/4, Section 5, T 6 S, R 20 E (12-5-6-20); NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20); NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21) in the Horseshoe Bend Area. Dates in which the field work was done on the project reported here were June 4th, and on June 9th & 10th, 2008. All work was done by Wade E. Miller, paleontological consultant. The survey begun on June 4th was cut short due to heavy rains which prevented further field work. This work was then continued and completed on June 9th and 10th.

Reports of paleontological surveying from 1999 through 2003, included general paleontological procedures used in field work, so they are not reported in detail here. The work for the areas of this report followed these same procedures. The earlier reports containing procedures should be on file in the Newfield Production Company's office as ones submitted to Newfield's precursor, the Inland Production Company. These reports should also be on file with the Salt Lake City and Vernal, Utah offices of the Bureau of Land Management (BLM).

It is the Uinta Formation that occupies much of the surface sediment and rock in the Uinta Basin where the Newfield Production Company has leased oil and gas land from the BLM. This formation ranks as one of Utah's most paleontologically sensitive geologic formations. It is for this reason that the BLM requires paleontological surveys for any type of land disturbance affecting this formation. Newfield, as well as the Inland Production Company before them, has been complying with the regulations involved. Fossils from the Uinta Formation have provided a wealth of scientifically important information regarding past animal life and its history, as well as the ancient environmental conditions that existed about 45 million years ago in the Uinta Basin and surrounding areas. As has earlier been reported, a Mammalian Age has been erected for all North America based on the Eocene fossils from the Uinta Basin.

Some of the specific types of fossil plants and animals found on Newfield's oil and gas leased land have been cited in earlier reports by the present author. The importance of protecting scientifically significant fossils and the Federal and State laws regarding their protection have also been cited in earlier reports. All the significant fossils collected during paleontological field surveys have been brought to the paleontological laboratory at Brigham Young University where they are prepared and curated into the fossil collections there. Whenever important fossils are collected on BLM lands, a Paleontological Report form is filled in and submitted to the Salt Lake City and local BLM offices. In the case of the Uinta Basin, this Regional Office is in Vernal, Utah. Fossils thus collected, prepared and curated are available to any qualified scientist. Some of the specimens are displayed at BYU's Earth Science Museum in Provo, Utah.

Two types of maps were used for the paleontological survey reported here, as has been true for all other surveys. One type is the planimetric map showing the roads through the oil and gas fields as provided by the Newfield Exploration/Production Company. The other is the topographic map. This is useful in determining specific areas, with their surface features. Ones used in the present survey work were the Pariette Draw SW, Uteland Butte, Vernal SW and Vernal SE 7.5' maps produced by the United States Geological Survey. These four maps covered all the area where the presently reported paleontological survey work took place. All were published in 1964.

PALEONTOLOGICAL FIELD SURVEY

Again, the paleontological field survey procedures are the same as those done earlier and reported. All areas receiving a survey are walked out on foot, with the exception of cliffs and steep escarpments where just the top and base of these structures are examined. This of course is just in areas where the Uinta Formation is exposed. All proposed access roads and pipeline routes are also walked out regardless of length. Care is taken to make sure that even small or very low exposures are checked. Notes are kept as the field survey progresses regarding the terrain, soil, plant growth and any fossils discovered. Digital photos are taken of significant fossils and their locations. Any collected fossils are plotted on the relevant USGS topographic map, and a GPS reading is taken at the site. Field numbers are also given for each. While in many instances the reporting unit is one quarter, quarter section, where two to four have no important fossils and are juxtaposed, the reporting unit may be up to one quarter section. In a few rare cases, more than one quarter section is reported as a unit if there is little or no exposure of the Uinta Formation and no important fossils are found within the unit.

The survey completed for this report, like all earlier ones, includes coverage of the staked (and sometimes not yet staked) proposed well pad sites in addition to the ancillary access road, water, gas, and fuel lines. Where no staking for these are present when the request is made for a survey, then the entire quarter, quarter section involved is all carefully surveyed. When staking is present, the staked areas receive close scrutiny, and with closely adjacent areas in the unit more casually examined.

REPORT OF AREAS SURVEYED

Section 34, T 8 S, R 18 E

Pariette Draw Area

NE 1/4, SE 1/4, Section 34, T 8 S, R 18 E (43-34-8-18)

The survey for this unit consisted of surveying a proposed 690 feet of water pipeline to be tied into an existing well. Terrain in the immediate area is nearly flat, sloping upward somewhat to the south. Soil is mostly rocky, and supports a sparse low-growing vegetation. A few low-lying discontinuous exposures of Uinta Formation sandstone and mudstone occur here. Although the site was carefully checked, no stakes marking the proposed water line were seen. According to the plot map of this site provided by Newfield, the 690 feet line should run from the well to the south. In case a mistake was made, the well site was checked in all directions. No staking was present at the time of the paleontological survey. However, the area was checked sufficiently to cover wherever this line will eventually be placed (assuming it is not longer than indicated). The Uinta formation exposures within 690 feet of the well only show a few invertebrate borings/burrowings in sandstones, and a few weathered fossil turtle shell fragments.

Section 34, T 8 S, R 17 E
Greater Boundary Area

NW 1/4, SE 1/4, Section 34, T 8 S, R 17 E (10-34-8-17)

The proposed water injection pipeline at this operating well runs only 70 feet to the east. Although Uinta Formation beds are exposed in the vicinity, with fossil vertebrate material earlier reported from the area, this short proposed line is entirely situated on previously disturbed land. In fact it covers only developed road areas leading to the well site.

Horseshoe Bend Area
Section 9, T 6 S, R 20 E

NW 1/4, NW 1/4, Section 9, T 6 S, R 20 E (4-9-6-20)

According to the provided site map, the proposed access road leading to this proposed well site location begins at State Highway 40. It proceeds south for a little more than half of its 3,210 feet of length, then turns to the southwest to its terminus. Over this entire distance the terrain is relatively flat. Soil conditions vary slightly from very fine-grained to sandy. The vegetation over roughly the first half of this proposed route is primarily low-growing and relatively sparse. However, the height and abundance increases closer to the proposed well pad site. Uinta Formation mudstones and sandstones are encountered throughout the access road route as broad and very low exposures. They are more numerous along the first half of the route. Some of these exposures are present at the proposed well site itself. In fact adjacent to the flat-lying area of this site the land slopes downward on both the east and west sides. Here, interbedded sandstones and mudstones are present. Even after a careful search of all exposed Uinta beds, along the access road corridor and the well site, no trace of fossils were seen. The proposed gas line route ties into the proposed access road about one-fifth of the distance from State Highway 40, and then continues along it to the well pad site. The proposed gas line begins in a large arroyo (Halfway Hollow) and runs east about 700 to 800 feet until it ties into the said access road. The gas pipeline route crosses a large number of Uinta sandstone and mudstone exposures along this distance. The only fossils seen consist of a few invertebrate borings in sandstone.

SE 1/4, SE 1/4, Section 9, T 6 S, R 20 E (16-9-6-20)

An existing road runs from State Route 88 to the proposed well pad site at this location. A proposed gas pipeline parallels this route. All were checked as part of the present paleontological survey. The gas pipeline runs a distance of 2.1 miles south along State Route 88 from State Highway 40. While some Uinta Formation strata were crossed along this distance, only some invertebrate boring/burrowing structures were noted in sandstones. The proposed gas line turns east on a dirt road for a distance of 0.6 mile. No fossils were seen along this segment although Uinta beds do intermittently occur in the area. From this point the proposed route turns north, then east near its end. This 6,300 feet of line was surveyed in its entirety as well. The land covered is almost all sandy desert soil. An exception is the low, narrow bands of Uinta sandstone beds that

were crossed. No fossils were found in them along the proposed gas line route. The proposed well site proper is located atop a broad ridge that has mostly a sandy soil coverage. However, some low outcroppings of sandstone exist along the western border of this site. Vegetation encountered throughout the surveyed area is moderate in coverage, and dominated by sage brush. All the exposed Uinta Formation sandstones showed no signs of fossils, not even the common (elsewhere) invertebrate trace fossils.

Section 26, T 6 S, R 20 E

NW 1/4, NE 1/4, Section 26, T 6 S, R 20 E (2-26-6-20)

A proposed access road and gas pipeline route extend essentially east from State Highway 88 to the proposed well pad site. This site lies about 2.7 miles from the above highway. The road and pipeline route follows an existing jeep trail until about 0.7 mile before the well site. It then separates from the jeep trail. Mostly the route runs across sage flats and slopes. Occasionally this route crosses low outcrops of Uinta Formation sandstones, shales and mudstones. A few invertebrate borings and burrowings occur in some sandstones. No other fossils were noted along this portion of the corridor. The proposed well pad site is located in an opening bounded by a sandstone ridge on the west, south and east. Mostly the site is on sandy soil with a sparse low-growing vegetation. However, it also rests on some deeply weathered Uinta Formation mudstone. Some invertebrate trace fossils in sandstones represent the only fossils seen.

Section 17, T 6 S, R 20 E

NW 1/4, NE 1/4, Section 17, T 6 S, R 20 E (2-17-6-20)

This proposed well pad site includes a short proposed access road and gas pipeline, extending west from State Highway 88. It also includes two long segments of a proposed gas pipeline. The first runs 5,200 feet south from the proposed well pad site alongside State Route 88 to the

northwest corner of Section 21, T 6 S, R 20 E. The second segment heads east to northeast from this juncture 15,410 feet to a point in the north-central part of Section 14, T 6 S, R 20 E.

The proposed well pad site is located on basically flat terrain immediately west of State Highway 88, and a vertical pipe marking a dry well hole. A fine to gravelly soil covers the entire staked area of the proposed well site, access road and gas pipeline to it. Vegetation is moderate, composed of bunch grass, Compositae, and low-growth brush. No outcrops of Uinta Formation occur on the proposed site. However, the deep arroyo close to the site on the west and north does expose Uinta Formation sandstones and mudstones. No fossils occur at the well site proper. The 5,200 feet of proposed gas pipeline running south from the proposed well pad site abuts State Highway 88, and traverses only a soil and brush cover until it 90 turns degree eastward in Section 21. At this turn east from the highway Uinta Formation beds are moderately exposed. The only fossils here, though, are probable trails/burrows of small invertebrates (weathering of sandstones here has made identification difficult). From this point the proposed gas pipeline runs east along an existing dirt road. The proposed line is on the south side of this dirt road. It continues to run through a soil and brush cover. Nearly 1.0 mile along this route some low outcroppings of Uinta Formation sandstone are present, extending eastward about 0.2 mile. No fossil evidence was seen in this sandstone. About 0.1 mile further east, sandstones and mudstones once more occur along the projected route in a discontinuous manner. Mostly the route is over a soil. The sandstones do show some invertebrate markings, but nothing significant.

Section 6, T 6 S R 20 E

NW 1/4, SW 1/4, Section 6, T 6 S, R 20 E (12-6-6-20)

This proposed well pad site is staked in an open sage flat, with very low-growing Compositae. Soil is mostly fine sand, but gravelly in spots. The well site at this location is bordered on the north by a low sandstone ridge, but is open on all other sides. The sandstone ridge is of the Uinta Formation, and contains the ubiquitous mollusc boring and fill features. Other, smaller,

invertebrate markings are also present in some sandstones. The short proposed access road and gas pipeline route extend over sandy soil as they run from an existing dirt road. This short route does cross some sandstone outcrops, but no fossils were found in them.

SE 1/4, SE 1/4, Section 6, T 6 S, R 20 E (16-6-6-20)

This quarter, quarter section lies on an extensive flat area. The soil is rocky to sandy, and supports a low-growth vegetation which is sparse to moderate in abundance. The proposed access road and gas pipeline into this site extend east from a north-south trending jeep trail. They run about one-quarter mile to the well site. No Uinta Formation beds are present in the immediate area. Therefore no fossils would be expected, or are present.

Section 5, T 6 S, R 20 E

NW 1/4, SW 1/4, Section 5, T 6 S, R 20 E (12-5-6-20)

An existing circuitous dirt road initially runs north to this proposed well pad site from State Highway 40. It crosses a sage flat area on to the well site. About 1.0 mile away a new, short proposed access road runs roughly west to this well pad site. A proposed gas pipeline also follows this route. The well site here is situated on flat terrain that is comprised of sandy to rocky soil, and sage-dominated vegetation. Uinta Formation outcrops of low sandstones, and steep escarpments of interbedded sandstones and mudstones lie just to the west of this site. No fossils were seen along the proposed road and pipeline corridor or at the site proper.

Section 36, T 6 S, R 20 E

NE 1/4, NE 1/4, Section 36, T 6 S, R 20 E (1-36-6-20)

A proposed access road, water and gas pipeline run to this proposed well pad site. The 2,100 feet

of proposed gas pipeline joins the proposed access road and water pipeline at County Road 2891. To this point the gas line runs southwest alongside said County Road. It only crosses desert soil along its length paralleling this road. The combined proposed access road, water and gas pipelines run roughly north 870 feet from 2891 to the 1-36-6-20 proposed well pad site. Mostly this route traverses just soil and low-growing vegetation to the site. The minor Uinta Formation exposures that are crossed exhibit only a few invertebrate borings and burrowings. The proposed well site exists on a small hill covered in soil. However, some low Uinta sandstones occur at the northern boundary of this site. Again, only a few ichnites are present here.

Section 7, T 6 S R 21 E

NW 1/4, SW 1/4, Section 7, T 6 S, R 21 E (12-7-6-21)

The proposed access road and gas pipeline route leading to this proposed well pad site starts at Twelve Mile Wash Road. Here in the east-central part of Section 13, T 6 S, R 20 E, a jeep trail intersects the road. The proposed access road and pipeline corridor follow this jeep trail northeast a little more than 1.0 mile. This corridor then leaves the jeep trail heading to the proposed well pad site about 1.0 mile to the west. While following the jeep trail, the access road and gas pipeline route are located in a narrow canyon. This route is on a mostly alluvial soil that contains a sparse to moderate vegetative growth, dominated by low to medium height brush. Occasionally this route passes over relatively narrow outcrops of sandstone and mudstone. The only fossils seen were the invertebrate borings and burrowings in sandstones. The section of proposed route that branches from the jeep trail passes up and across a wide ridge. A sandy soil with some rocks covers this ridge. The vegetation consists of low bunch grasses, cactus and Compositae, with brush again being dominant. Near the access road and pipeline route terminus, they drop off the ridge ending at the proposed well pad site. Mostly this site is on soil. However, a portion located on the ridge slope rests on Uinta Formation sandstone and mudstone. More invertebrate trace fossils are present in sandstone here.

RESULTS OF SURVEY

The sections included for the present report were dispersed over a distance of many miles. Some of the proposed access roads and pipeline routes necessitated lengthy walks. In places no existing roads led into areas of investigation. While exposures of the Uinta Formation were relatively common, at least intermittently, fossils were surprisingly scarce aside from those made by invertebrate burrowers. In total very few fossils were encountered at any of the proposed well pad sites or along their accompanying proposed access roads, water, and gas pipeline routes. And even many of these were indistinct due to weathering. While the 42-32D-8-18 (SE 1/4, NE 1/4, Section 34, T 8 S, R 18 E) proposed water injection pipeline had been surveyed earlier, it was again rechecked. This is the one area of all surveyed that has significant fossils as reported on 5/29/08.

RECOMMENDED MITIGATION

It is recommended that the 42-32D-8-18 site be paleontologically monitored during any excavating activity. The other sites surveyed in this report would not require any paleontological monitoring. However, there is one change that is here suggested. As noted for 12-7-6-21, the planned pit for this well pad site does partially rest on Uinta Formation strata on its east end. Since the area for this proposed well site appears to allow for realigning somewhat without causing problems, the portion on the Uinta formation should be positioned to avoid this. Wherever the Uinta Formation is excavated, the possibility exists for contacting fossils.

Wade E. Miller
Wade E. Miller
6/11/08

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 11/20/2008

API NO. ASSIGNED: 43-047-40420

WELL NAME: STATE 1-36-6-20

OPERATOR: NEWFIELD PRODUCTION (N2695)

PHONE NUMBER: 435-646-3721

CONTACT: MANDIE CROZIER

PROPOSED LOCATION:

NENE 36 060S 200E

SURFACE: 0723 FNL 0490 FEL

BOTTOM: 0723 FNL 0490 FEL

COUNTY: Uintah

LATITUDE: 40.26015 LONGITUDE: -109.6093

UTM SURF EASTINGS: 618265 NORTHINGS: 4457349

FIELD NAME: UNDESIGNATED (2)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DND	1/12/09
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-49755

SURFACE OWNER: 3 - State

PROPOSED FORMATION: GRRV

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]
(No. B001834)
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit
(No. 43-7478)
- RDCC Review (Y/N)
(Date: _____)
- Fee Surf Agreement (Y/N)
- Intent to Commingle (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: _____
Eff Date: _____
Siting: _____
- ____ R649-3-11. Directional Drill

COMMENTS:

Needs Permit (12-22-08)

STIPULATIONS:

1- Spacing Slip
2- STATEMENT OF BASIS

API Number: 4304740420

Well Name: STATE 1-36-6-20

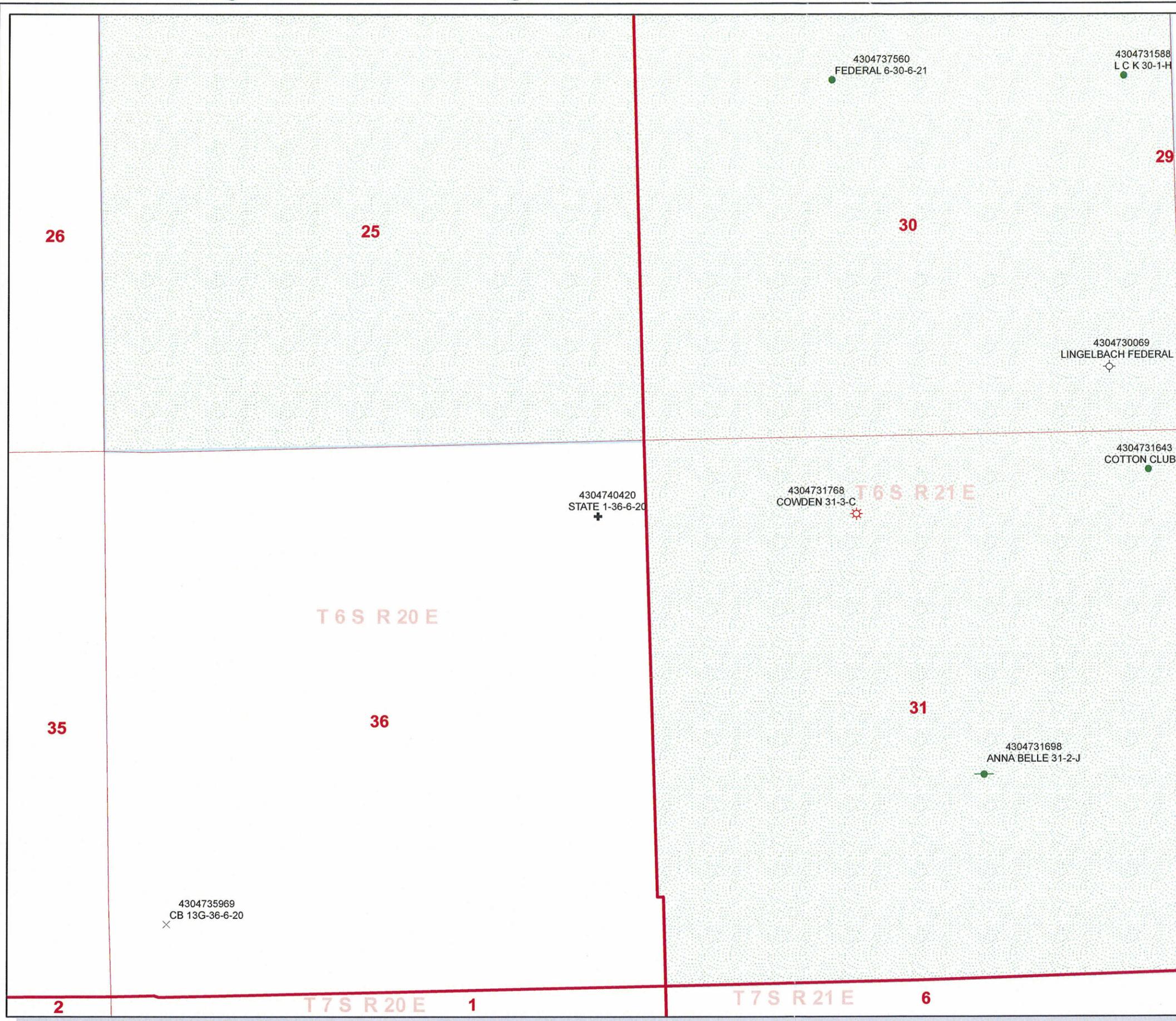
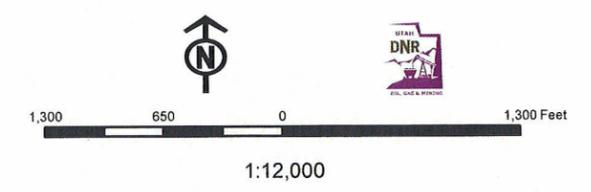
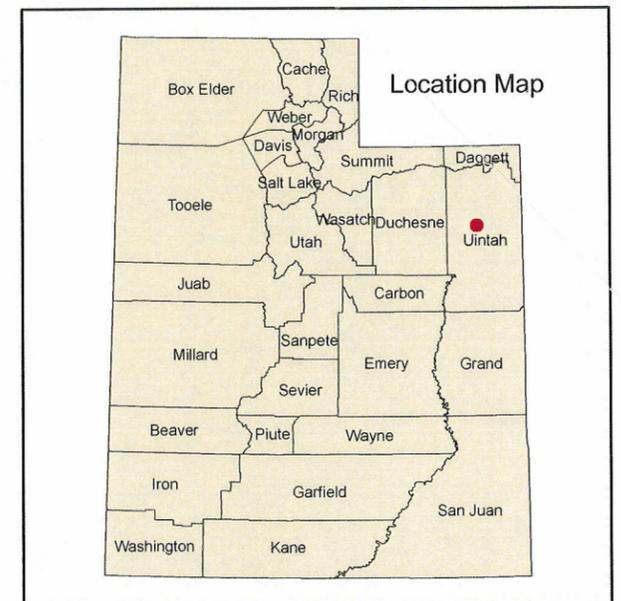
Township 06.0 S Range 20.0 E Section 36

Meridian: SLBM

Operator: NEWFIELD PRODUCTION COMPANY

Map Prepared:
Map Produced by Diana Mason

Units	Wells Query Events
STATUS	✕ <all other values>
ACTIVE	✕ <Null>
EXPLORATORY	◆ APD
GAS STORAGE	⊙ DRL
NF PP OIL	⊙ GI
NF SECONDARY	⊙ GS
PI OIL	✕ LA
PP GAS	⊕ NEW
PP GEOTHERML	⊕ OPS
PP OIL	⊕ PA
SECONDARY	⊕ PGW
TERMINATED	● POW
Fields	⊙ RET
STATUS	⊕ SGW
ACTIVE	● SOW
COMBINED	⊙ TA
Sections	○ TW
Township	⊕ WD
	⊕ WI
	● WS



Application for Permit to Drill

Statement of Basis

12/23/2008

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
1209	43-047-40420-00-00		OW	S	No
Operator	NEWFIELD PRODUCTION COMPANY	Surface Owner-APD			
Well Name	STATE 1-36-6-20	Unit			
Field	UNDESIGNATED	Type of Work			
Location	NENE 36 6S 20E S 723 FNL 490 FEL	GPS Coord (UTM) 618265E 4457349N			

Geologic Statement of Basis

Newfield proposes to set 300' 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 4,800'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is over 1 mile east of the proposed location. It is listed as 40' deep and used for stock watering. 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 should adequately protect useable sources of underground water. The production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

12/23/2008
Date / Time

Surface Statement of Basis

The general area is north of the Green River in the slopes that lead south toward Hamaker Bottoms. The area is characterized by low hills with sandstone ledge rock out crops. Short drainages intersect the hills running south toward the River and associated flat bottomlands. Vernal, Utah is approximately 12 air miles and 17.5 road miles to the northeast. This section and an adjacent section are owned by SITLA while lands managed by the BLM dominate the general ownership in the area. No streams, springs or surface water is in the immediate area. Access to the area from Vernal is by existing State Highways and Uintah County roads to within 870 feet of the proposed pad, which will require new construction.

The proposed State 1-36-6-20 oil well is along the south edge of a slope of a rocky ridge running in an east to west direction. Several short ravines or draws intersect this ridge. The west end of the location is on a high knob where the reserve pit will be dug. Cut from the high area will be moved easterly to form the pad. No drainages will be blocked and no diversions required. Corners 2, 7 and 8 are all proposed to be rounded to reduce the amount of fill required. The selected site appears to be a suitable location for constructing a pad and drilling and operating the well as proposed. A gentler site exists to the south of the location but it is outside the normal drilling window.

Tim Rainbolt of the UDWR said the area is classified as substantial value habitat for antelope. He made no recommendations for this or any other species. He gave Mr. Eaton a written copy of his wildlife evaluation and also a UDWR recommended seed mix to be used when the area is reclaimed.

Both the surface and minerals are owned by SITLA. Jim Davis and Ed Bonner of SITLA were invited to the on-site visit. Neither attended.

Floyd Bartlett
Onsite Evaluator

12/22/2008
Date / Time

Application for Permit to Drill

Statement of Basis

12/23/2008

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator NEWFIELD PRODUCTION COMPANY
Well Name STATE 1-36-6-20
API Number 43-047-40420-0 APD No 1209 Field/Unit UNDESIGNATED
Location: 1/4,1/4 NENE Sec 36 Tw 6S Rng 20E 723 FNL 490 FEL
GPS Coord (UTM) 618271 4457362 Surface Owner

Participants

Floyd Bartlett (DOGM), Tim Eaton and Brian Foote (Newfield Production Company), Ben Williams and Tim Rainbolt (UDWR).

Regional/Local Setting & Topography

The general area is north of the Green River in the slopes that lead south toward Hamaker Bottoms. The area is characterized by low hills with sandstone ledge rock out crops. Short drainages intersect the hills running south toward the River and associated flat bottomlands. Vernal, Utah is approximately 12 air miles and 17.5 road miles to the northeast. This section and an adjacent section are owned by SITLA while lands managed by the BLM dominate the general ownership in the area. No streams, springs or surface water is in the immediate area. Access to the area from Vernal is by existing State Highways and Uintah County roads to within 870 feet of the proposed pad, which will require new construction.

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Jim Davis and Ed Bonner of SITLA were invited to the on-site visit. Neither attended.

Surface Use Plan

Current Surface Use

Grazing
Recreational
Wildlife Habitat

New Road

Miles	Well Pad	Src Const Material	Surface Formation
0.2	Width 199 Length 290	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetland N

Flora / Fauna

Moderate vegetation cover which included big sagebrush, rabbit brush, Mormon tea, cheat grass, curly mesquite, annual mustard and Indian ricegrass.

Periodic cattle grazing, coyote, antelope, rabbits, small mammals and birds. Some raptors use the area for feeding.

Soil Type and Characteristics

Soils are a shallow rocky clay loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors

Site Ranking

Distance to Groundwater (feet)	100 to 200	5
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)	>1320	0
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)	10 to 20	5
Affected Populations	<10	0
Presence Nearby Utility Conduits	Not Present	0

Final Score 25 1 **Sensitivity Level**

Characteristics / Requirements

A 40' by 80' by 10' deep reserve pit is planned in an area of cut on the northwest side of the location. No stabilization problems are expected. A liner is required. The operator routinely installs a 16 mil liner.

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

Other Observations / Comments

Floyd Bartlett
Evaluator

12/22/2008
Date / Time

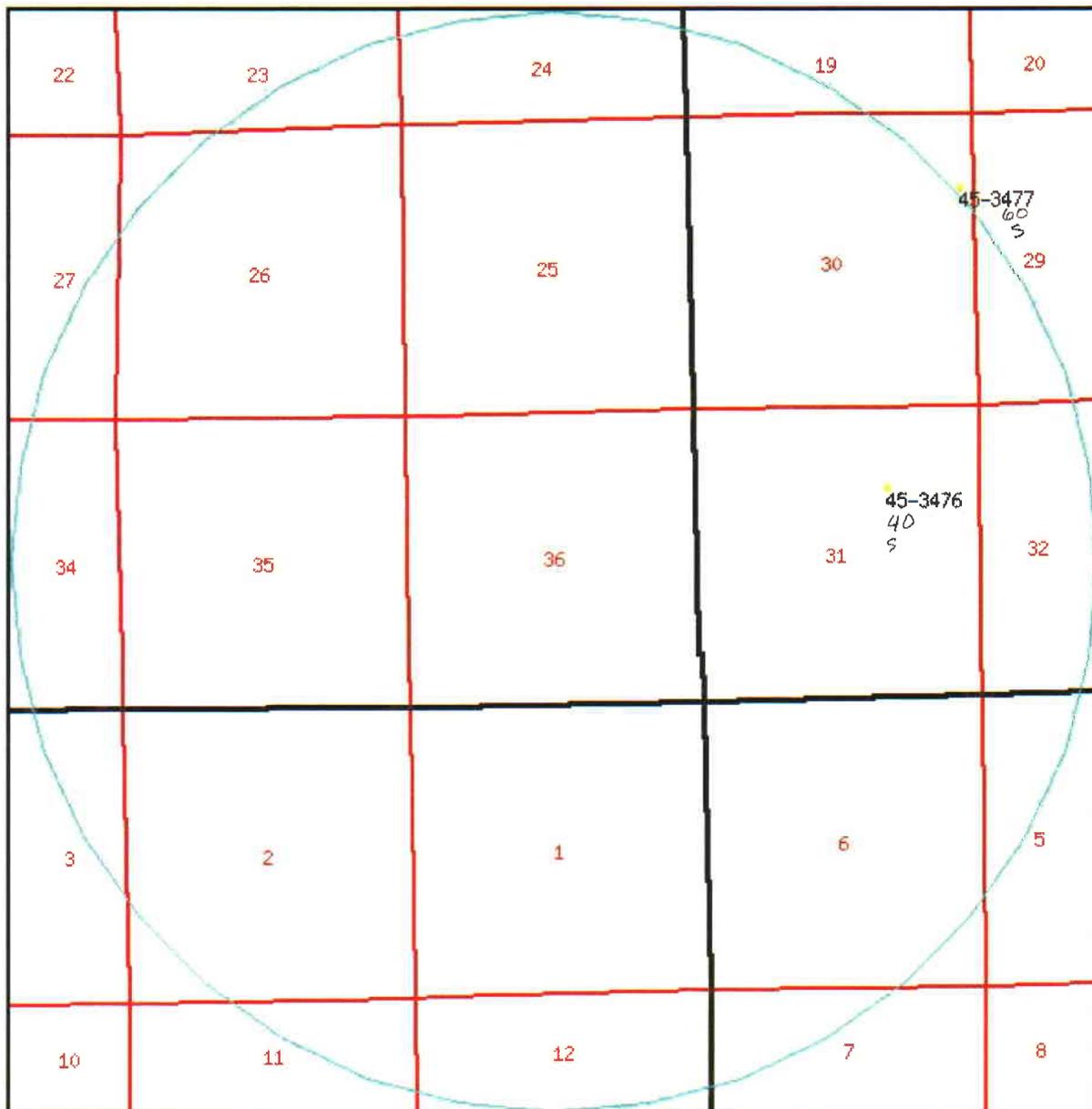
[utah gov](#)
[Online Services](#)
[Agency List](#)
[Business](#)

Utah Division of Water Rights

WRPLAT Program Output Listing

Version: 2007.04.13.01 Rundate: 12/23/2008 03:04 PM

Radius search of 10000 feet from a point N2640 E2640 from the SW corner, section 36, Township 6S, Range 20E, SL b&m Criteria:wrtypes=W,C,E podtypes=U status=U,A,P usetypes=all



Water Rights

WR Number	Diversion Type/Location	Well Log Status	Priority	Uses	CFS	ACFT	O
<u>45-3476</u>	Underground S1460 E930 N4 31 6S 21E SL	P	19731119	S	0.015	0.000	STEVEI 1974 W
<u>45-3477</u>	Underground S1350 W230 NE 30 6S 21E SL	P	19731119	S	0.015	0.000	STEVEI 1974 W

Utah Division of Water Rights | 1594 West North Temple Suite 220, P.O. Box 146300, Salt Lake City, Utah 84114-6300 | 801-538-7240

[Natural Resources](#) | [Contact](#) | [Disclaimer](#) | [Privacy Policy](#) | [Accessibility Policy](#)

Casing Schematic

Surface

12 1/2"

18 1/2"

8-5/8"
MW 8.4
Frac 19.3

TOC @
53.
Surface
300. MD

Units to surf w/12%

TOC @
2041.
to surf w/2% w/o, tail 4665'
Propose to surface v.o.k.

Step surf. cont.

4048' Green River

4800' ± BMSW

5498' tail

5-1/2"
MW 8.4

7650' Wasatch
Production
7650. MD

Well name:

4304740420000 Newfield State 1-36-6-20

Operator:

Newfield Production Company

String type:

Surface

Project ID:

43-047-40420-0000

Location:

Uintah County

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 69 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 185 ft
Cement top: 53 ft

Burst

Max anticipated surface pressure: 264 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 300 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 262 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 7,650 ft
Next mud weight: 8.400 ppg
Next setting BHP: 3,338 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 300 ft
Injection pressure: 300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft ³)
1	300	8.625	24.00	J-55	ST&C	300	300	7.972	107.3
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
1	131	1370	10.465	300	2950	9.83	7	244	33.89 J

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

Phone: 810-538-5357

Date: January 8, 2009
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 300 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes.
Burst strength is not adjusted for tension.

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

Well name:

4304740420000 Newfield State 1-36-6-20

Operator: **Newfield Production Company**

String type: **Production**

Project ID:

43-047-40420-0000

Location: **Uintah County**

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 172 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 368 ft
Cement top: 2,041 ft

Burst

Max anticipated surface pressure: 1,655 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 3,338 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
Neutral point: 6,678 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft ³)
1	7650	5.5	15.50	J-55	LT&C	7650	7650	4.825	1022.3
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
1	3338	4040	1.210	3338	4810	1.44	119	217	1.83 J

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

Phone: 810-538-5357

Date: January 8, 2009
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 7650 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes.
Burst strength is not adjusted for tension.

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

BOPE REVIEW

Newfield State 1-36-6-20 API 43-047-40420-0000

INPUT		Newfield State 1-36-6-20 API 43-047-40420-0000	
Well Name	String 1	String 2	
Casing Size (")	8 5/8	5 1/2	
Setting Depth (TVD)	300	7650	
Previous Shoe Setting Depth (TVD)	0	300	
Max Mud Weight (ppg)	8.4	8.4	✓
BOPE Proposed (psi)	0	2000	
Casing Internal Yield (psi)	2950	4810	
Operators Max Anticipated Pressure (psi)	3312	8.3 ppg	✓

Calculations	String 1	8 5/8 "	
Max BHP [psi]	.052*Setting Depth*MW =	131	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	95	NO <i>OK</i> Air drill
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	65	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	65	NO <i>OK</i>
Required Casing/BOPE Test Pressure		300 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		0 psi	*Assumes 1psi/ft frac gradient

Calculations	String 2	5 1/2 "	
Max BHP [psi]	.052*Setting Depth*MW =	3342	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	2424	NO Air drill
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	1659	YES ✓
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	1725	← NO <i>Common practice in area</i>
Required Casing/BOPE Test Pressure		2000 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		300 psi	*Assumes 1psi/ft frac gradient

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 12/30/2008 1:00 PM
Subject: SITLA well approvals (4 KMG, 2 Newfield)

CC: Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

4304740431	NBU 1022-2B2S	Kerr-McGee Oil & Gas	Natural Buttes
4304740432	NBU 1022-2A3S	Kerr-McGee Oil & Gas	Natural Buttes
4304740433	NBU 1022-2A4S	Kerr-McGee Oil & Gas	Natural Buttes
4304740434	NBU 1022-2A2T	Kerr-McGee Oil & Gas	Natural Buttes
4304740420	STATE 1-36-6-20	Newfield Production Co.	Undesignated
4301334146	W DRAW ST N-32-8-16	Newfield Production Co.	Monument Butte

-Jim

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

RECEIVED

JAN 05 2009

DIV. OF OIL, GAS & MINING



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 12, 2009

Newfield Production Company
Rt. #3, Box 3630
Myton, UT 84052

Re: State 1-36-6-20 Well, 723' FNL, 490' FEL, NE NE, Sec. 36, T. 6 South, R. 20 East,
Uintah County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-40420.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
SITLA



Operator: Newfield Production Company

Well Name & Number State 1-36-6-20

API Number: 43-047-40420

Lease: ML-49755

Location: NE NE Sec. 36 T. 6 South R. 20 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 action during drilling of this well:

- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
- 24 hours prior to spudding the well – contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

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

- Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
- Any changes to the approved drilling plan – contact Dustin Doucet

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

- Dan Jarvis at: (801) 538-5338 office (801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

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

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML-49755
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.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: STATE 1-36-6-20
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY	9. API NUMBER: 43047404200000
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT, 84052	PHONE NUMBER: 435 646-4825 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0723 FNL 0490 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 36 Township: 06.0S Range: 20.0E Meridian: S	9. FIELD and POOL or WILDCAT: UNDESIGNATED COUNTY: UINTAH STATE: UTAH

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

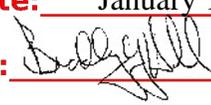
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/11/2010	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

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

Newfield proposes to extend the permit to drill this well for one year.

Approved by the Utah Division of Oil, Gas and Mining

Date: January 11, 2010

By: 

NAME (PLEASE PRINT) Mandie Crozier	PHONE NUMBER 435 646-4825	TITLE Regulatory Tech
SIGNATURE N/A	DATE 1/11/2010	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047404200000

API: 43047404200000

Well Name: STATE 1-36-6-20

Location: 0723 FNL 0490 FEL QTR NENE SEC 36 TWNP 060S RNG 200E MER S

Company Permit Issued to: NEWFIELD PRODUCTION COMPANY

Date Original Permit Issued: 1/12/2009

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 rightof- 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

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

Signature: Mandie Crozier

Date: 1/11/2010

Title: Regulatory Tech **Representing:** NEWFIELD PRODUCTION COMPANY

Date: January 11, 2010

By: 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML-49755
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1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: STATE 1-36-6-20
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 0723 FNL 0490 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 36 Township: 06.0S Range: 20.0E Meridian: S	9. FIELD and POOL or WILDCAT: UNDESIGNATED COUNTY: UINTAH STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/12/2011	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
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	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
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	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Newfield proposes to extend the Application for Permit to Drill this well for one year.

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

Date: 12/30/2010
By: 

NAME (PLEASE PRINT) Mandie Crozier	PHONE NUMBER 435 646-4825	TITLE Regulatory Tech
SIGNATURE N/A		DATE 12/28/2010



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047404200000

API: 43047404200000

Well Name: STATE 1-36-6-20

Location: 0723 FNL 0490 FEL QTR NENE SEC 36 TWP 060S RNG 200E MER S

Company Permit Issued to: NEWFIELD PRODUCTION COMPANY

Date Original Permit Issued: 1/12/2009

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- 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

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

Signature: Mandie Crozier

Date: 12/28/2010

Title: Regulatory Tech **Representing:** NEWFIELD PRODUCTION COMPANY

Date: 12/30/2010

By: 



GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 13, 2012

Mandie Crozier
Newfield Production Co
Route 3 Box 3630
Myton, UT 84052

Re: APD Rescinded – State 1-36-6-20, Sec. 36, T.6S, R.20E
Uintah County, Utah API No. 43-047-40420

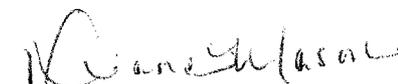
Dear Ms. Crozier:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on January 12, 2009. On January 11, 2010 and December 30, 2010 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective January 13, 2012.

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

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

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
SITLA, Ed Bonner

