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

FORM 3
AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 1022-19H2BS

2. TYPE OF WORK
DRILL NEW WELL (●) REENTER P&A WELL ( ) DEEPEN WELL ( )

3. FIELD OR WILDCAT
NATURAL BUTTES

4. TYPE OF WELL
Gas Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

6. NAME OF OPERATOR
KERR-MCGEE OIL & GAS ONSHORE, L.P.

7. OPERATOR PHONE
720 929-6587

8. ADDRESS OF OPERATOR
P.O. Box 173779, Denver, CO, 80217

9. OPERATOR E-MAIL
mary.mondragon@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
ML 20714

11. MINERAL OWNERSHIP
FEDERAL ( ) INDIAN ( ) STATE (●) FEE ( )

12. SURFACE OWNERSHIP
FEDERAL ( ) INDIAN ( ) STATE (●) FEE ( )

13. NAME OF SURFACE OWNER (if box 12 = 'fee')

14. SURFACE OWNER PHONE (if box 12 = 'fee')

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')

16. SURFACE OWNER E-MAIL (if box 12 = 'fee')

17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')

18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS
YES (●) (Submit Commingling Application) NO ( )

19. SLANT
VERTICAL ( ) DIRECTIONAL (●) HORIZONTAL ( )

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1127 FNL 542 FWL	NWNW	20	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	1610 FNL 1250 FEL	SENE	19	10.0 S	22.0 E	S
At Total Depth	1610 FNL 1250 FEL	SENE	19	10.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
1250

23. NUMBER OF ACRES IN DRILLING UNIT
203

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
1200

26. PROPOSED DEPTH
MD: 9310 TVD: 8860

27. ELEVATION - GROUND LEVEL
5239

28. BOND NUMBER
22013542

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
Permit #43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	12.25	9.625	0 - 1970	36.0	J-55 LT&C	0.2	Class G	215	1.18	15.6
							Class G	50	1.18	15.6
Prod	7.875	4.5	0 - 9310	11.6	I-80 LT&C	11.6	Premium Lite High Strength	350	3.38	11.0
							50/50 Poz	1380	1.31	14.3

ATTACHMENTS

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

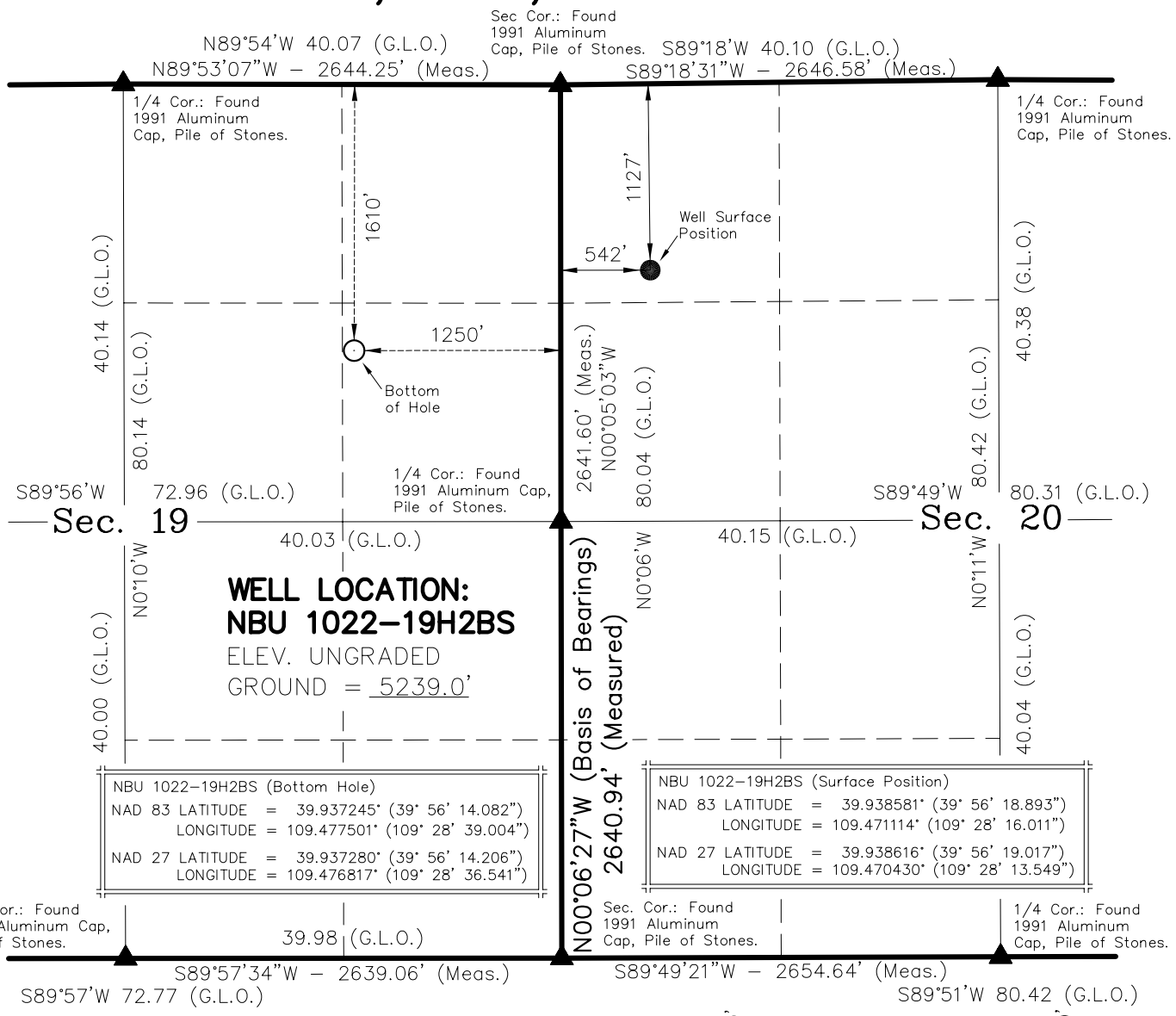
- ☑ **WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER**
- ☑ **COMPLETE DRILLING PLAN**
- ☐ **AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)**
- ☐ **FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER**
- ☑ **DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)**
- ☑ **TOPOGRAPHICAL MAP**

NAME Danielle Piernot	**TITLE** Regulatory Analyst	**PHONE** 720 929-6156
SIGNATURE	**DATE** 05/13/2009	**EMAIL** danielle.piernot@anadarko.com

API NUMBER ASSIGNED 43047504270000 **APPROVAL**

'APIWellNo:43047504270000'

T10S, R22E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. The Bottom of hole bears S74°48'05"W 1856.50' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri–Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri–Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

1000' 500' 0' 1000'

SCALE

N

SURVEYOR'S CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION No. 362251
STATE OF UTAH

REGISTERED LAND SURVEYOR No.362251 KOLBY R. KAY STATE OF UTAH

Kerr–McGee Oil & Gas Onshore, LP
1099 18th Street – Denver, Colorado 80202

NBU 1022-19H2BS
WELL PLAT
1610' FNL, 1250' FEL (Bottom Hole)
SE ¼ NE ¼ OF SECTION 19, T10S, R22E,
S.L.B.&M. UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST – VERNAL, UTAH 84078

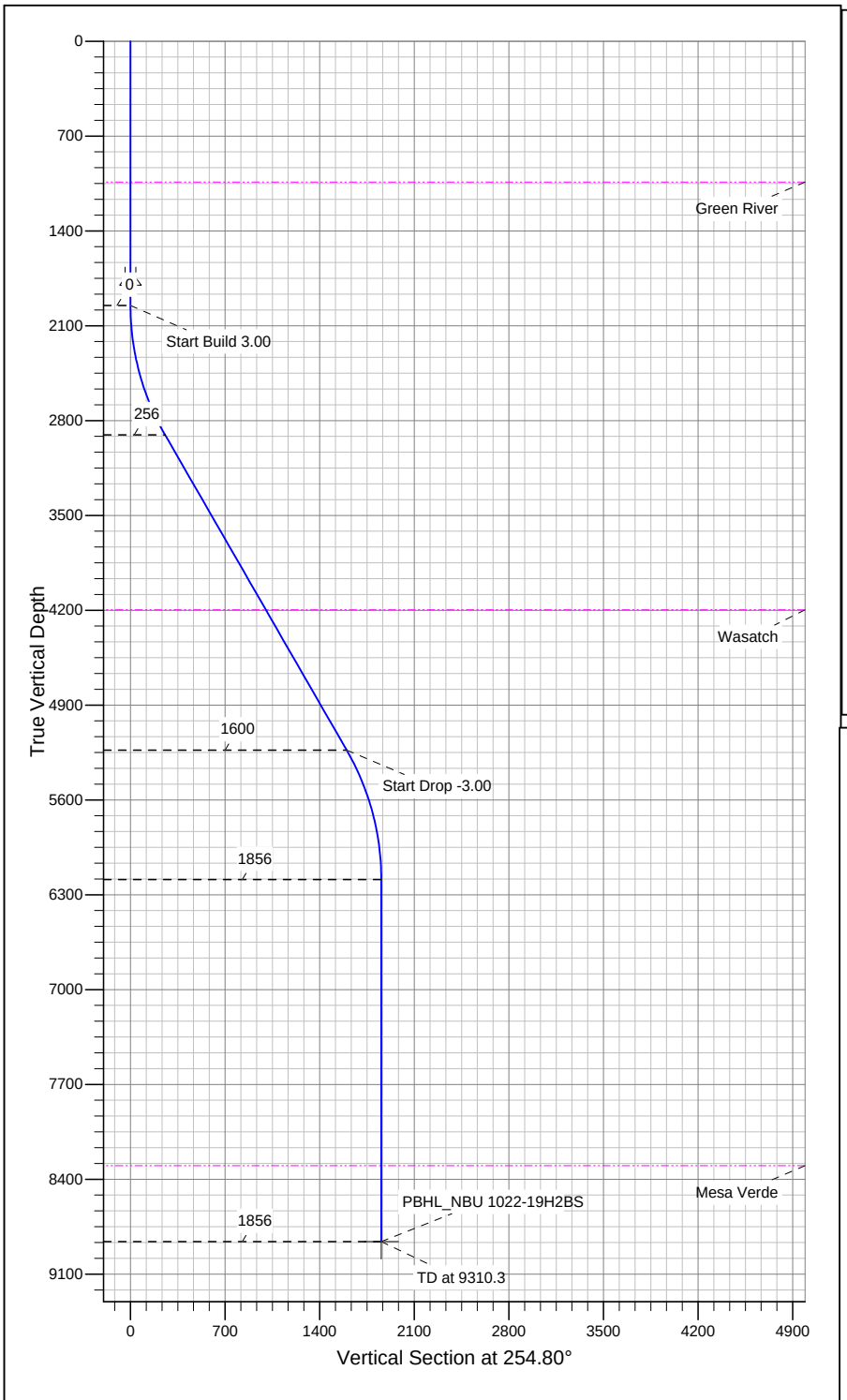
DATE SURVEYED: 11–24–08	SURVEYED BY: M.S.B.	SHEET 2 OF 13
DATE DRAWN: 01–13–09	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'	Date Last Revised: 02–07–09	

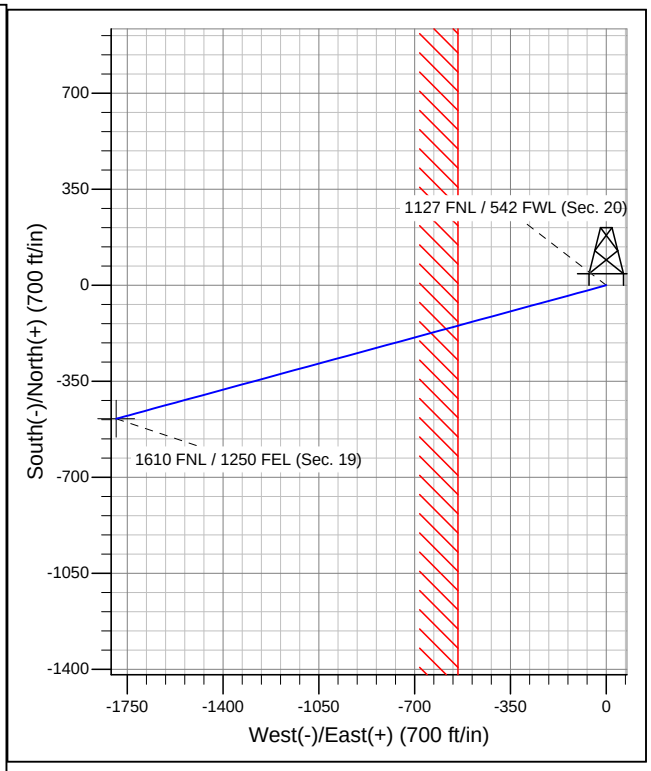
’APIWellNo:43047504270000’

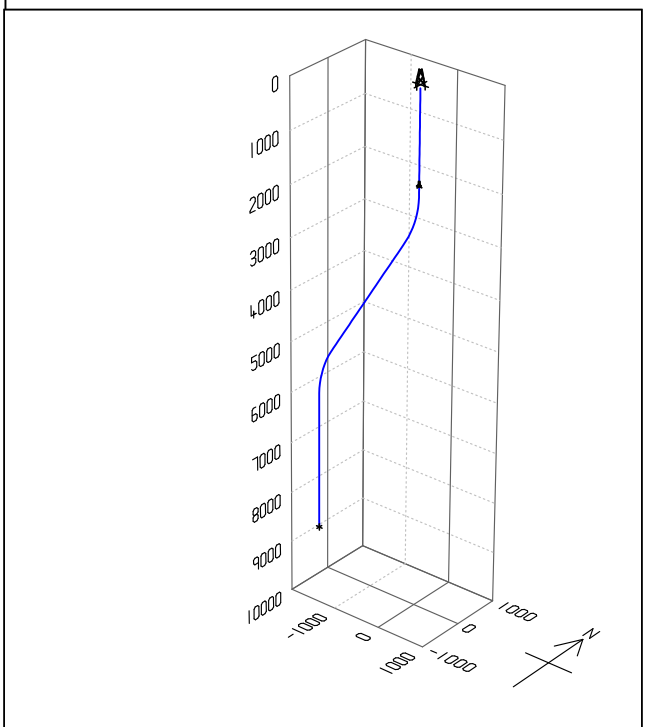
Anadarko Petroleum Corporation

Well Name: P_NBU 1022-19H2BS
Surface Location: UINTAH_NBU 1022-20D PAD
NAD 1927 (NADCON CONUS)US State Plane 1927 (Exact solution)
UTAH CENTRAL ZONE - 27
Ground Elevation: 5238.0

Northing	Easting	Latitude	Longitude
591142.83	2569028.71	39.938616°N	109.470430°W

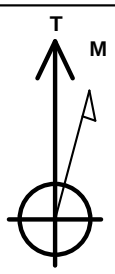






SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	1950.0	0.00	0.00	1950.0	0.0	0.0	0.00	0.00	0.0
3	2950.0	30.00	254.80	2904.9	-67.1	-246.9	3.00	254.80	255.9
4	5638.2	30.00	254.80	5232.9	-419.5	-1544.0	0.00	0.00	1600.0
5	6638.2	0.00	0.00	6187.9	-486.6	-1790.9	3.00	180.00	1855.8
6	9310.3	0.00	0.00	8860.0	-486.6	-1790.9	0.00	0.00	1855.8



Azimuths to True North
Magnetic North: 11.31°

Magnetic Field
Strength: 52540.3snT
Dip Angle: 65.89°
Date: 4/14/2009
Model: IGRF200510

ROCKIES - PLANNING

UTAH CENTRAL ZONE - 27
UINTAH_NBU 1022-20D PAD
P_NBU 1022-19H2BS
P_NBU 1022-19H2BS

Plan: Plan #1 04-14-09 ZJRA6

Standard Planning Report - Geographic

14 April, 2009

APC

Planning Report - Geographic

Database:	apc_edmp	**Local Co-ordinate Reference:**	Well P_NBU 1022-19H2BS
Company:	ROCKIES - PLANNING	**TVD Reference:**	WELL @ 5238.0ft (Original Well Elev)
Project:	UTAH CENTRAL ZONE - 27	**MD Reference:**	WELL @ 5238.0ft (Original Well Elev)
Site:	UINTAH_NBU 1022-20D PAD	**North Reference:**	True
Well:	P_NBU 1022-19H2BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	P_NBU 1022-19H2BS		
Design:	Plan #1 04-14-09 ZJRA6		

Project UTAH CENTRAL ZONE - 27

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site UINTAH_NBU 1022-20D PAD

Site Position:		**Northing:**	591,168.66 ft	**Latitude:**	39.938685°N
From:	Lat/Long	**Easting:**	2,569,058.97 ft	**Longitude:**	109.470320°W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	1.30 °

Well P_NBU 1022-19H2BS

Well Position	**+N/-S**	0.0 ft	**Northing:**	591,142.83 ft	**Latitude:**	39.938616°N
	+E/-W	0.0 ft	**Easting:**	2,569,028.71 ft	**Longitude:**	109.470430°W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,238.0 ft

Wellbore P_NBU 1022-19H2BS

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/14/2009	11.32	65.89	52,540

Design Plan #1 04-14-09 ZJRA6

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	8,860.0	0.0	0.0	254.80

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,950.0	0.00	0.00	1,950.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,950.0	30.00	254.80	2,904.9	-67.1	-246.9	3.00	3.00	0.00	254.80	
5,638.2	30.00	254.80	5,232.9	-419.5	-1,544.0	0.00	0.00	0.00	0.00	
6,638.2	0.00	0.00	6,187.9	-486.6	-1,790.9	3.00	-3.00	0.00	180.00	
9,310.3	0.00	0.00	8,860.0	-486.6	-1,790.9	0.00	0.00	0.00	0.00	PBHL_NBU 1022-1

APC

Planning Report - Geographic

Database:	apc_edmp	**Local Co-ordinate Reference:**	Well P_NBU 1022-19H2BS
Company:	ROCKIES - PLANNING	**TVD Reference:**	WELL @ 5238.0ft (Original Well Elev)
Project:	UTAH CENTRAL ZONE - 27	**MD Reference:**	WELL @ 5238.0ft (Original Well Elev)
Site:	UINTAH_NBU 1022-20D PAD	**North Reference:**	True
Well:	P_NBU 1022-19H2BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	P_NBU 1022-19H2BS		
Design:	Plan #1 04-14-09 ZJRA6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	591,142.83	2,569,028.71	39.938616°N	109.470430°W
1,040.0	0.00	0.00	1,040.0	0.0	0.0	591,142.83	2,569,028.71	39.938616°N	109.470430°W
Green River									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	591,142.83	2,569,028.71	39.938616°N	109.470430°W
Surface Casing									
1,950.0	0.00	0.00	1,950.0	0.0	0.0	591,142.83	2,569,028.71	39.938616°N	109.470430°W
2,950.0	30.00	254.80	2,904.9	-67.1	-246.9	591,070.16	2,568,783.37	39.938432°N	109.471311°W
4,440.8	30.00	254.80	4,196.0	-262.5	-966.2	590,858.46	2,568,068.67	39.937895°N	109.473876°W
Wasatch									
5,638.2	30.00	254.80	5,232.9	-419.5	-1,544.0	590,688.43	2,567,494.64	39.937464°N	109.475936°W
6,638.2	0.00	0.00	6,187.9	-486.6	-1,790.9	590,615.76	2,567,249.30	39.937280°N	109.476817°W
8,749.3	0.00	0.00	8,299.0	-486.6	-1,790.9	590,615.76	2,567,249.30	39.937280°N	109.476817°W
Mesa Verde									
9,310.3	0.00	0.00	8,860.0	-486.6	-1,790.9	590,615.76	2,567,249.30	39.937280°N	109.476817°W

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NBU 1022-19H - plan hits target center - Point	0.00	0.00	8,860.0	-486.6	-1,790.9	590,615.76	2,567,249.30	39.937280°N	109.476817°W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,800.0	1,800.0	Surface Casing	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,749.3	8,299.0	Mesa Verde		0.00	
1,040.0	1,040.0	Green River		0.00	
4,440.8	4,196.0	Wasatch		0.00	

NBU 1022-19H2BS

Pad: NBU 1022-20D
Surface: 1,127' FNL, 542' FWL (NW/4NW/4) Sec. 20
BHL: 1,610' FNL 1,250' FEL (SE/4NE/4) Sec. 19
T10S R22E

Uintah, Utah
Mineral Lease: ML20714

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. Estimated Tops of Important Geologic Markers:
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 – Surface	
Green River	1,040'	
Birds Nest	1,351'	Water
Mahogany	1,771'	Water
Wasatch	4,196'	Gas
Mesaverde	6,728'	Gas
MVU2	7,678'	Gas
MVL1	8,299'	Gas
TVD	8,860'	
TD	9,310'	

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 9,310' TD, approximately equals 5,244 psi (calculated at 0.59 psi/foot).

Maximum anticipated surface pressure equals approximately 3,295 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background
In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements
The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements
Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

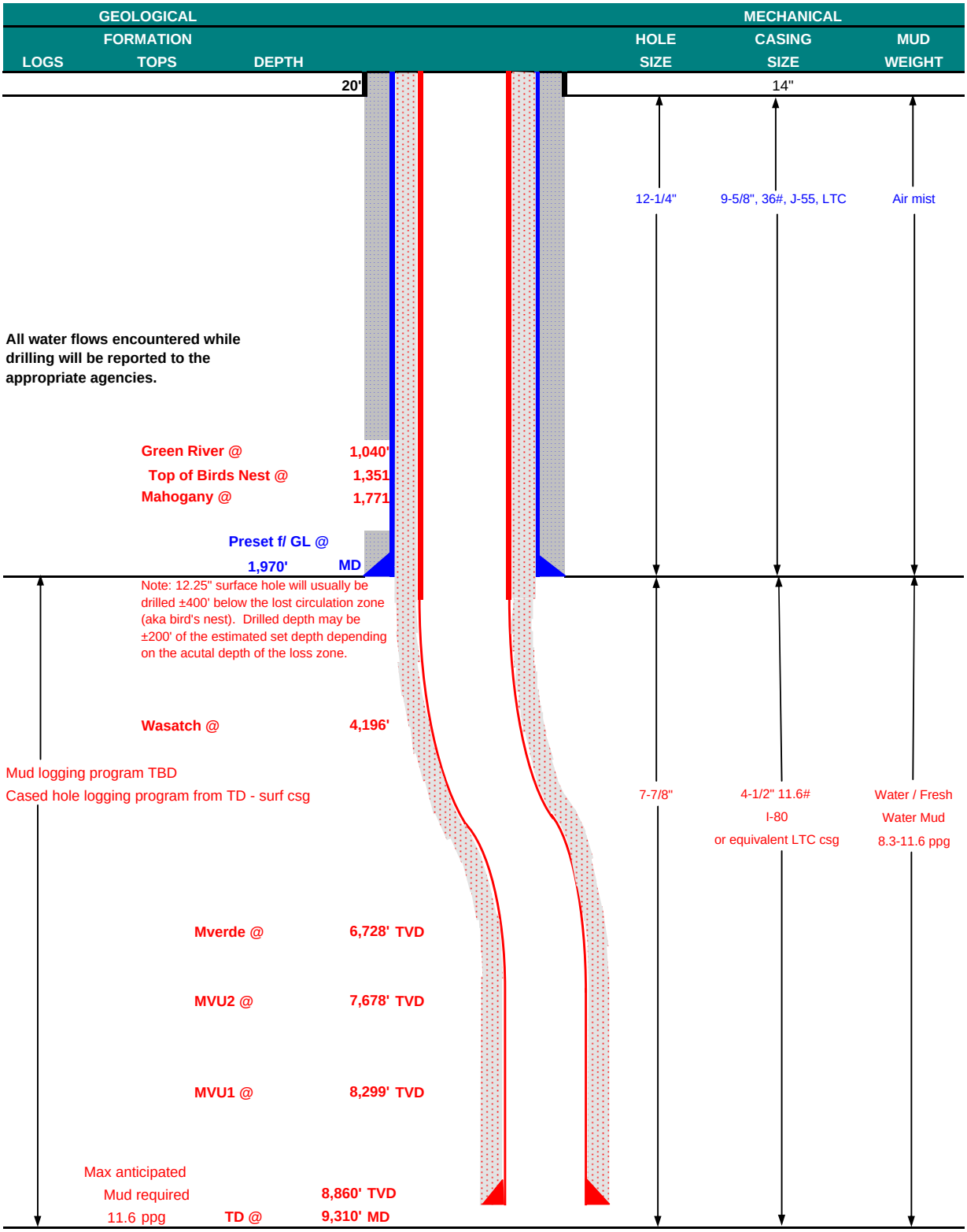
Please refer to the attached Drilling Program.

'APIWellNo:43047504270000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	May 11, 2009		
WELL NAME	**NBU 1022-19H2BS**			TD	8,860'	TVD	9,310' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	5,239' GL KB 5,254'
SURFACE LOCATION	NW/4 NW/4	1,127' FNL	542' FWL	Sec 20	T 10S	R 22E	
	Latitude:	39.938616	Longitude:	-109.470430		NAD 27	
BTM HOLE LOCATION	SE/4 NE/4	1,610' FNL	1,250' FEL	Sec 19	T 10S	R 22E	
	Latitude:	39.937280	Longitude:	-109.476817		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.						



'APIWellNo:43047504270000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3520	2020	453000
SURFACE	9-5/8"	0	to	1,970	36.00	J-55	LTC	0.99	2.19	8.13
								7,780	6,350	201,000
PRODUCTION	4-1/2"	0	to	9,310	11.60	I-80	LTC	2.29	1.19	2.13

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 3,295 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 5,244 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite	360	35%	12.60	1.81
			+.25 pps Flocele + 3% salt BWOW				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,690'	Premium Lite II + 3% KCl + 0.25 pps	350	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,620'	50/50 Poz/G + 10% salt + 2% gel	1380	40%	14.30	1.31
			+.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

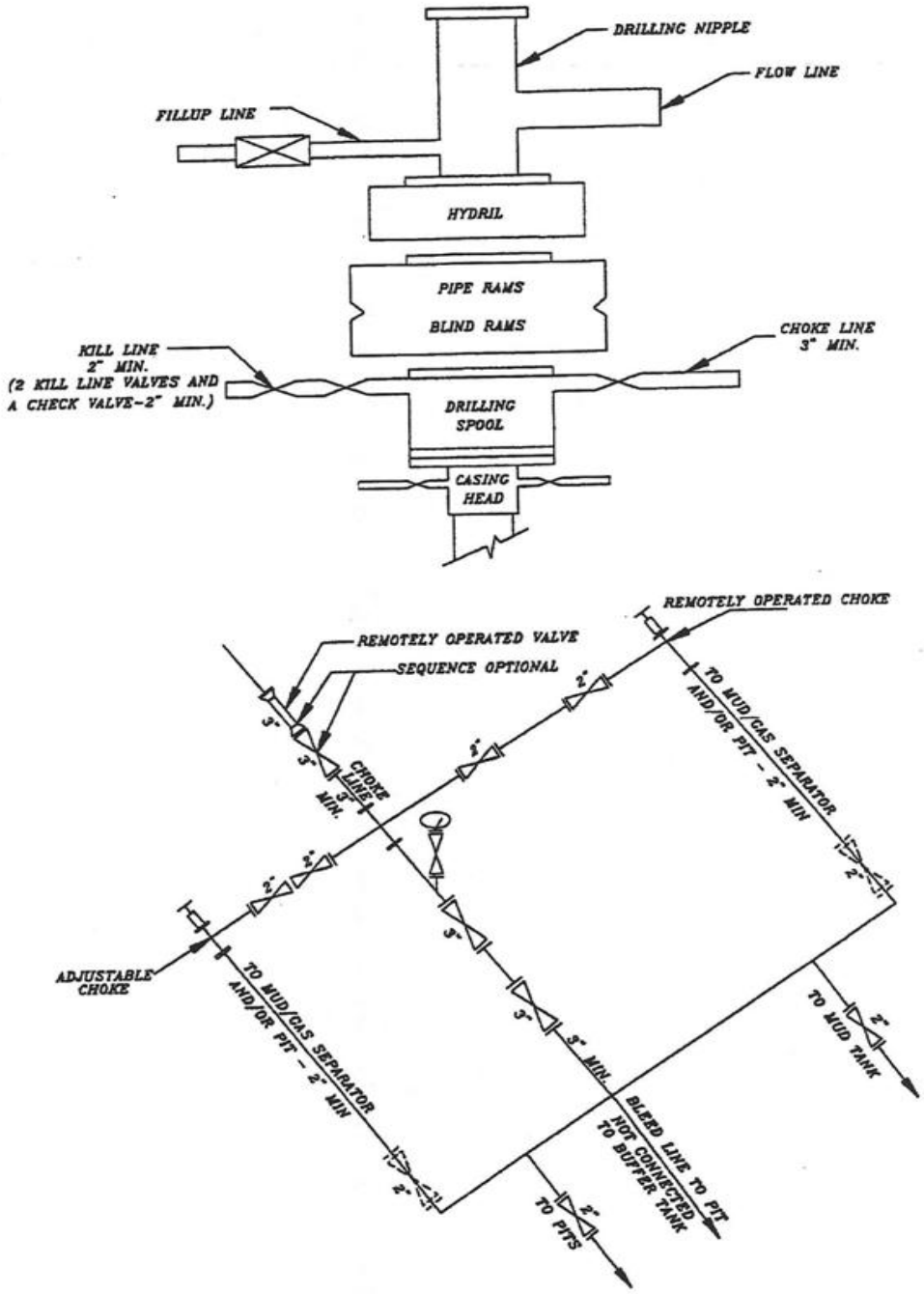
Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____
John Huycke / Grant Schluender

DRILLING SUPERINTENDENT: _____ **DATE:** _____
John Merkel / Lovel Young

EXHIBIT A
NBU 1022-19H2BS

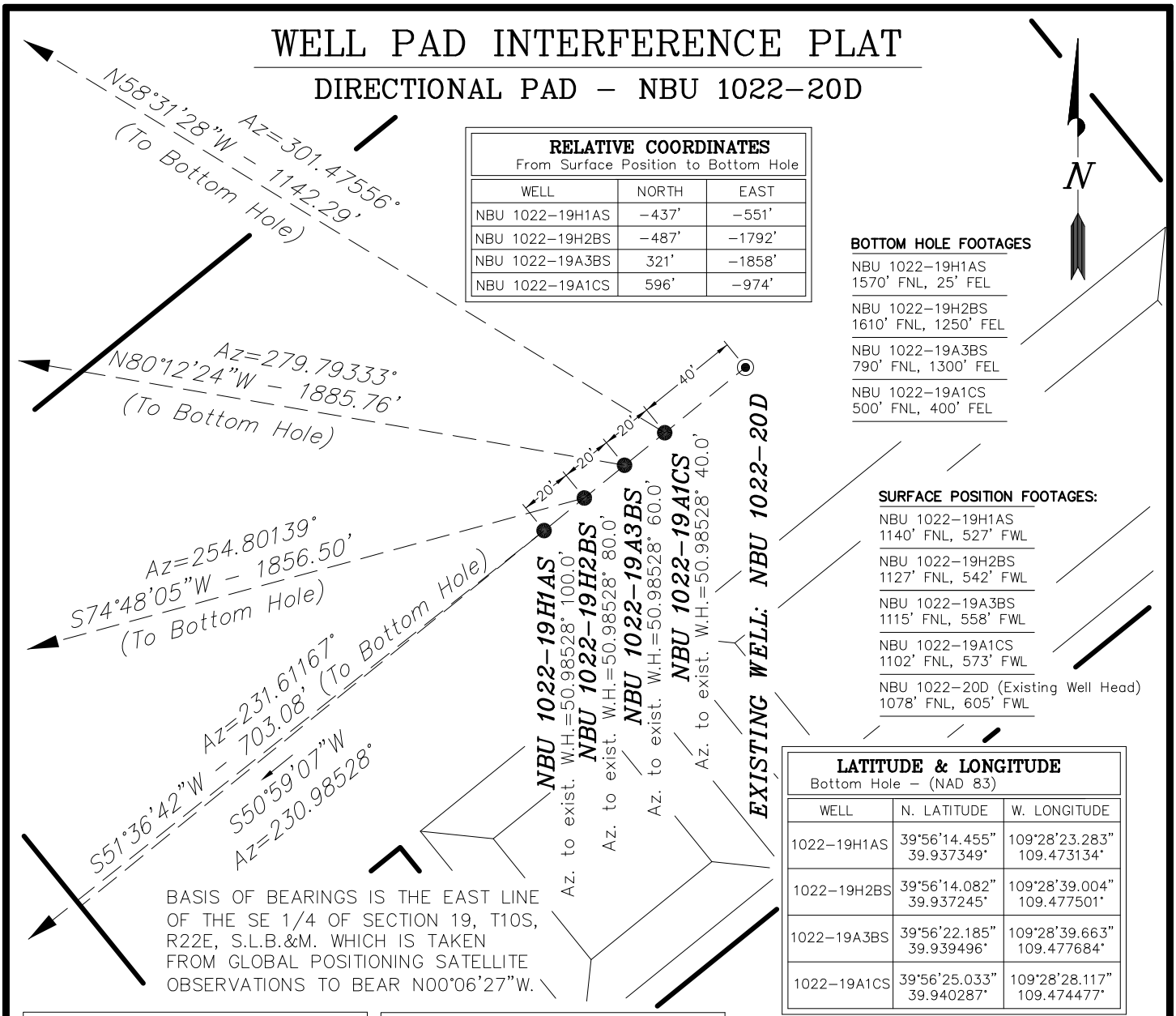


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

'APIWellNo:43047504270000'

WELL PAD INTERFERENCE PLAT

DIRECTIONAL PAD – NBU 1022-20D



RELATIVE COORDINATES
From Surface Position to Bottom Hole

WELL	NORTH	EAST
NBU 1022-19H1AS	-437'	-551'
NBU 1022-19H2BS	-487'	-1792'
NBU 1022-19A3BS	321'	-1858'
NBU 1022-19A1CS	596'	-974'

BOTTOM HOLE FOOTAGES

NBU 1022-19H1AS
1570' FNL, 25' FEL

NBU 1022-19H2BS
1610' FNL, 1250' FEL

NBU 1022-19A3BS
790' FNL, 1300' FEL

NBU 1022-19A1CS
500' FNL, 400' FEL

SURFACE POSITION FOOTAGES:

NBU 1022-19H1AS
1140' FNL, 527' FWL

NBU 1022-19H2BS
1127' FNL, 542' FWL

NBU 1022-19A3BS
1115' FNL, 558' FWL

NBU 1022-19A1CS
1102' FNL, 573' FWL

NBU 1022-20D (Existing Well Head)
1078' FNL, 605' FWL

BASIS OF BEARINGS IS THE EAST LINE OF THE SE 1/4 OF SECTION 19, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°06'27"W.

LATITUDE & LONGITUDE
Bottom Hole – (NAD 83)

WELL	N. LATITUDE	W. LONGITUDE
1022-19H1AS	39°56'14.455" 39.937349°	109°28'23.283" 109.473134°
1022-19H2BS	39°56'14.082" 39.937245°	109°28'39.004" 109.477501°
1022-19A3BS	39°56'22.185" 39.939496°	109°28'39.663" 109.477684°
1022-19A1CS	39°56'25.033" 39.940287°	109°28'28.117" 109.474477°

LATITUDE & LONGITUDE
Surface Position – (NAD 83)

WELL	N. LATITUDE	W. LONGITUDE
1022-19H1AS	39°56'18.769" 39.938547°	109°28'16.210" 109.471169°
1022-19H2BS	39°56'18.893" 39.938581°	109°28'16.011" 109.471114°
1022-19A3BS	39°56'19.018" 39.938616°	109°28'15.812" 109.471059°
1022-19A1CS	39°56'19.142" 39.938651°	109°28'15.612" 109.471003°
Existing Well 1022-20D	39°56'19.391" 39.938720°	109°28'15.213" 109.470892°

LATITUDE & LONGITUDE
Surface Position – (NAD 27)

WELL	N. LATITUDE	W. LONGITUDE
1022-19H1AS	39°56'18.893" 39.938581°	109°28'13.748" 109.470486°
1022-19H2BS	39°56'19.017" 39.938616°	109°28'13.549" 109.470430°
1022-19A3BS	39°56'19.142" 39.938651°	109°28'13.350" 109.470375°
1022-19A1CS	39°56'19.266" 39.938685°	109°28'13.151" 109.470320°
Existing Well 1022-20D	39°56'19.515" 39.938754°	109°28'12.751" 109.470209°

LATITUDE & LONGITUDE
Bottom Hole – (NAD 27)

WELL	N. LATITUDE	W. LONGITUDE
1022-19H1AS	39°56'14.579" 39.937383°	109°28'20.820" 109.472450°
1022-19H2BS	39°56'14.206" 39.937280°	109°28'36.541" 109.476817°
1022-19A3BS	39°56'22.309" 39.939530°	109°28'37.200" 109.477000°
1022-19A1CS	39°56'25.158" 39.940322°	109°28'25.655" 109.473793°

60' 30' 0' 60'

SCALE

Kerr-McGee
Oil & Gas Onshore, LP
1099 18th Street – Denver, Colorado 80202

NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS & NBU 1022-19A1CS LOCATED IN SECTION 20, T10S, R22E, S.L.B.&M. UINTAH COUNTY, UTAH.

CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

DATE SURVEYED: 11-24-08	SURVEYED BY: M.S.B.
DATE DRAWN: 01-13-09	DRAWN BY: E.M.S.
	REVISED: 03-06-09

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
209 NORTH 300 WEST VERNAL, UTAH 84078

’APIWellNo:43047504270000’

CONSTRUCT DIVERSION DITCH (AS NEEDED)

TOPSOIL STOCKPILE

TOPSOIL STOCKPILE

RESERVE PIT AND EXCESS CUT STOCKPILE

EXISTING TOPSOIL PILE, NEEDS MOVED TO PROPOSED LOCATION

EXISTING WELL PAD

EXISTING TANK AND BERM

EXISTING METHANOL TANK

EXISTING SEPERATOR & METER

BOILER

EXISTING NBU 1022-20D

DIESEL TANK

GENERATOR

MUD PUMP 1

MUD PUMP 2

MUD TANK

WATER TANK

SHALE TANK

19A1CS

19A3BS

19H2BS

19H1AS

PIPERACKS

PIPETUBS

DERRICK STAND

RESERVE PIT 12' DEPTH SLOPE 2:1

BACKFLOW PIT 12' DEPTH SLOPE 2:1

EXISTING ACCESS ROAD

A

A'

B

B'

5240

5230

160'

170'

100'

250'

140'

110'

60'

10'

20'

40'

2 F1.5

3 C3.2

A C4.3

B C7.5

4 C8.0

1 F1.9

W C1.1

D C0.3

C C3.5

5 C3.6

E F0.5

F C3.7

H F1.6

G C2.1

6 C1.6

7 F2.2

10 F8.0

9 F5.8

8 F5.2

WELL PAD NBU 1022-20D QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 5239.0'
FINISHED GRADE ELEVATION = 5237.9'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 7,895 C.Y.
TOTAL FILL FOR WELL PAD = 7,449 C.Y.
TOPSOIL @ 6" DEPTH = 1,706 C.Y.
EXCESS MATERIAL = 446 C.Y.
TOTAL DISTURBANCE = 3.77 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 28,730 BARRELS
RESERVE PIT VOLUME
+/- 7,720 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 9,490 BARRELS
BACKFLOW PIT VOLUME
+/- 2,660 CY

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)

HORIZONTAL 0 30 60 1" = 60'

2' CONTOURS

KERR-MCGEE OIL & GAS ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

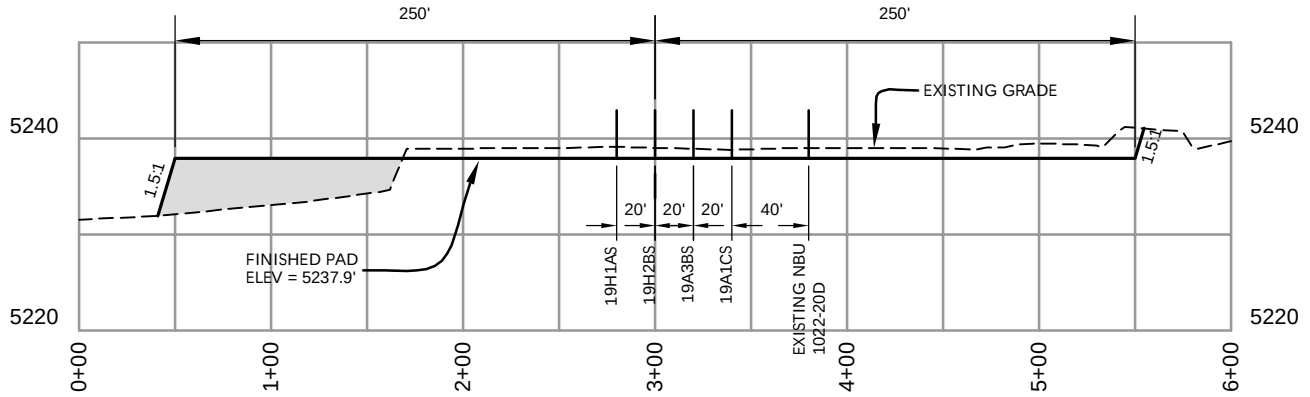
WELL PAD - LOCATION LAYOUT
NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS, & NBU 1022-19A1CS
LOCATED IN SECTION 20, T.10S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

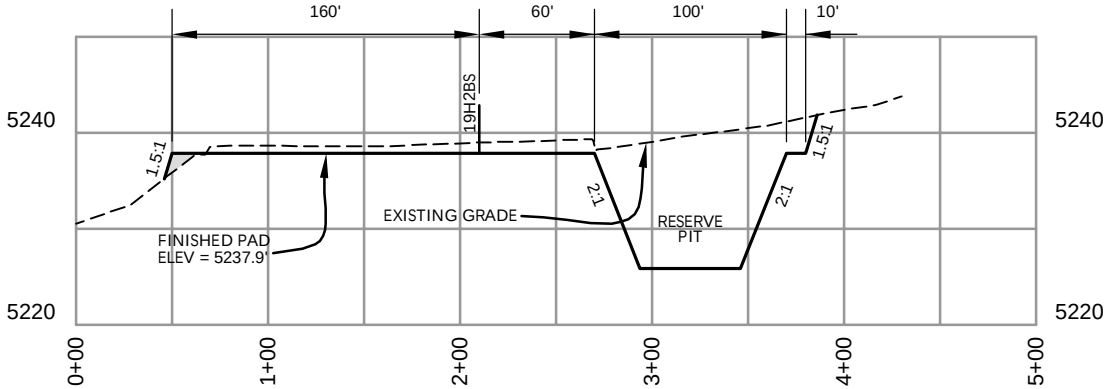
Scale: 1"=60'	Date: 3/6/09	SHEET NO: 6 6 OF 13
REVISED:		

Timberline Engineering & Land Surveying, Inc. (435) 789-1365
38 WEST 100 NORTH VERNAL, UTAH 84078

K:\ANADARKO\2008_27_NBU_Directional_Wells\DWGS\NBU FINAL SEC 18,19,28.dwg, 3/6/2009 3:16:07 PM, PDF-XChange for AcroPlot Pro



CROSS SECTION A-A'



CROSS SECTION B-B'

NOTE: CROSS SECTION B-B' DEPICTS MAXIMUM RESERVE PIT DEPTH.

KERR-MCGEE OIL & GAS
ONSHORE L.P.
1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS
NBU 1022-19H1AS, NBU 1022-19H2BS,
NBU 1022-19A3BS, & NBU 1022-19A1CS
LOCATED IN SECTION 20, T.10S., R.22E.
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50 100 1" = 100'
VERTICAL 0 10 20 1" = 20'

Scale: 1"=100'	Date: 3/6/09	SHEET NO: 7
REVISED:		7 OF 13

Timberline Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078 (435) 789-1365

'APIWellNo:43047504270000'

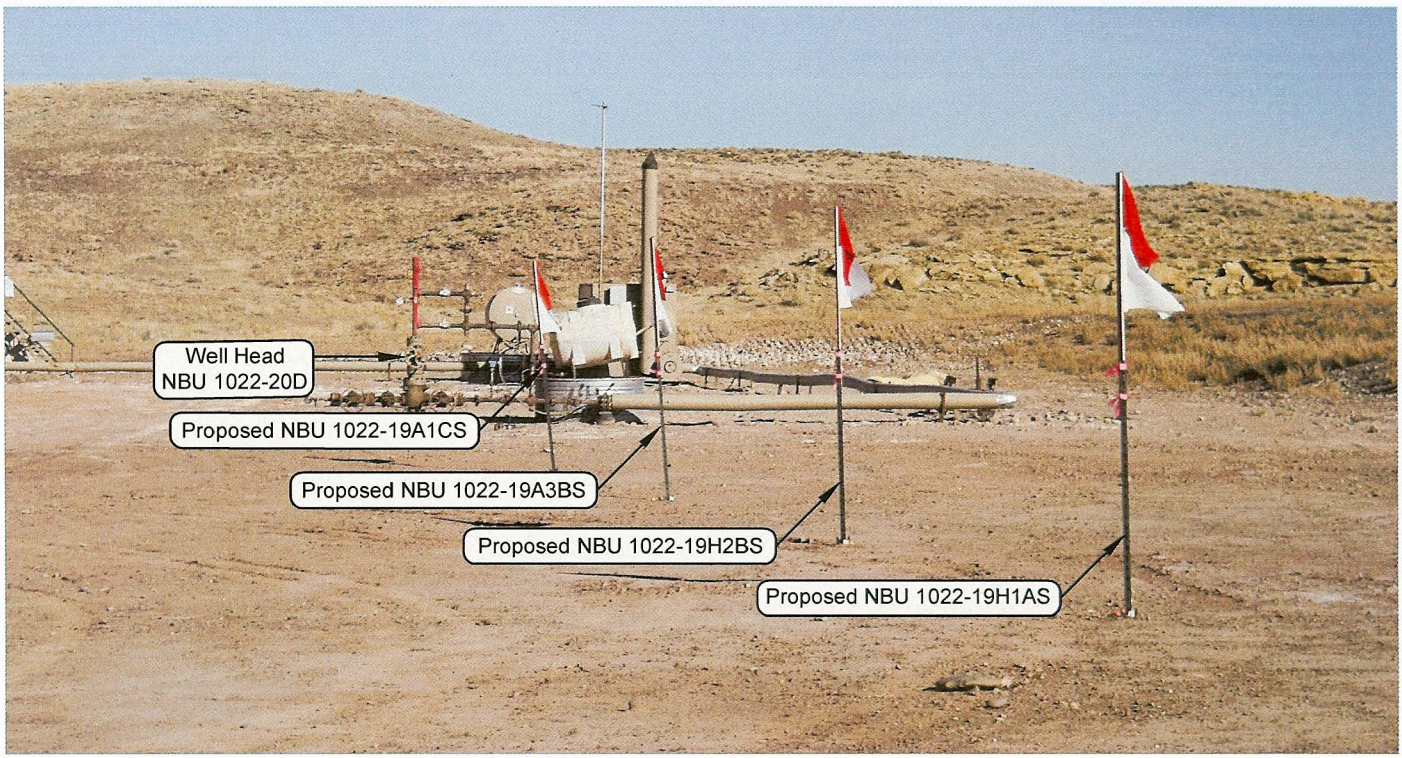


PHOTO VIEW: FROM LOCATION STAKES TO EXISTING WELL HEAD CAMERA ANGLE: NORTHEASTERLY

PHOTO VIEW: FROM EXISTING ROAD CAMERA ANGLE: NORTHEASTERLY

Kerr–McGee
Oil & Gas Onshore, LP
1099 18th Street – Denver, Colorado 80202

NBU 1022-19H1AS, NBU 1022-19H2BS,
NBU 1022-19A3BS & NBU 1022-19A1CS
LOCATED IN SECTION 20, T10S, R22E,
S.L.B.&M. UINTAH COUNTY, UTAH.

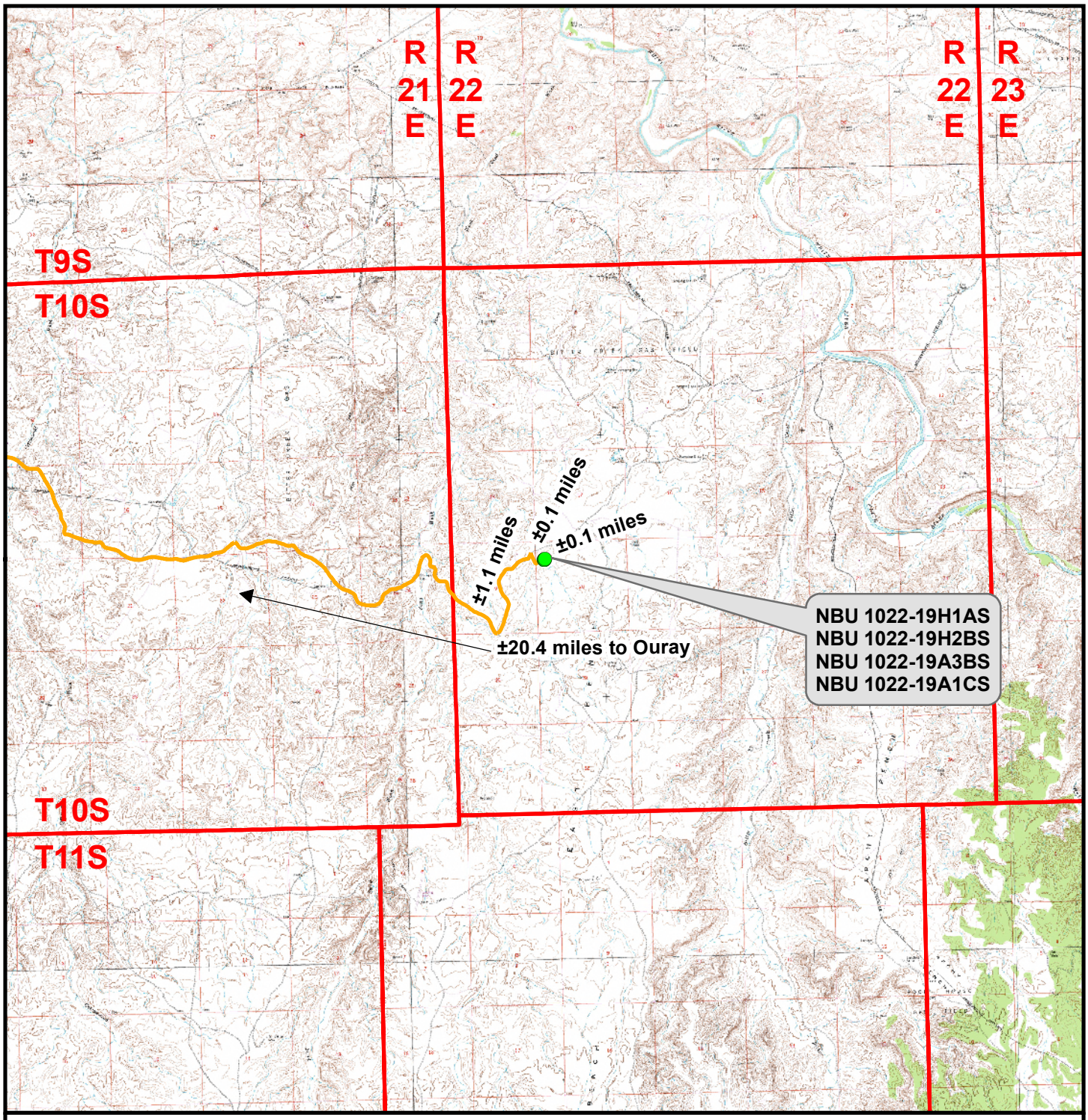
609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

LOCATION PHOTOS		DATE TAKEN: 11-24-08
		DATE DRAWN: 01-12-09
TAKEN BY: M.S.B.	DRAWN BY: E.M.S.	REVISED: 02-07-09

Timberline Engineering & Land Surveying, Inc.
(435) 789-1365
209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET 8 OF 13

’APIWellNo:43047504270000’



Legend

- Proposed Well Location
- Access Route - Proposed

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

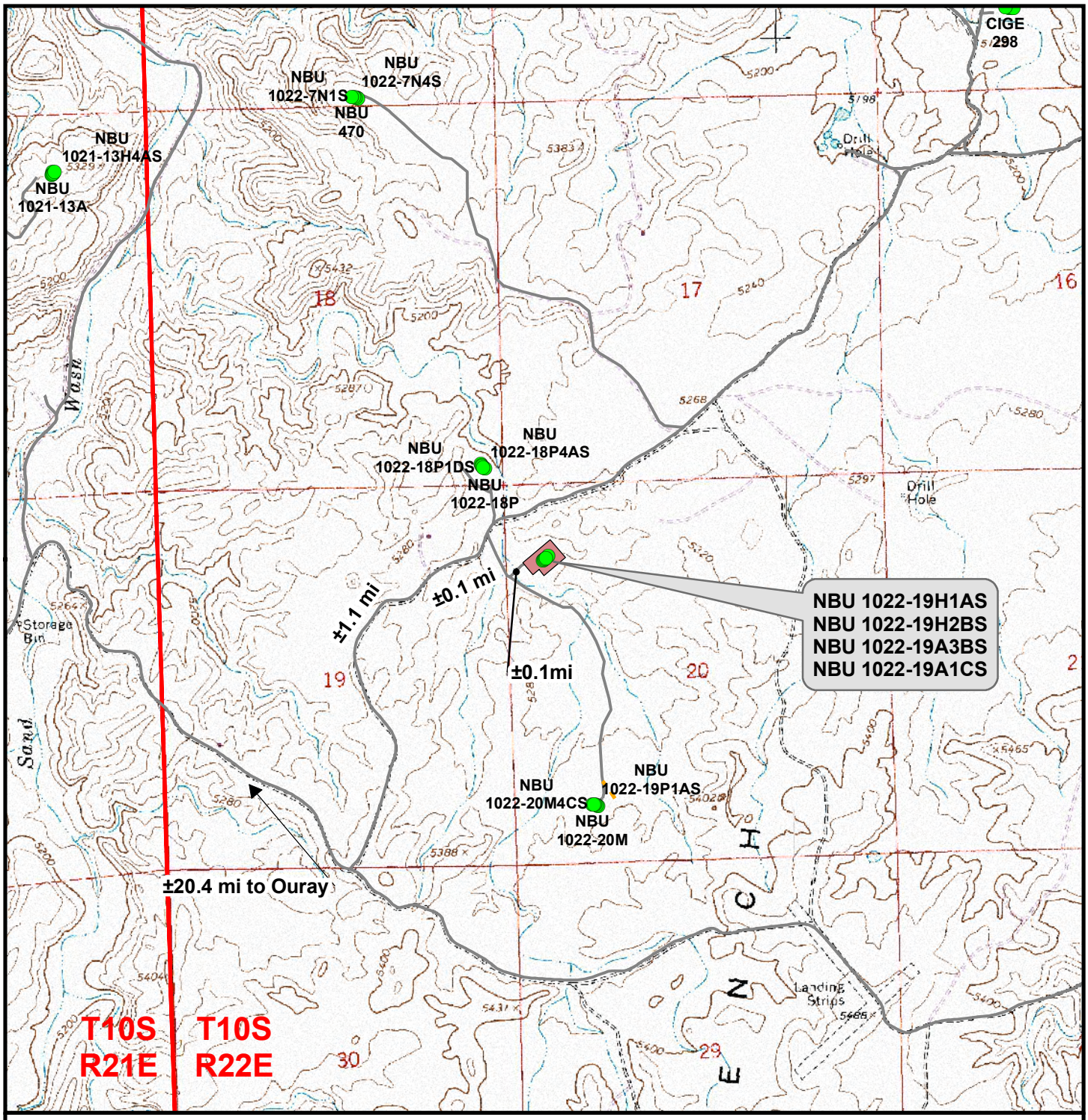
NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS & NBU 1022-19A1CS
Topo A
Located In Section 20, T10S, R22E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1:100,000	NAD83 USP Central	Sheet No: 9	9 of 13
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047504270000’



Legend

Well - Proposed | Well Pad | Road - Proposed | Road - Existing

Total Proposed Road Length: ±0ft

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

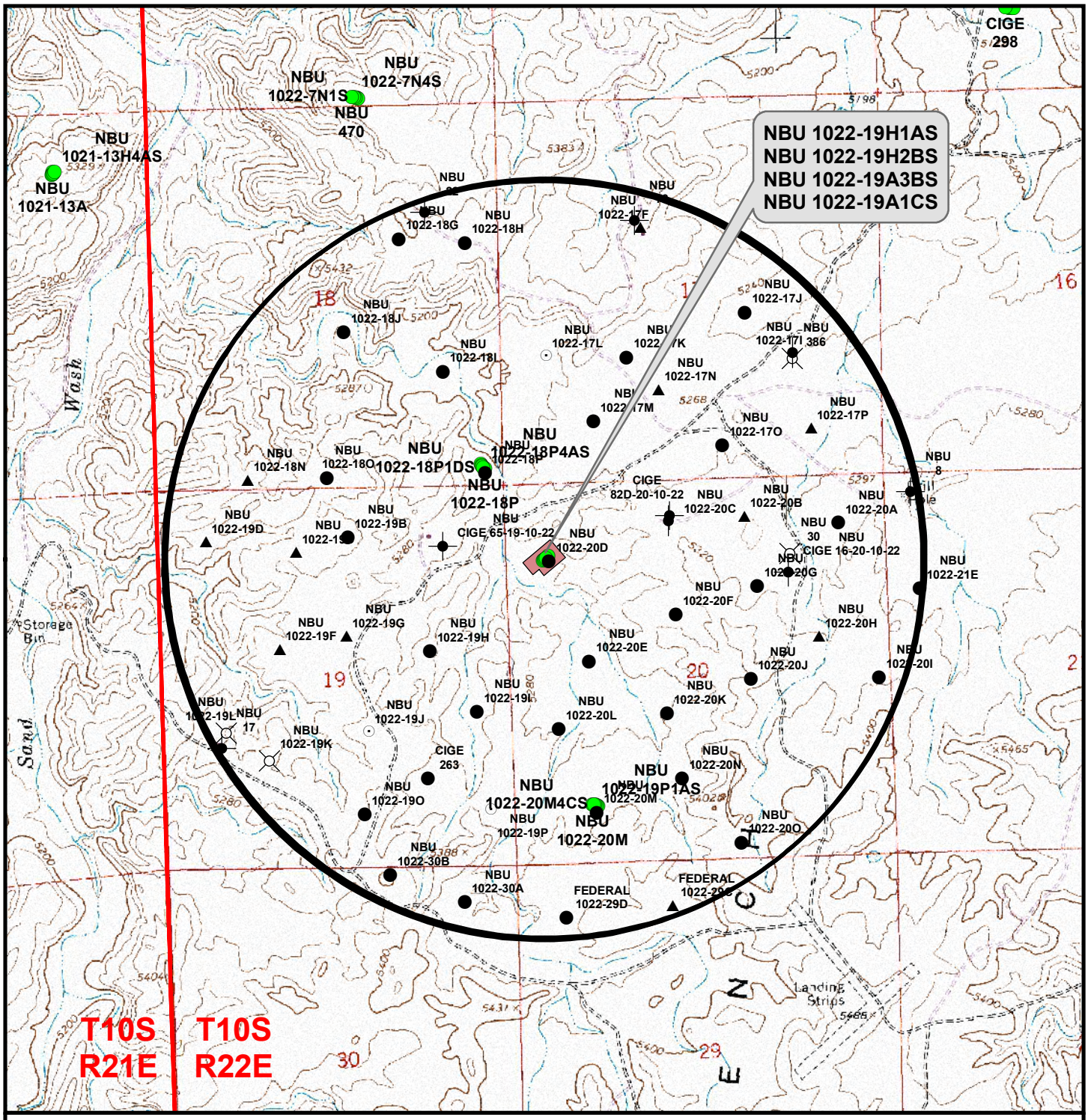
NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS & NBU 1022-19A1CS
Topo B
Located In Section 20, T10S, R22E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 10 of 13	
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047504270000’



Legend

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

- Well - Proposed
- Well - 1 Mile Radius
- Well Pad
- Producing
- Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet comple
- Location Abandoned
- Temporarily-Abandoned
- Plugged and Abandoned
- Shut-In

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

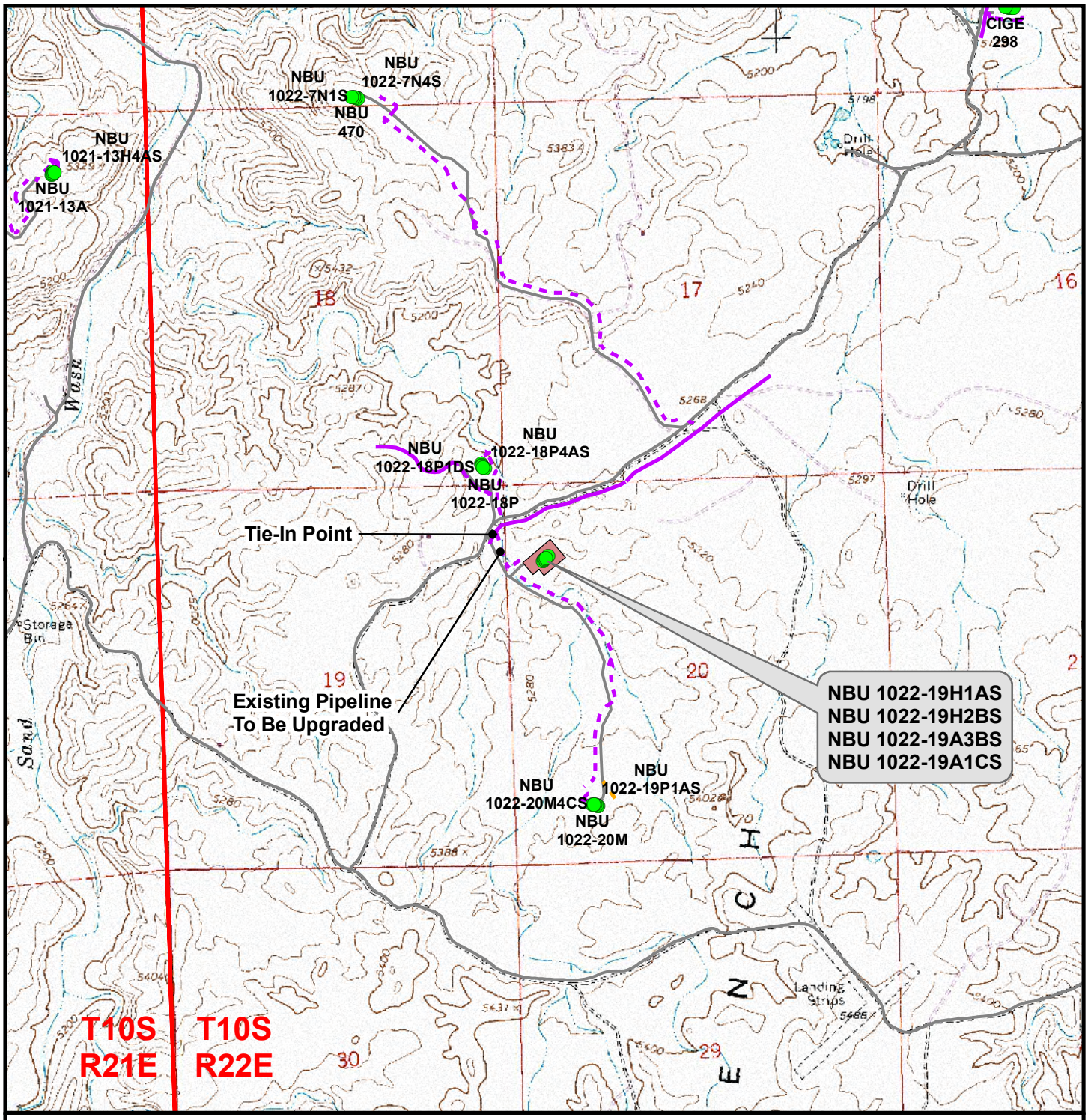
NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS & NBU 1022-19A1CS
Topo C
Located In Section 20, T10S, R22E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 11	11 of 13
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

’APIWellNo:43047504270000’



Legend

Well - Proposed | Well Pad | Road - Proposed | Pipeline - Proposed | Road - Existing | Pipeline - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad: ±940ft
Proposed Pipeline Length Around Pad: ±660ft

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS & NBU 1022-19A1CS
Topo D
Located In Section 20, T10S, R22E
S.L.B.&M., Uintah County, Utah

609 CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No: 12 of 13	
Drawn: JELo	Date: 24 Feb 2009		
Revised:	Date:		

Kerr-McGee Oil & Gas Onshore, LP
NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-19A3BS
& NBU 1022-19A1CS
Section 20, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 5.2 MILES TO THE INTERSECTION OF THE BITTER CREEK ROAD (COUNTY B ROAD 4120). EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG THE BITTER CREEK ROAD APPROXIMATELY 4.0 MILES TO A CLASS D COUNTY ROAD RUNNING NORTHEASTERLY. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 1.1 MILES TO A SERVICE ROAD RUNNING SOUTHEASTERLY. EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.1 MILES TO THE EXISTING ACCESS ROAD. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE ACCESS ROAD APPROXIMATELY 0.1 MILES TO THE EXISTING WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE WELL LOCATION IS APPROXIMATELY 52.4 MILES IN A SOUTHERLY DIRECTION.

Kerr-McGee Oil & Gas Onshore LP

NBU 1022-19A1CS
Surface: 1,102’ FNL, 573’ FWL (NW/4NW/4) Sec. 20
BHL: 500’ FNL 400’ FEL (NE/4NE/4) Sec. 19

NBU 1022-19A3BS
Surface: 1,115’ FNL, 558’ FWL (NW/4NW/4) Sec. 20
BHL: 790’ FNL 1,300’ FEL (NE/4NE/4) Sec. 19

NBU 1022-19H1AS
Surface: 1,140’ FNL, 527’ FWL (NW/4NW/4) Sec. 20
BHL: 1,570’ FNL 25’ FEL (SE/4NE/4) Sec. 19

NBU 1022-19H2BS
Surface: 1,127’ FNL, 542’ FWL (NW/4NW/4) Sec. 20
BHL: 1,610’ FNL 1,250’ FEL (SE/4NE/4) Sec. 19

Township 10 South Range 22 East
Pad: NBU 1022-20D
Uintah, Utah
Minerals: State – ML20714
Surface: State

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

Directional Drilling:

In accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

1. Existing Roads:

Refer to Topo Map A for directions to the location.

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

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

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

2. Planned Access Roads:

Approximately ±0.0 mi. of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

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

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

5. Location and Type of Water Supply:

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. Source of Construction Materials:

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

Any gravel will be obtained from a commercial source.

7. Methods of Handling Waste Materials:

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

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

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

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

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

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling 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 of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI in Sec. 5 T9S R22E, NBU #159 in Sec. 35 T9S R21E, Ace Oilfield in Sec. 2 T6S R20E, MC&MC in Sec. 12 T6S R19E, Pipeline Facility in Sec. 36 T9S R20E, Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E, Bonanza Evaporation Pond in Sec. 2 T10S R23E.

8. Ancillary Facilities:

None are anticipated.

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

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

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

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

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

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

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

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Form 9 shall be submitted.

10. Plans for Reclamation of the Surface:

Producing Location:

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

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

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

11. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

12. Other Information:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan
Staff Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6226

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

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

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

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542.

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

Kathy Schneebeck Dulnoan

May 12, 2009
Date

Kerr-McGee Oil & Gas Onshore LP

1099 18th Street, Suite 1800
Denver, CO 80202-1918
P.O. Box 173779
Denver, CO 80217-3779
720-929-6000

May 5, 2009

Mrs. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
NBU 1022-19H2BS (FKA NBU 1022-19G1S)
T10S-R22E
Section 19: SENE
Surface: 1127' FNL, 542' FWL
Bottom Hole: 1610' FNL, 1250' FEL
Uintah County, Utah

Dear Mrs. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-19H2BS located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jason K. Rayburn
Landman

'API WellNo:43047504270000'

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 55 PROPOSED WELL LOCATIONS IN TOWNSHIP 10S, RANGE 22E, SECTIONS 4, 7, 8, 9, 10, 18 AND 20, UINTAH COUNTY, UTAH

’APIWellNo:43047504270000’

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP’S 55 PROPOSED WELL LOCATIONS IN TOWNSHIP 10S, RANGE 22E, SECTIONS 4, 7, 8, 9, 10, 18 AND 20, UINTAH COUNTY, UTAH

By:

Patricia Stavish

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

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078

Prepared By:

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

MOAC Report No. 08-321

February 20, 2009

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

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

INTRODUCTION

A Class I literature review was completed Montgomery Archaeological Consultants, Inc. (MOAC) in February 2009 of Kerr-McGee Onshore's 55 proposed well locations with associated access and pipeline corridors in Township 10S, Range 22E, Sections 4, 5, 7, 8, 9, 10, 17, 18, 19, and 20. The project area is situated in the Bitter Creek Gas Field, west of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated NBU 1022-4E Directional Pad, NBU 1022-04E2S, NBU 1022-04E3S, NBU 1022-05H4S, NBU 1022-05I2S, NBU 470 (1022-7O) Directional Pad, NBU 1022-07O4AS, NBU 1022-07O4DS, NBU 1022-07N1S, NBU 1022-07N4S, NBU 343 (1022-8B) Directional Pad, NBU 1022-08C1AS, NBU 1022-08C1CS, NBU 1022-08B1DS, NBU 1022-08B4AS, NBU 1022-8L Directional Pad, NBU 1022-08L3CS, NBU 1022-08M3DS, NBU 1022-08N1DS, NBU 1022-08N2DS, NBU 1022-9C Directional Pad, NBU 1022-09C2DS, NBU 1022-09C3CS, NBU 1022-09C4DS, NBU 1022-09B4CS, NBU 1022-9N-2T Directional Pad, NBU 1022-09L4AS, NBU 1022-09M1AS, NBU 1022-09M1DS, NBU 1022-09O1BS, NBU 231 (1022-10B) Directional Pad, NBU 1022-10C1BS, NBU 1022-10B2AS, NBU 1022-10B4BS, NBU 1022-10A4BS, NBU 249 (1022-10N) Directional Pad, NBU 1022-10O2CS, NBU 1022-10O3BS, NBU 1022-10M1AS, NBU 1022-10M1DS, NBU 1022-18P Directional Pad, NBU 1022-18I4BS, NBU 1022-18O1AS, NBU 1022-18P1DS, NBU 1022-48P4AS, NBU 1022-20D Directional Pad, NBU 1022-19A1CS, NBU 1022-19A3BS, NBU 1022-19H1AS, NBU 1022-19H2BS, NBU 1022-20M Directional Pad, NBU 1022-19P1AS, NBU 1022-20M1DS, NBU 1022-20M4CS, and NBU 1022-20M4DS. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado. Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office and state lands administered by the State of Utah School & Institutional Trust Lands Administration (SITLA).

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The project area, in which Kerr-McGee Onshore's 55 proposed well locations occur, was previously inventoried by MOAC in 2007 for the Class III inventory of Township 10 South, Range 22 East (Montgomery 2008). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that three previous archaeological sites (42Un664, 42Un6472, and 42Un6499) occur in the current project area.

DESCRIPTION OF THE PROJECT AREA

The project area is situated in the Bitter Creek Gas Field, west of the White River in the Uinta Basin. The legal description is Township 10 South, Range 22 East, Sections 4, 5, 7, 8, 9, 10, 17, 18, 19, and 20 (Table 1; Figures 1 and 2).

Table 1. Kerr-McGee Onshore’s 55 Proposed Well Locations.

Well Designation	Legal Description	Access and Pipeline Corridor	Cultural Resources
NBU 1022-4E Directional Pad NBU 1022-04E2S NBU 1022-04E3S NBU 1022-05H4S NBU 1022-05I2S	SW/NW of Sec. 4, T10S, R22E	Access: 1251 ft Pipeline: 2456 ft	None
NBU 470 (1022-7O) Directional Pad NBU 1022-07O4AS NBU 1022-07O4DS NBU 1022-07N1S NBU 1022-07N4S	SW/SE of Sec. 7, T10S, R22E	Pipeline: 7796 ft	None
NBU 343 (1022-8B) Directional Pad NBU 1022-08C1AS NBU 1022-08C1CS NBU 1022-08B1DS NBU 1022-08B4AS	NW/NE of Sec. 8, T10S, R22E	Pipeline: 719 ft	None
NBU 1022-8L Directional Pad NBU 1022-08L3CS NBU 1022-08M3DS NBU 1022-08N1DS NBU 1022-08N2DS	NW/SW of Sec. 8, T10S, R22E	Access: 560 ft Pipeline: 3848 ft	42Un6472
NBU 1022-9C Directional Pad NBU 1022-09C2DS NBU 1022-09C3CS NBU 1022-09C4DS NBU 1022-09B4CS	NE/NW of Sec. 9, T10S, R22E	Access: 570 ft Pipeline: 661 ft	None
NBU 1022-9N-2T Directional Pad NBU 1022-09L4AS NBU 1022-09M1AS NBU 1022-09M1DS NBU 1022-09O1BS	SE/SW of Sec. 9, T10S, R22E	Pipeline: 643 ft	None
NBU 231 (1022-10B) Directional Pad NBU 1022-10C1BS NBU 1022-10B2AS NBU 1022-10B4BS NBU 1022-10A4BS	NW/NE of Sec. 10, T10S, R22E	Pipeline: 2122 ft	None
NBU 249 (1022-10N) Directional Pad NBU 1022-10O2CS NBU 1022-10O3BS NBU 1022-10M1AS NBU 1022-10M1DS	SE/SW of Sec. 10, T10S, R22E	Pipeline: 6598 ft	42Un664

Well Designation	Legal Description	Access and Pipeline Corridor	Cultural Resources
NBU 1022-18P Directional Pad NBU 1022-18I4BS NBU 1022-18O1AS NBU 1022-18P1DS NBU 1022-18P4AS	SE/SE of Sec. 18, T10S, R22E	Pipeline: 1355 ft	42Un6499
NBU 1022-20D Directional Pad NBU 1022-19A1CS NBU 1022-19A3BS NBU 1022-19H1AS NBU 1022-19H2BS	NW/NW of Sec. 20, T10S, R22E	Pipeline: 942 ft	None
NBU 1022-20M Directional Pad NBU 1022-19P1AS NBU 1022-20M1DS NBU 1022-20M4CS NBU 1022-20M4DS	SW/SW of Sec. 20, T10S, R22E	Access: 266 ft Pipeline: 4861 ft	None

Environmental Setting

The study 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 geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated adjacent to the White River and Bitter Creek. Elevation averages approximately 5200 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes; sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

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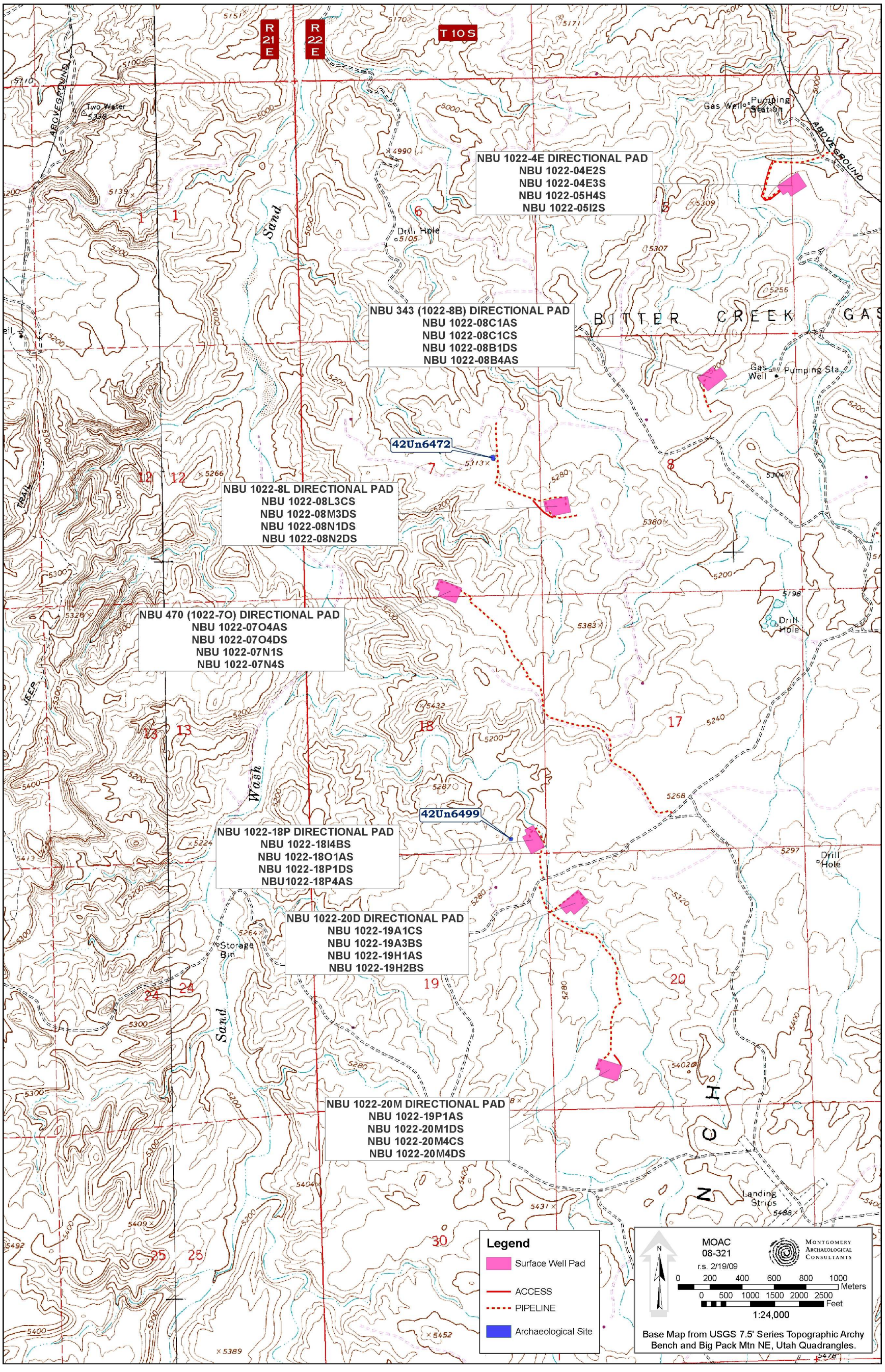

Figure 1. Kerr-McGee Oil & Gas Onshore LP’s 55 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

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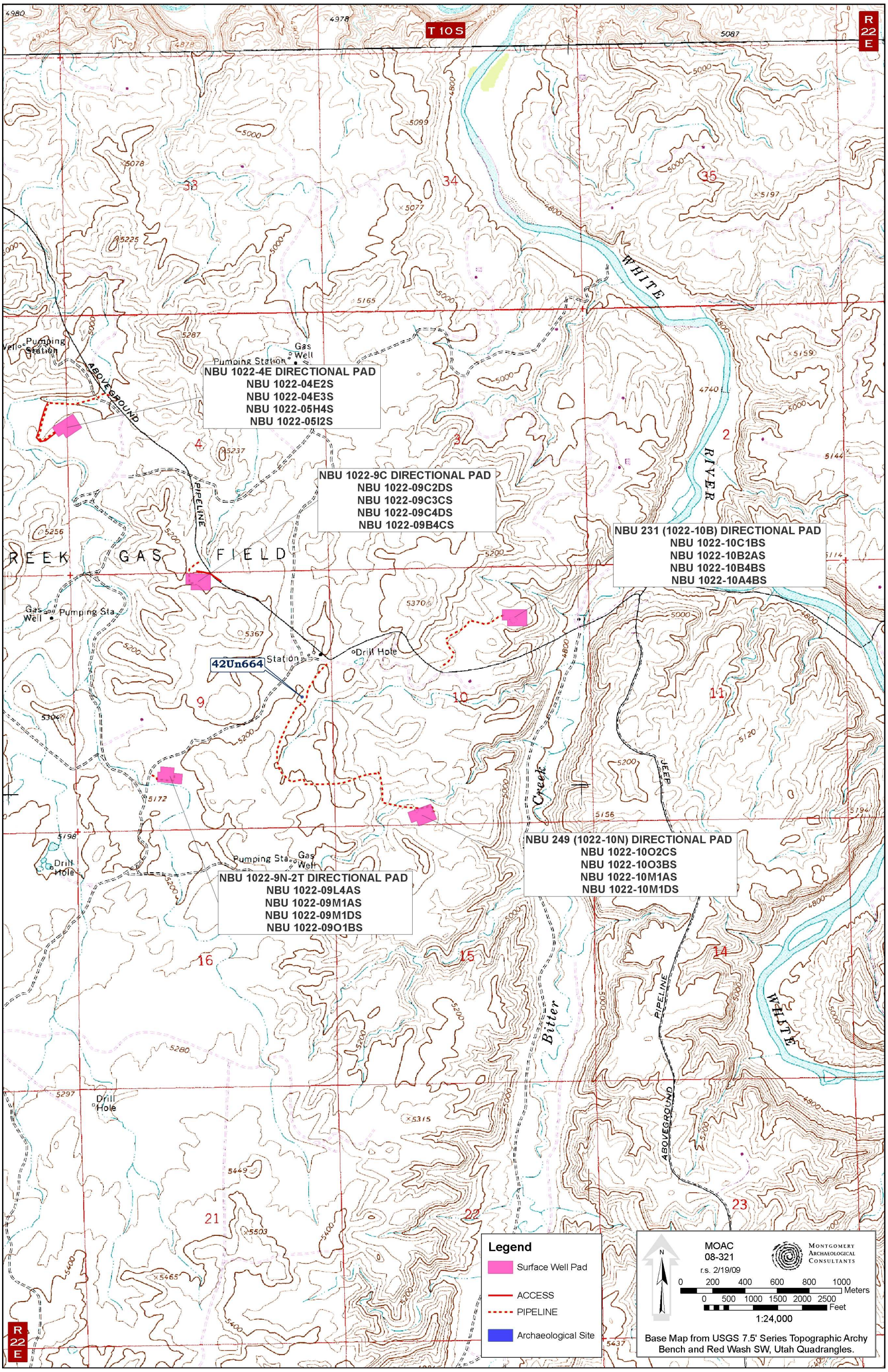

Figure 2. Kerr-McGee Oil & Gas Onshore LP’s 55 Proposed Well Locations with Access and Pipeline Corridors, Uintah County, Utah.

CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review resulted in the location of three previously documented sites (42Un664, 42Un6472, and 42Un6499). Site 42Un664 is a prehistoric temporary camp with firecracked and oxidized rocks, slab metates, and lithic debitage. Site 42Un664 is recommended as eligible to the NRHP under Criterion D. Site 42Un6472 is a historic trash scatter that is recommended as not eligible to the NRHP. Site 42Un6499 was a prehistoric burial situated in a rockshelter, at which an emergency recovery of the human remains was conducted on November 7, 2007 by Keith R. Montgomery and Jody Patterson. Site 42Un6499 is recommended as eligible to the NRHP under Criterion D.

The Class I literature review of 55 proposed well locations with associated pipeline and access corridors in Township 10 South, Range 22 East, Sections 4, 5, 7, 8, 9, 10, 17, 18, 19, and 20 resulted in the location of three previously documented archaeological sites (42Un664, 42Un6472, and 42Un6499). Sites 42Un664 and 42Un6499 are recommended as eligible to the NRHP under Criterion D and site 42Un6472 is recommended as not eligible to the NRHP. Site 42Un664 will be avoided by the undertaking, as it is located 100 ft from the proposed pipeline. Site 42Un6499 is avoided by at least 300 ft, which should be sufficient as the human remains have been removed from the site. Based on the avoidance of the eligible sites, a determination of "no adverse impact" is proposed pursuant to Section 106, CFR 800.

REFERENCES CITED

Montgomery, J. A.
2008 Cultural Resource Management Report for Kerr-McGee Oil and Gas Onshore LP's Greater NBU Blocks in Township 10 South, Range 22 East, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-07-MQ-1438b,s,p.

Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas
2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah.

Stokes, W. L.
1986 *Geology of Utah*. Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.

IPC #09-28

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Multi-Well Pads and Pipeline Upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S &M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, &18-20, T 10 S, R 22 E)

Archy Bench & Red Wash SW
Topographic Quadrangles
Uintah County, Utah

March 25, 2009

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

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pads and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E) was conducted by Stephen Sandau and Thomas Temme on March 20, 2009. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

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

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

- ***Class 1* – Very Low**. Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- ***Class 2* – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc…)
- ***Class 3* – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.

  - ***Class 3a* – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
  - ***Class 3b* – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- ***Class 4* – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - ***Class 4a* –** Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 4b* –** Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- ***Class 5* – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - ***Class 5a* -** Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 5b*** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

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

LOCATION

Kerr McGee's proposed multi-well pads, and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), in the Sand Wash area, 0.5-5 miles west of the White River on East Bench, and some 19-26 miles southeast of Ouray, UT. The project area can be found on the Arch Bench and Red Wash SW 7.5 minute U. S. Geological Survey Quadrangle Maps, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

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

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

NBU #922-29M2DS, M4DS & M3CS

The proposed pipeline upgrade begins in the NW/NW quarter-quarter section of Sec. 32, T 9 S, R 22 E, and heads north for about 2500 feet before joining the proposed multi-well pad located on the existing pad "NBU #922-29M" in the SW/SW quarter-quarter section of Sec. 29 (Figure 1). The project area is situated in hilly terrain of ridges, ravines and valleys cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, and purplish brown mudstones and

siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and tan, fine-grained, sub-quartzic sandstone; cut by several paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides and valleys throughout the project area.

Numerous isolated turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. Most fragments were moderately to well preserved, and moderately to highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in the colluvium in the middle portion of the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown sandstones and in the colluvium throughout the project area.

NBU #1022-9O1S, L4S, M1S & M4S

The proposed pipeline upgrade and multi-well pad is located on the existing pad "CIGE #298" in the SE/SW quarter-quarter section of Sec. 9, T 10 S, R 22 E (Figure 1). The project area is situated in hilly terrain cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, small mudflats, and alluvium/colluvium consisting of locally derived and transported clasts of green and tan sandstone, green, purplish brown, and tan siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, tan, and orangish tan mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and cut by several paleo-channels of greenish tan and greenish gray, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides capped by thick beds of channel sandstone throughout the project area.

Numerous isolated bone and turtle shell fragments were observed in the colluvium and *in situ* in medium to coarse-grained sandstones throughout the project area. Most fragments were moderately preserved and highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in colluvium in the northeastern portion of the proposed multi-well pad. Two individual concentrations of large mammal limb bone fragments were observed in the southern portion of the proposed multi-well pad, one sourcing from gray mudstone and one sourcing from orangish tan mudstone. Identifiable mammalian bone fragments include a sesamoid, humeral head, proximal tibia, distal tibia, distal calcaneum, and distal femur. A small concentration of mammal mandible fragments was observed in gray/green disaggregated mudstone, next to the southeastern corner of the existing pad. A few ichnofossil burrow casts, presumably of *Planolites*, were observed in colluvium throughout the project area. The area where the fossils were discovered is designated as the new vertebrate fossil locality "42Un2536V."

NBU #1022-10C1BS, B2AS, B4BS & A4BS

The proposed pipeline upgrade begins in the SE/NW quarter-quarter section of Sec. 10, T 10 S, R 22 E, and heads northeast for about 2500 feet before joining the proposed multi-well pad on the existing pad "NBU #231" located in the NW/NE and NE/NE quarter-quarter sections of Sec. 10 (Figure 1). The project area is situated in hilly terrain of ridges and ravines cut by modern

drainages, next to a deep river cut canyon of the White River. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, purplish brown, and tan mudstones and siltstones inter-bedded with tan, green, and purplish brown fine-grained, sub-quartzic sandstone cut by numerous large paleo-channels of tan, medium to coarse-grained, cross-bedded, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area. Three isolated, moderately to well preserved, and moderately to highly weathered turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites,* were observed in the purplish brown sandstones and in the colluvium throughout the project area.

NBU #1022-18O1AS, I4BS, P1DS & P4AS

The proposed pipeline upgrade begins in the NE/NE quarter-quarter section of Sec. 19, T 10 S, R 22 E, and heads south-southeast for about 1100 feet before joining the proposed multi-well pad on the existing pad "NBU #1022-18D" located in the NW/NW quarter-quarter section of Sec. 18 (Figure 2). The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tannish brown silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan, medium-grained, sub-lithic sandstones; green and purplish brown siltstones; and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.

A few isolated bone and turtle shell fragments were observed in the colluvium throughout the project area. Most fragments were moderately preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites,* were observed in the purplish brown siltstones and in the colluvium throughout the project area.

NBU #1022-19H1AS, H2BS, A3BS & A1CS

The proposed pipeline upgrade begins in the NE/NE quarter-quarter section of Sec. 19, T 10 S, R 22 E, and heads south-southeast for about 700 feet before joining the proposed multi-well pad on the existing pad "NBU #1022-20D" located in the NW/NW quarter-quarter section of Sec. 20 (Figure 2). The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tan to orangish tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of green and purplish brown, fine-grained, sub-lithic sandstones; purplish brown and tan siltstones, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of

green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone cut by paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.

Infrequent isolated bone (? mammal rib fragment) and turtle shell fragments were observed in the colluvium at the base of the surrounding hills. Most fragments were moderately to well preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown and green sandstones and in the colluvium throughout the project area.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #922-29M2DS, M4DS & M3CS" (Sec. 29 & 32, T 9 S, R 22 E)	The project area is situated in hilly terrain of ridges, ravines and valleys cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, and purplish brown mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and tan, fine-grained, sub-quartzic sandstone; cut by several paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides and valleys throughout the project area.	Numerous isolated turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. Most fragments were moderately to well preserved and moderately to highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in the colluvium in the middle portion of the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown sandstones and in the colluvium throughout the project area. **Class 3a**

"NBU #1022-9O1S, L4S, M1S & M4S" (Sec. 9, T 10 S, R 22 E)	The project area is situated in hilly terrain cut by modern drainages. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, small mudflats, and alluvium/colluvium consisting of locally derived and transported clasts of green and tan sandstone, green, purplish brown, and tan siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, tan, and orangish tan mudstones and siltstones inter-bedded with purplish brown, fine-grained, sub-lithic sandstone and cut by several paleo-channels of greenish tan and greenish gray, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides capped by thick beds of channel sandstone throughout the project area.	**Numerous isolated bone and turtle shell fragments were observed in the colluvium and *in situ* in medium to coarse-grained sandstones throughout the project area. Most fragments were moderately preserved and highly weathered. At least one individual turtle, represented as a small fragmentary scatter, was observed in colluvium in the northeastern portion of the proposed multi-well pad. Two individual concentrations of large mammal limb bone fragments were observed in the southern portion of the proposed multi-well pad, one sourcing from gray mudstone and one sourcing from orangish tan mudstone. Identifiable mammalian bone fragments include a sesamoid, humeral head, proximal tibia, distal tibia, distal calcaneum, and distal femur. A small concentration of mammal mandible fragments was observed in gray/green disaggregated mudstone, next to the southeastern corner of the existing pad. A few ichnofossil burrow casts, presumably of *Planolites*, were observed in colluvium throughout the project area. The area where the fossils were discovered is designated as the new vertebrate fossil locality "42Un2536V."** **Class 5a**

"NBU #1022-10C1BS, B2AS, B4BS & A4BS" (Sec. 10, T 10 S, R 22 E)	The project area is situated in hilly terrain of ridges and ravines cut by modern drainages, next to a deep river cut canyon of the White River. Ground cover consists of previously disturbed mudstones and siltstones, tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan sandstone, green and purplish brown siltstone, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including arid steppe grasses and shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of gray, green, purplish brown, and tan mudstones and siltstones inter-bedded with tan, green, and purplish brown fine-grained, sub-quartzic sandstone cut by numerous large paleo-channels of tan, medium to coarse-grained, cross-bedded, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.	Three isolated, moderately to well preserved, and moderately to highly weathered turtle shell fragments were observed in the colluvium along the proposed pipeline upgrade. A few ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown sandstones and in the colluvium throughout the project area. **Class 3b**
"NBU #1022-18O1AS, I4BS, P1DS & P4AS" (Sec. 18 & 19, T 10 S, R22 E)	The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tannish brown silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of tan, medium-grained, sub-lithic sandstones; green and purplish brown siltstones; and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.	A few isolated bone and turtle shell fragments were observed in the colluvium throughout the project area. Most fragments were moderately preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown siltstones and in the colluvium throughout the project area. **Class 3a**

"NBU #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19 & 20, T 10 S, R22 E)	The project area is situated in hilly terrain cut by modern drainages and an ephemeral stream. Ground cover consists primarily of previously disturbed mudstones and siltstones, small amounts of tan to orangish tan silty soil, and alluvium/colluvium consisting of locally derived and transported clasts of green and purplish brown, fine-grained, sub-lithic sandstones; purplish brown and tan siltstones, and disaggregated mudstones and siltstones. Sediments in the project area support vegetation including cheat grass, shrubs, cactus, and sagebrush. The stratigraphy of the project area is typical of the Wagonhound Member (Uinta B) and includes variegated beds of green, purplish brown, and tan mudstones and siltstones inter-bedded with green and purplish brown, fine-grained, sub-lithic sandstone cut by paleo-channels of tan, medium to coarse-grained, cross-bedded, lithic sandstone. Stratigraphy outcrops as resistant beds exposed in colluvium covered hillsides throughout the project area.	Infrequent isolated bone (? mammal rib fragment) and turtle shell fragments were observed in the colluvium at the base of the surrounding hills. Most fragments were moderately to well preserved and highly weathered. Abundant ichnofossil burrows and burrow casts, presumably of *Planolites*, were observed in the purplish brown and green sandstones and in the colluvium throughout the project area. **Class 3a**

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed multi-well pads, and pipeline upgrades for "NBU #922-29M2DS, M4DS & M3CS, #1022-9O1S, L4S, M1S & M4S, #1022-10C1BS, B2AS, B4BS & A4BS, #1022-18O1AS, I4BS, P1DS & P4AS, and #1022-19H1AS, H2BS, A3BS & A1CS" (Sec. 19, T 9 S, R 21 E), (Sec. 29 & 32, T 9 S, R 22 E), (Sec. 13, T 10 S, R 21 E), & (Sec. 9, 10, & 18-20, T 10 S, R 22 E). The well pads and the associated pipeline upgrades covered in this report showed some signs of vertebrate fossils, therefore, we advise the following recommendations.

Due to a number of vertebrate fossils found in and around the proposed location for "NBU #1022-9O1S, L4S, M1S & M4S" we recommend that a permitted paleontologist be present to monitor the construction process of the access road, pipeline and well pad.

Furthermore, we recommend that no other paleontological restrictions should be placed on the development of the remainder of the projects included in this report.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.

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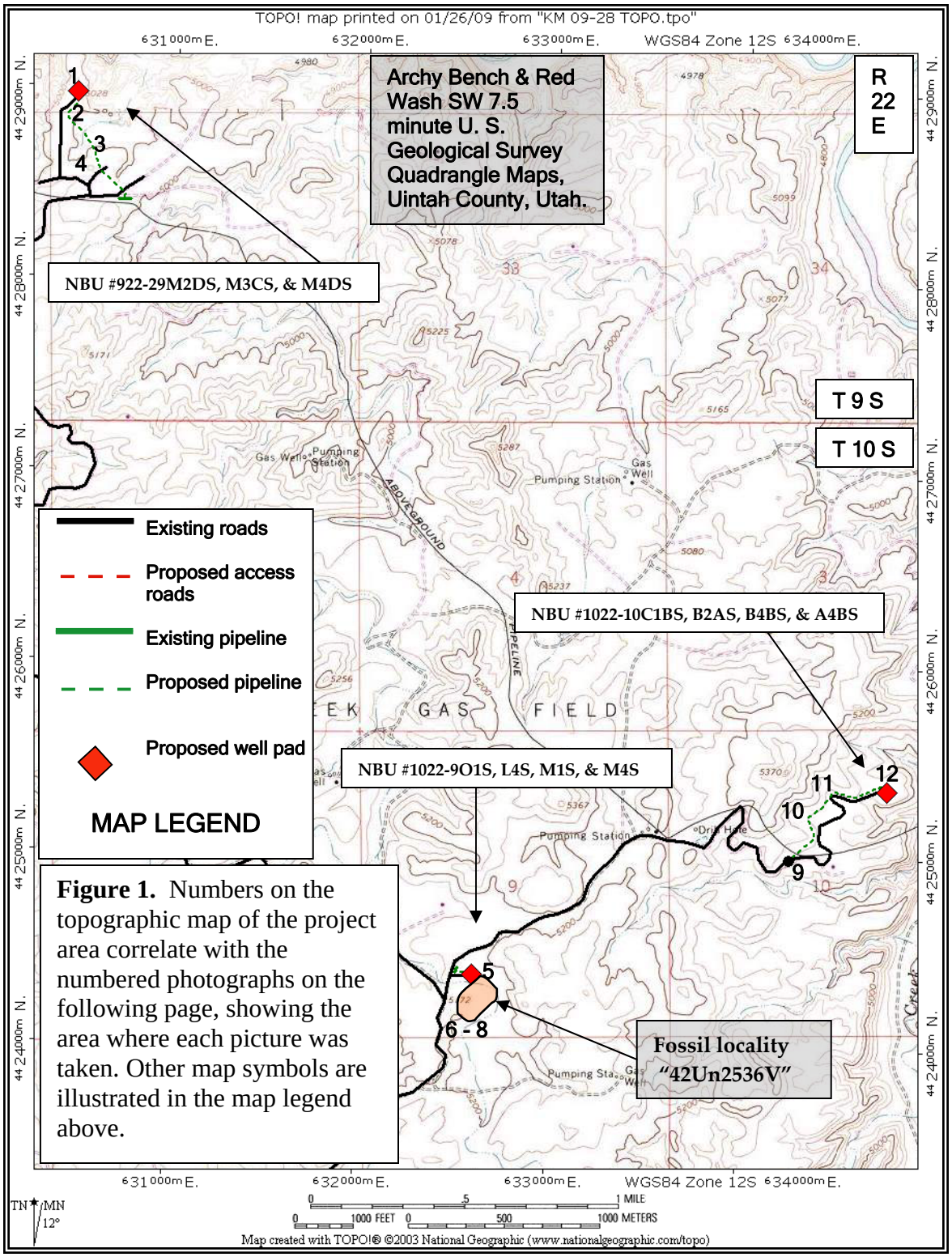

Figure 1. Numbers on the topographic map of the project area correlate with the numbered photographs on the following page, showing the area where each picture was taken. Other map symbols are illustrated in the map legend above.

Figure 1. *continued…*

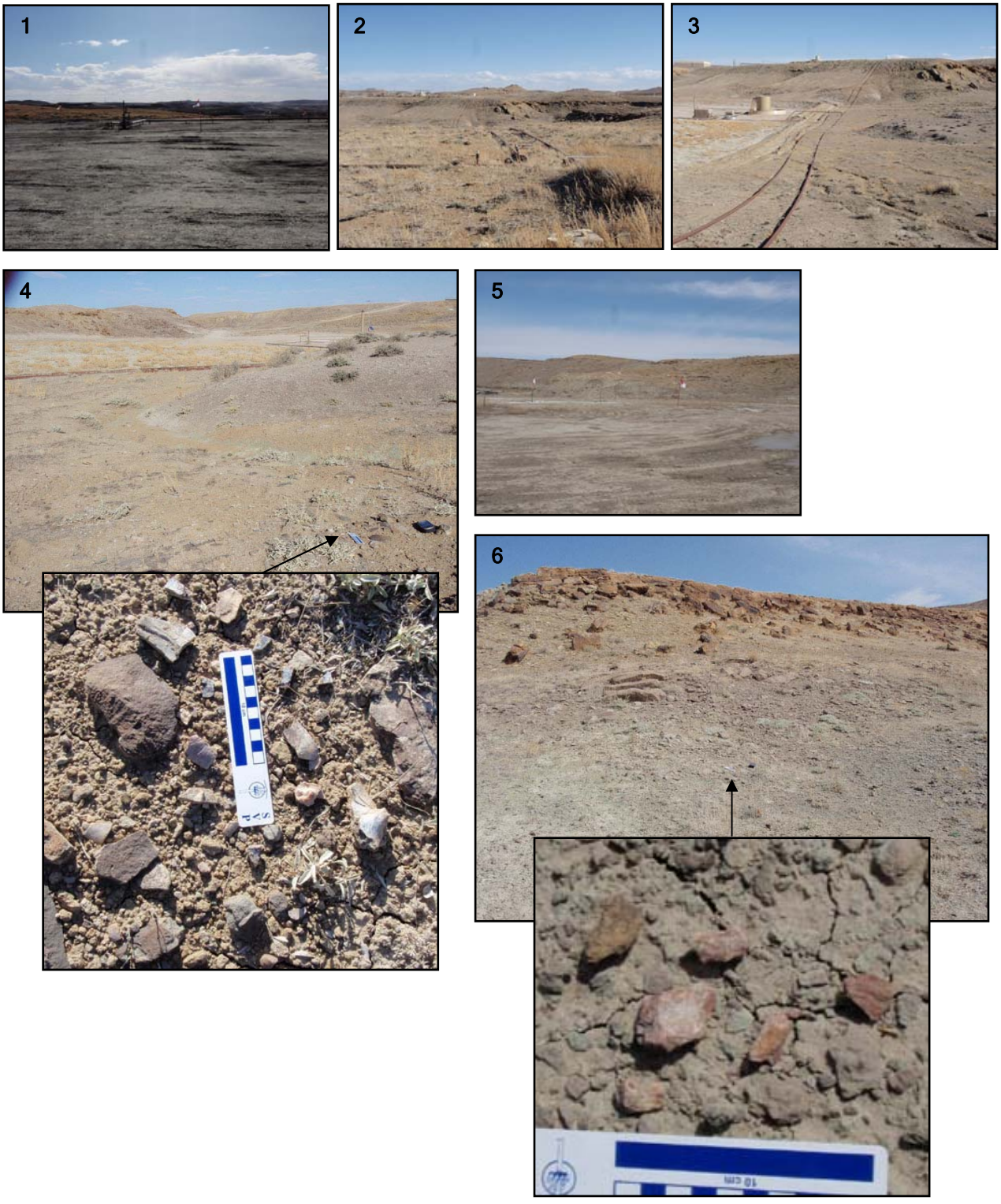

Figure 1. *continued…*

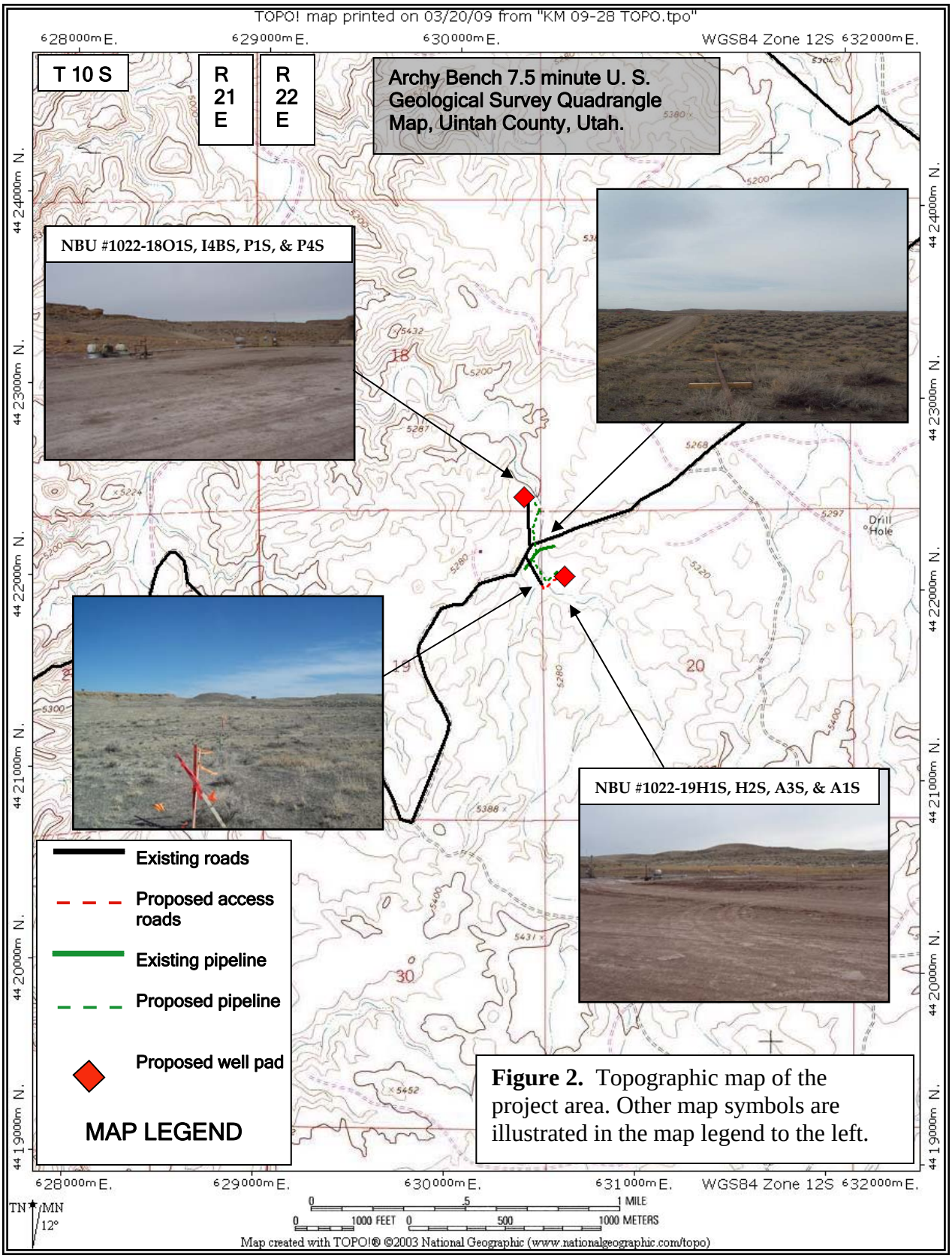

Figure 2. Topographic map of the project area. Other map symbols are illustrated in the map legend to the left.

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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

IN REPLY REFER TO:
3160
(UT-922)

May 15, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50418	NBU 1022-19P1AS	Sec 20 T10S R22E 0739 FSL 1156 FWL BHL Sec 19 T10S R22E 1230 FSL 0200 FEL
43-047-50421	NBU 1022-20M1DS	Sec 20 T10S R22E 0726 FSL 1194 FWL BHL Sec 20 T10S R22E 0945 FSL 1170 FWL
43-047-50422	NBU 1022-20M4CS	Sec 20 T10S R22E 0733 FSL 1175 FWL BHL Sec 20 T10S R22E 0055 FSL 0690 FWL
43-047-50423	NBU 1022-20M4DS	Sec 20 T10S R22E 0720 FSL 1213 FWL BHL Sec 20 T10S R22E 0195 FSL 1280 FWL
43-047-50424	NBU 1022-19A1CS	Sec 20 T10S R22E 1102 FNL 0573 FWL BHL Sec 19 T10S R22E 0500 FNL 0400 FEL
43-047-50425	NBU 1022-19A3BS	Sec 20 T10S R22E 1115 FNL 0558 FWL BHL Sec 19 T10S R22E 0790 FNL 1300 FEL
43-047-50426	NBU 1022-19H1AS	Sec 20 T10S R22E 1140 FNL 0527 FWL BHL Sec 19 T10S R22E 1570 FNL 0025 FEL
43-047-50427	NBU 1022-19H2BS	Sec 20 T10S R22E 1127 FNL 0542 FWL BHL Sec 19 T10S R22E 1610 FNL 1250 FEL

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

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:5-15-09

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 6/15/2009 4:09 PM
Subject: Anadarko (Kerr McGee) Approvals. Two four-well pads.

CC: Garrison, LaVonne

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

Bonanza 1023-2M1S (4304750379)
Bonanza 1023-2K1S (4304750382)
Bonanza 1023-2K4S (4304750381)
Bonanza 1023-2L2S (4304750380)

NBU 1022-19A1CS (4304750424)
NBU 1022-19A3BS (4304750425)
NBU 1022-19H1AS (4304750426)
NBU 1022-19H2BS (4304750427)

-Jim

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

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-19H2BS 43047504270000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-19H2BS 430475042			
String	Surf	Prod		
Casing Size(")	9.625	4.500		
Setting Depth (TVD)	1970	8860		
Previous Shoe Setting Depth (TVD)	20	1970		
Max Mud Weight (ppg)	8.3	11.6		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3520	7780		
Operators Max Anticipated Pressure (psi)	5244	11.4		

Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	853	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	617	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	420	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	424	NO Reasonable depht in area
Required Casing/BOPE Test Pressure=		1970	psi
*Max Pressure Allowed @ Previous Casing Shoe=		20	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	5344	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4281	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3395	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3828	NO Reasonable, note max allowed pressure
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1970	psi *Assumes 1psi/ft frac gradient

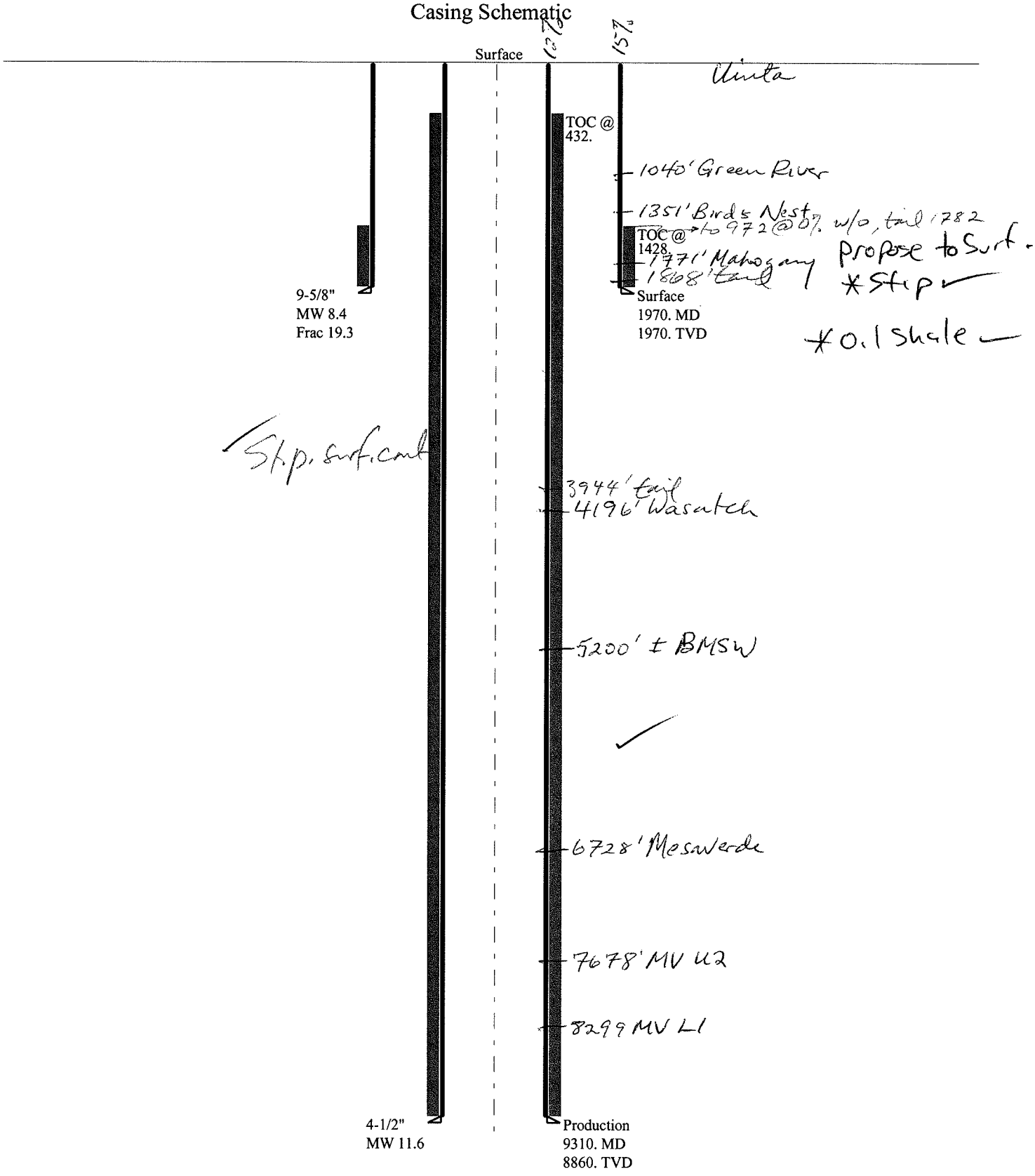
Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous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

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

'APIWellNo:43047504270000'

43047504270000 NBU 1022-19H2BS

Casing Schematic



'APIWellNo:43047504270000'

Well name:	**43047504270000 NBU 1022-19H2BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-50427
Location:	UINTAH COUNTY

Design parameters:

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

Burst
Max anticipated surface pressure: 951 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,187 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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

Tension is based on air weight.
Neutral point: 1,725 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 102 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,428 ft

Directional Info - Build & Drop
Kick-off point 1950 ft
Departure at shoe: 0 ft
Maximum dogleg: 3 °/100ft
Inclination at shoe: .6 °

Re subsequent strings:
Next setting depth: 1,970 ft
Next mud weight: 11.600 ppg
Next setting BHP: 1,187 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,970 ft
Injection pressure: 1,970 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	1970	9.625	36.00	J-55	LT&C	1970	1970	8.796	16109

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	860	1948	2.266	1187	3520	2.97	70.9	453	6.39 J

Prepared by: Dustin Doucet, Div of Oil,Gas & Mining
Phone: 801 538-5281
FAX: 801-359-3940
Date: June 18,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 1970 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

'APIWellNo:43047504270000'

Well name:	**43047504270000 NBU 1022-19H2BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-50427
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 11.600 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 3,562 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,339 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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

Tension is based on air weight.
Neutral point: 7,774 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 198 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 432 ft

Directional Info - Build & Drop
Kick-off point 1950 ft
Departure at shoe: 1856 ft
Maximum dogleg: 3 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	9310	4.5	11.60	I-80	LT&C	8860	9310	3.875	122892

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	5339	6360	1.191	5511	7780	1.41	102.8	212	2.06 J

Prepared by: Dustin Doucet, Div of Oil,Gas & Mining
Phone: 801 538-5281
FAX: 801-359-3940
Date: June 18,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8860 ft, a mud weight of 11.6 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.								
Well Name	NBU 1022-19H2BS								
API Number	43047504270000			**APD No**	1550	**Field/Unit**		NATURAL BUTTES	
Location: 1/4,1/4	NWNW	**Sec** 20	**Tw** 10.0S	**Rng** 22.0E	1127	FNL	542	FWL	
GPS Coord (UTM)	630685 4421849			**Surface Owner**					

Participants

Floyd Bartlett (DOGM), Jim Davis (SITLA), Raleen White, Griz Oleen, Clay Einerson, Charles Chase and Tony Kzneck (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in the Sand Wash Drainage of Uintah, County, approximately 36 air miles and 52 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 1022-20D will be enlarged to add four wells that will be directionally drilled. They are the NBU 1022-19A1CS, 19A3BS, 19H2BS and 19H1AS. The pad will be significantly enlarged in all directions. It is in the bottom of a gentle wide swale, which runs to the northwest where it joins the main Sandwash Drainage. A drainage parallels the location on the north or Corner 2 which will not be infringed upon. This drainage joins a swale, which is off the location on the west to northwest side of the pad. A diversion ditch will be constructed around the location beyond the topsoil stockpile as needed. The location is surrounded by moderately low rolling hills some with exposed sandstone cliffs. The White River is approximately 8 miles down drainage. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed Kerr McGee will request it under a separate application.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location. The selected location appears to be a suitable site for drilling and operating additional wells.

Surface Use Plan

Current Surface Use
Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	**Width** 330 **Length** 500	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation is a poor desert shrub type which includes sage brush, greasewood, cheatgrass, shadscale, halogeton and spring annuals.

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Moderately deep sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? Y

A diversion ditch will be constructed around the location beyond the topsoil stockpile as needed.

Berm Required? N

Erosion Sedimentation Control Required? Y

A diversion ditch will be constructed around the location beyond the topsoil stockpile as needed.

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

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	35	1 Sensitivity Level

Characteristics / Requirements

The proposed reserve pit is 100' x 250' x 12' deep located in a cut on the southeast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed Kerr McGee will request it under a separate application.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

Other Observations / Comments

Floyd Bartlett	5/20/2009
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1550	43047504270000	SITLA	GW	S	No

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.	**Surface Owner-APD**	
Well Name	NBU 1022-19H2BS	**Unit**	NATURAL BUTTES
Field	NATURAL BUTTES	**Type of Work**	DRILL
Location	NWNW 20 10S 22E S 1127 FNL 542 FWL GPS Coord (UTM) 630688E 4421834N		

Geologic Statement of Basis

Kerr McGee proposes to set 2,000' 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 5,200'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 19. 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. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill	5/26/2009
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is the Natural Buttes Unit in the Sand Wash Drainage of Uintah, County, approximately 36 air miles and 52 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The existing pad of the producing NBU 1022-20D will be enlarged to add four wells that will be directionally drilled. They are the NBU 1022-19A1CS, 19A3BS, 19H2BS and 19H1AS. The pad will be significantly enlarged in all directions. It is in the bottom of a gentle wide swale, which runs to the northwest where it joins the main Sandwash Drainage. A drainage parallels the location on the north or Corner 2 which will not be infringed upon. This drainage joins a swale, which is off the location on the west to northwest side of the pad. A diversion ditch will be constructed around the location beyond the topsoil stockpile as needed. The location is surrounded by moderately low rolling hills some with exposed sandstone cliffs. The White River is approximately 8 miles down drainage. A Backflow Pit is included on the Location Layout Sheet. If it is to be constructed Kerr McGee will request it under a separate application.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location. The selected location appears to be a suitable site for drilling and operating additional wells.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location.

Floyd Bartlett	5/20/2009
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/13/2009 **API NO. ASSIGNED:** 43047504270000

WELL NAME: NBU 1022-19H2BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NWNW 20 100S 220E **Permit Tech Review:** ☑

SURFACE: 1127 FNL 0542 FWL **Engineering Review:** ☑

BOTTOM: 1610 FNL 1250 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 39.93844 **LONGITUDE:** -109.47041

UTM SURF EASTINGS: 630688.00 **NORTHINGS:** 4421834.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 20714 **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ☑ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-14

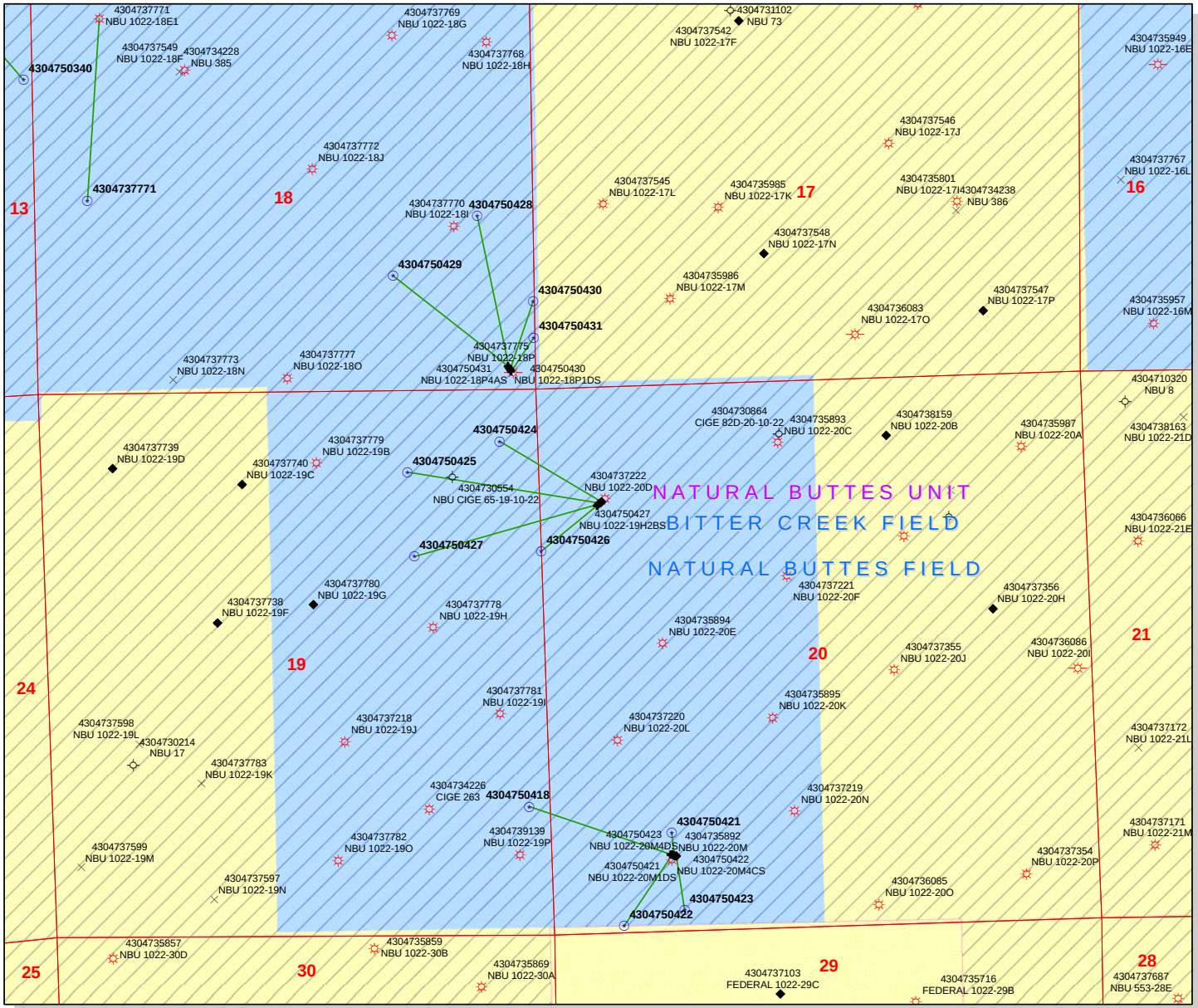
Effective Date: 12/2/1999

Siting: 460' fr u bdry & uncomm. tract

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed
BHL SEC 19 SENE:

Stipulations:
3 - Commingling - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmacdonald



API Number: 4304750427

Well Name: NBU 1022-19H2BS

Township 10.0 S Range 22.0 E Section 20

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

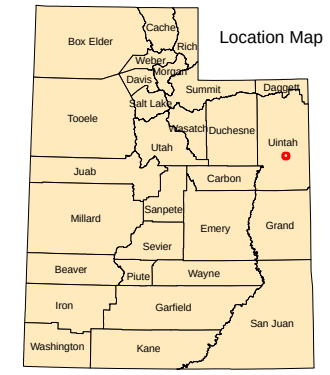
Fields

STATUS
- ACTIVE
- COMBINED
- Sections

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

Location Map



1,200 600 0 1,200 Feet

1:12,000

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

Permit To Drill

****

Well Name: NBU 1022-19H2BS
API Well Number: 43047504270000
Lease Number: ML 20714
Surface Owner: STATE
Approval Date: 7/16/2009

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

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

Commingle:
In accordance with Board Cause No. 173-14 commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

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

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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

Surface casing shall be cemented to the surface.

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

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

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

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

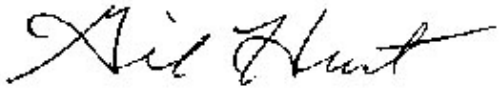
Contact Information:
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-942-0871 - after office hours

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

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

Approved By:



Gil Hunt
Associate Director, Oil & Gas

API Well No: 43047504270000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 20714

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: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-19H2BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047504270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1127 FNL 0542 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 7/16/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: July 22, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 7/14/2010

RECEIVED July 14, 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 43047504270000

API: 43047504270000
Well Name: NBU 1022-19H2BS
Location: 1127 FNL 0542 FWL QTR NWNW SEC 20 TWNP 100S RNG 220E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 7/16/2009

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: Danielle Piernot **Date:** 7/14/2010
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: July 22, 2010

By: Dustin Doucet

RECEIVED July 14, 2010

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-19H2BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047504270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515 Ext

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4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1127 FNL 0542 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 20 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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TYPE OF SUBMISSION	TYPE OF ACTION		
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	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 06/20/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 6/13/2011

RECEIVED Jun. 13, 2011

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 43047504270000

API: 43047504270000
Well Name: NBU 1022-19H2BS
Location: 1127 FNL 0542 FWL QTR NWNW SEC 20 TWNP 100S RNG 220E MER S
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- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Andy Lytle **Date:** 6/13/2011
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Jun. 13, 2011

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

July 27, 2012

Kerr McGee Oil & Gas Onshore, L.P.
P.O. Box 173779
Denver, CO 80217

Re: APD Rescinded – NBU 1022-19H2BS, Sec. 20, T. 10S, R. 22E
Uintah County, Utah API No. 43-047-50427

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on July 16, 2009. On July 22, 2010 and June 20, 2011 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 July 27, 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

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING