API Well Number: 43047513960000

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 921-35J SWD

2. TYPE OF WORK
DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○

3. FIELD OR WILDCAT
NATURAL BUTTES

4. TYPE OF WELL
Water Injection 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
720 929-6515

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

9. OPERATOR E-MAIL
julie.jacobson@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
ML 22582

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	1467 FSL 1427 FEL	NWSE	35	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	1467 FSL 1427 FEL	NWSE	35	9.0 S	21.0 E	S
At Total Depth	1467 FSL 1427 FEL	NWSE	35	9.0 S	21.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
1427

23. NUMBER OF ACRES IN DRILLING UNIT
321

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
50

26. PROPOSED DEPTH
MD: 1890 TVD: 1890

27. ELEVATION - GROUND LEVEL
5072

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	8.75	7	0 - 1580	23.0	J-55 ST&C	8.4	Class G	50	3.82	11.0
							Class G	150	1.15	15.8

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** 12/07/2010 **EMAIL** danielle.piernot@anadarko.com

API NUMBER ASSIGNED
43047513960000

APPROVAL
Permit Manager

RECEIVED: Apr. 14, 2011

NBU 921-35J SWD

1,467’ FSL 1,427’ FEL (NW/4SE/4)

Section 35 T9S R21E
Mineral Lease: ML 22582
Uintah County, Utah

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

Formation	Depth
Uinta	0- Surface
Green River	1398’
Base of Upper Confining	1580’
Top of Lower Confining	1890’
TD	1890’

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Substance	Formation	Depth
	Green River	1398’
Water	Base of Upper Confining	1580’
Water	Top of Lower Confining	1890’
Gas	N/A	
Other Minerals	N/A	

3. Pressure Control Equipment (Schematic Attached)

Not Applicable. Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Air Mist/Aerated Water. Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

RECEIVED: Dec. 07, 2010

NBU 921-35J SWD

7. Abnormal Conditions:
None Anticipated.

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

10. Other Information:

Please refer to the attached Drilling Program.

RECEIVED: Dec. 07, 2010

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	December 7, 2010		
WELL NAME	**NBU 921-35J SWD**			TD	1,890'	MD/TVD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	5,072' GL KB NA
SURFACE LOCATION	NW/SE SEC. 35, T9S, R21E 1467'FSL, 1427'FEL					BHL	Straight Hole
	Latitude: 39.989334	Longitude:	-109.513876		NAD 27		
OBJECTIVE ZONE(S)	Green River (Bird's Nest)						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (SURF & MINERALS), BLM, Tri-County Health Dept.						

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
Catch water sample, if possible, from 0 to 1,890'			8-3/4"	7", 23#, J55, STC	Air mist Aerated water
	Green River @	**1398'**			
	Base of Upper Confining @	**1,580**			
	6 1/4" open hole that a workover or air rig will drill	>>>: >>	6 1/4" Open hole		
	Top of Lower Confining @	**1,890**			
	Preset f/ GL @ 1890 MD				

Either open hole or cased hole logs will be run f/TD - surface

Max anticipated Mud required 8.4 ppg

RECEIVED: Dec. 07, 2010

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						4360	3270	284000
SURFACE	7"	0 to 1,580	23.00	J-55	LTC	10.64	3.70	4.77

CEMENT PROGRAM

	FT. OF CMT	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
LEAD	780	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	50	40%	11.00	3.82
TAIL	800	Class "G" + 2% CaCl + .25 pps celloflake	150	40%	15.80	1.15
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints and every third joint to surface. Thread lock guide shoe.

ADDITIONAL INFORMATION

Drilling will be done utilizing a small air rig. An air hammer will be utilized. Air rig to drill to 1580', run logs, cement casing, and then RDMOL so a workover or air rig can come in later and drill the open hole section after WOC.

No BOPE will be utilized other than a rotating head as there is no potential for hydrocarbons. This type of equipment drills all of our existing surface casing presets for our typical Wasatch/Mesaverde development.

ENGINEER: _____ **DATE:** _____

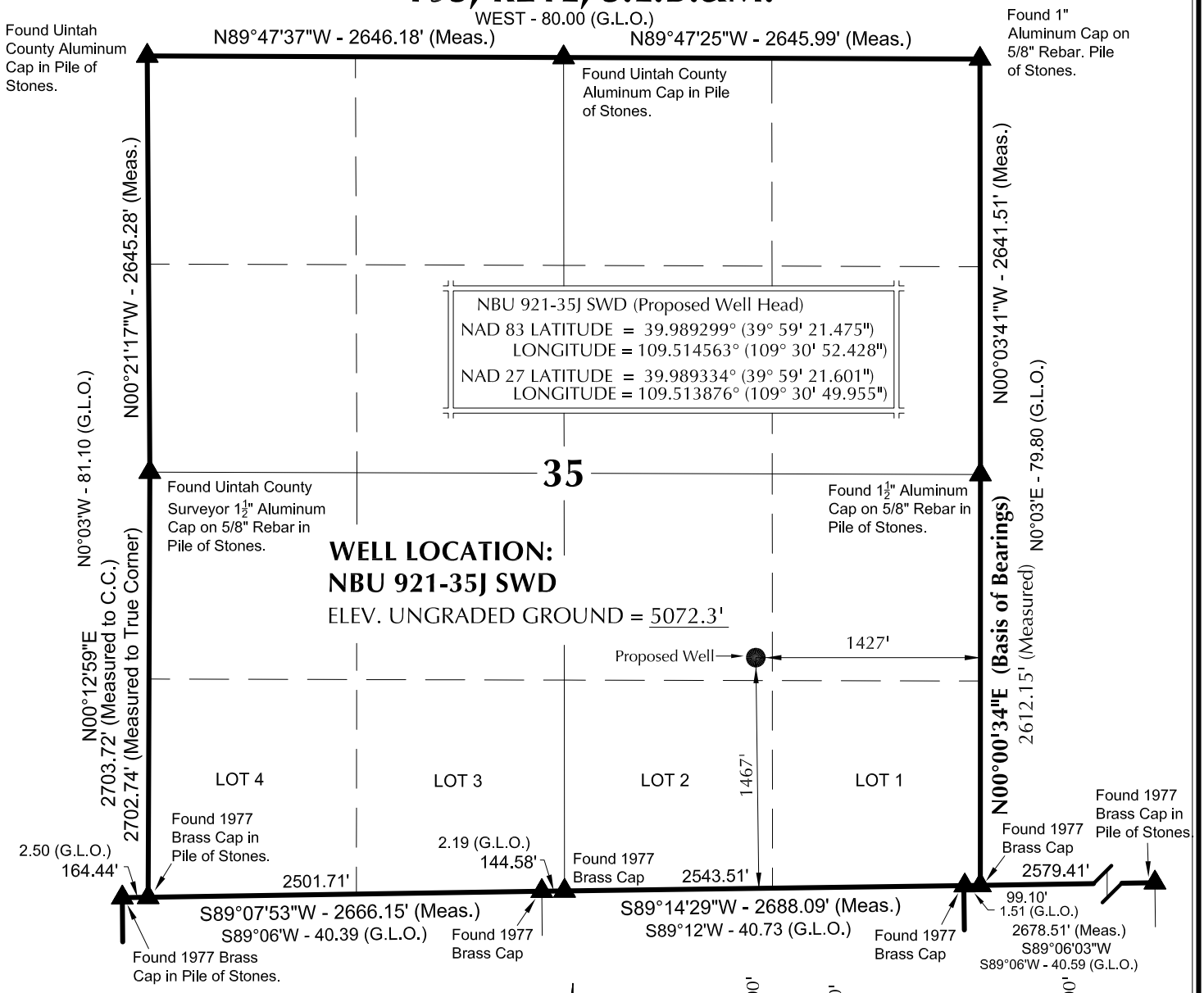
Robert Miller

DRILLING SUPERINTENDENT: _____ **DATE:** _____

RECEIVED: Dec. 07, 2010

API Well Number: 43047513960000

T9S, R21E, S.L.B.&M.



SCALE

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. Bearings are based on Global Positioning Satellite observations.
4. 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'.

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.

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R. SLAUGH STATE OF UTAH

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 921-35J

NBU 921-35J SWD
WELL PLAT
1467' FSL, 1427' FEL
NW ¼ SE ¼ OF SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

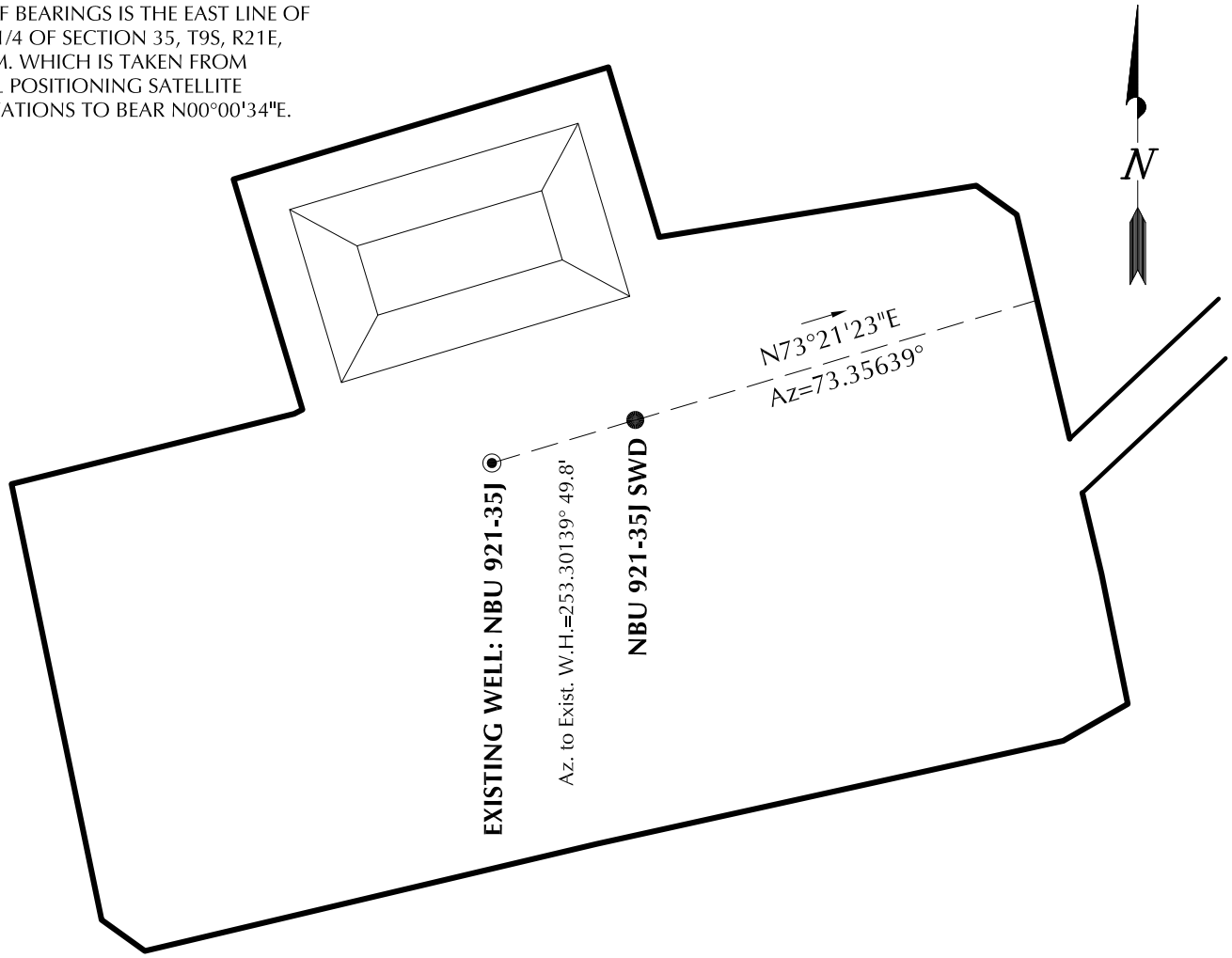
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 11-16-10	SURVEYED BY: M.S.B.	SHEET NO: 1
DATE DRAWN: 11-17-10	DRAWN BY: M.W.W.	1 OF 9
SCALE: 1" = 1000'	Date Last Revised: 12-02-10 M.W.W.	

RECEIVED: Dec. 07, 2010

WELL NAME	SURFACE POSITION				
	NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 921-35J SWD	39°59'21.475" 39.989299°	109°30'52.428" 109.514563°	39°59'21.601" 39.989334°	109°30'49.955" 109.513876°	1467' FSL 1427' FEL
NBU 921-35J	39°59'21.333" 39.989259°	109°30'53.040" 109.514733°	39°59'21.459" 39.989294°	109°30'50.567" 109.514046°	1454' FSL 1475' FEL

BASIS OF BEARINGS IS THE EAST LINE OF THE SE 1/4 OF SECTION 35, T9S, R21E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°00'34"E.



60' 30' 0' 60'

SCALE

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

WELL PAD - NBU 921-35J

WELL PAD INTERFERENCE PLAT
WELL - NBU 921-35J SWD
LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

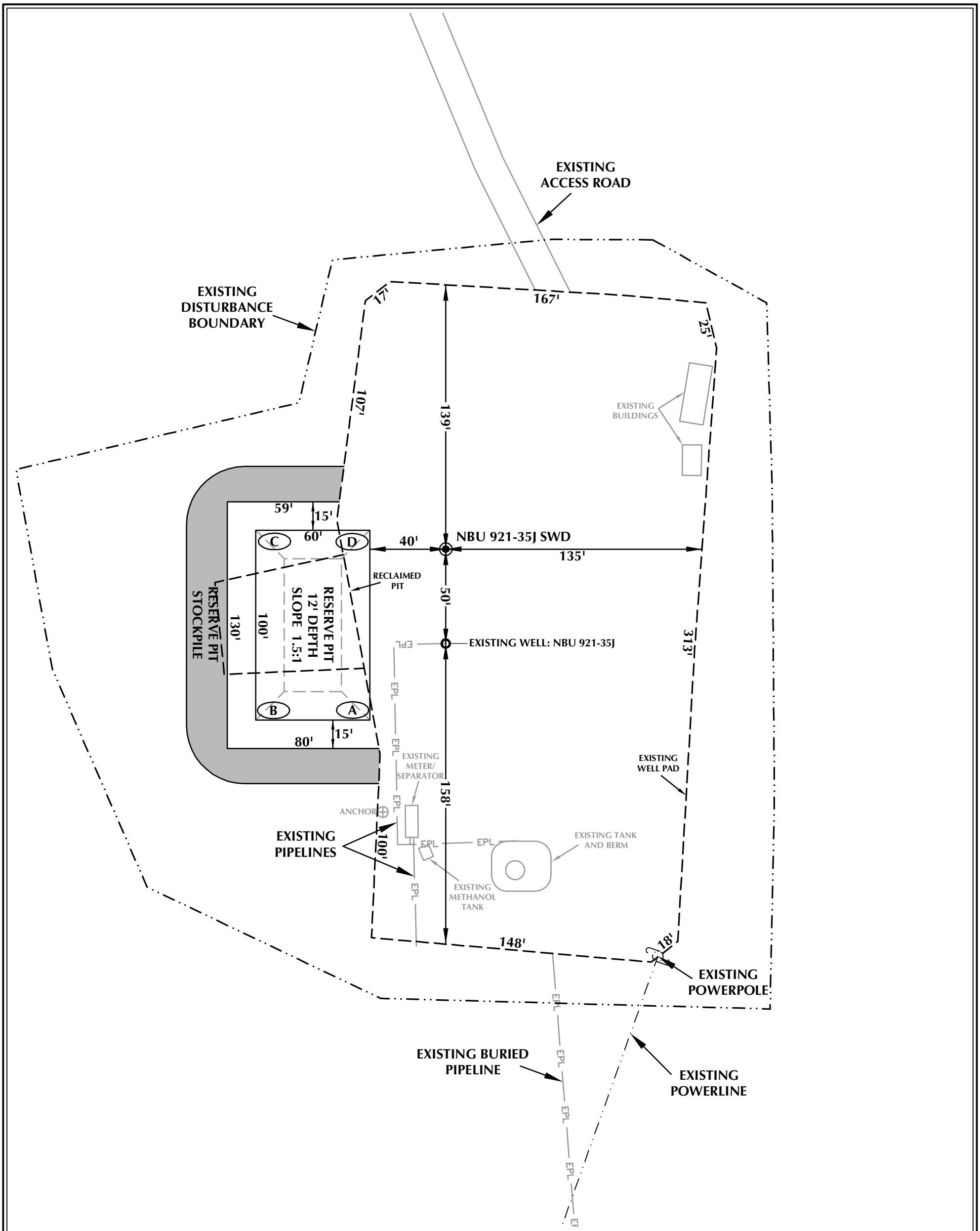
609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE SURVEYED: 11-16-10	SURVEYED BY: M.S.B.	SHEET NO: 2
DATE DRAWN: 11-17-10	DRAWN BY: M.W.W.	2 OF 9
SCALE: 1" = 60'	Date Last Revised: 12-02-10 M.W.W.	

RECEIVED: Dec. 07, 2010

API Well Number: 43047513960000



WELL PAD - NBU 921-35J DESIGN SUMMARY

TOTAL EXISTING WELL PAD AREA WITH RESERVE PIT UPGRADE= 1.61 ACRES
TOTAL EXISTING DISTURBANCE AREA = 2.94 ACRES

NOTE: ALL CONSTRUCTION WILL BE CONTAINED WITHIN THE EXISTING DISTURBANCE AREA

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 1,580 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 5,630 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 25' 50' 1" = 50'

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

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Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

WELL PAD - NBU 921-35J

WELL PAD - LOCATION LAYOUT
NBU 921-35J SWD
1467' FSL, 1427' FEL
NW1/4 SE1/4 OF SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

SCALE: 1"=50' | DATE: 11/19/10 | SHEET NO: 3 3 OF 9
REVISED: TAR 12/6/10

C:\ANADARKO\2010_53_NBU_FOCUS_SEC_921-35\DWG\NBU 921-35J SWD\NBU 921-35J SWD_20101202.dwg, 12/6/2010 10:19:20 AM

RECEIVED: Dec. 07, 2010

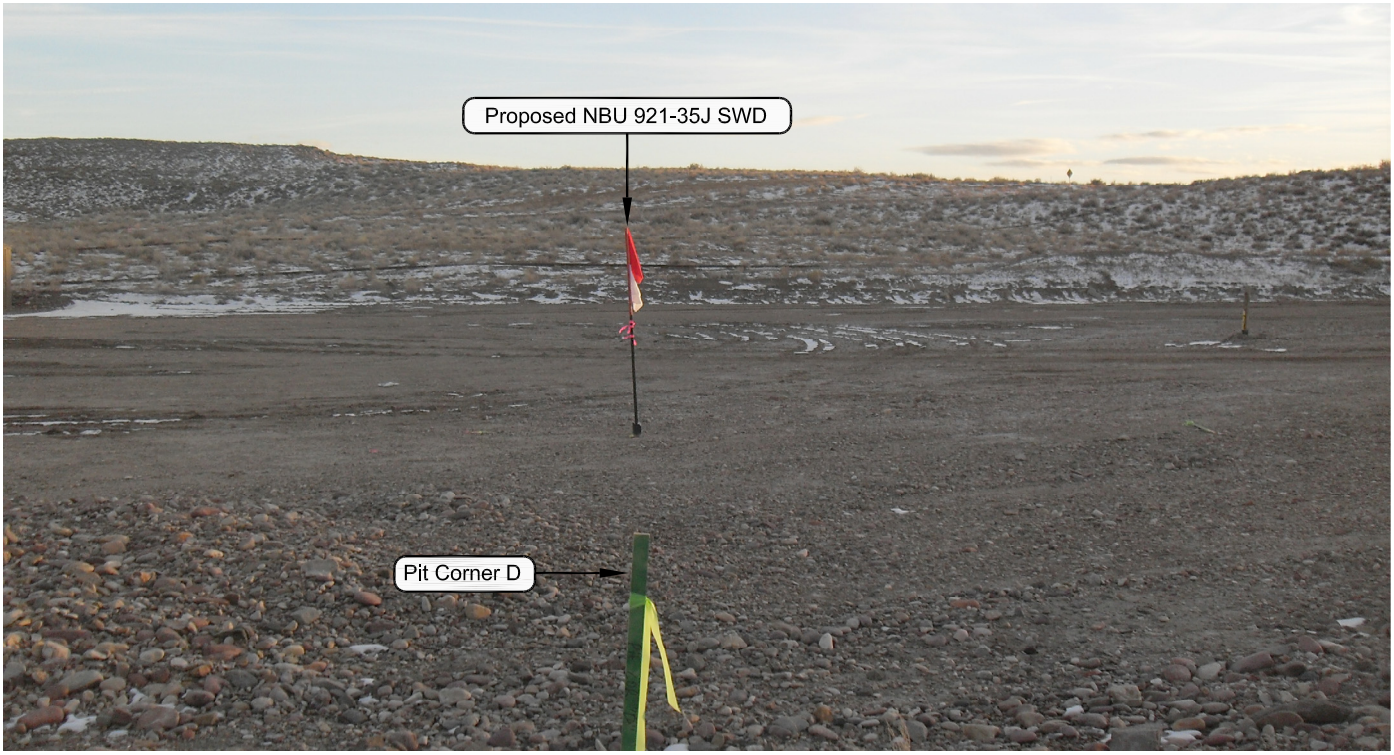


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE CAMERA ANGLE: SOUTHERLY

PHOTO VIEW: FROM EXISTING ACCESS ROAD CAMERA ANGLE: SOUTHWESTERLY

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

WELL PAD - NBU 921-35J

LOCATION PHOTOS
NBU 921-35J SWD
NW ¼ SE ¼ OF SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

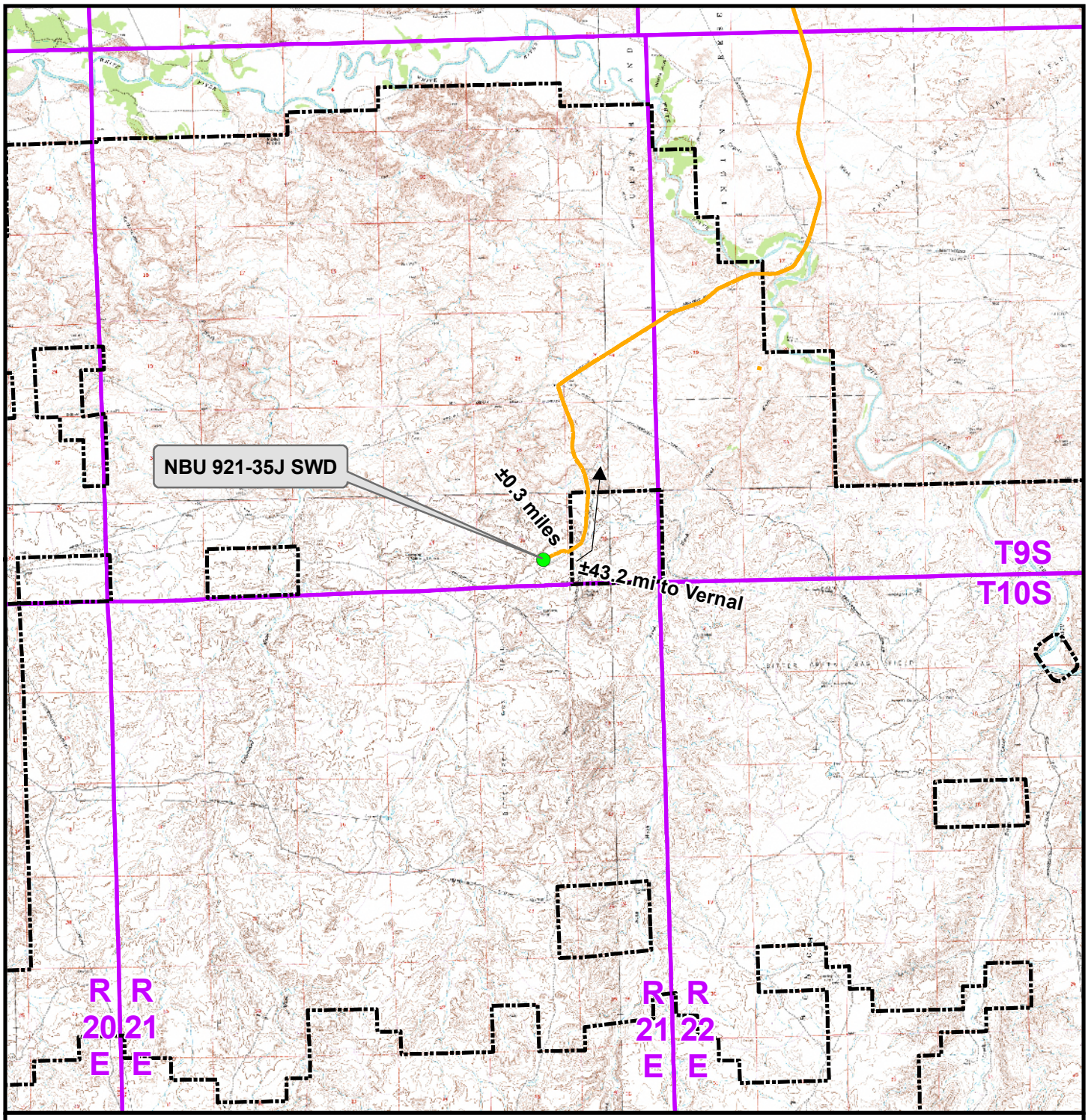
609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

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

DATE PHOTOS TAKEN: 11-16-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 4
DATE DRAWN: 11-17-10	DRAWN BY: M.W.W.	4 OF 9
Date Last Revised: 12-02-10 M.W.W.		

RECEIVED: Dec. 07, 2010

API Well Number: 43047513960000



Legend

Distance From Well Pad - NBU 921-35J To Unit Boundary: ±1,427ft

Proposed Well Location

Natural Buttes Unit Boundary

Access Route - Proposed

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

WELL PAD - NBU 921-35J

TOPO A
NBU 921-35J SWD
1467' FSL, 1427' FEL
NW¼ SE¼, SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1:100,000		NAD83 USP Central	Sheet No: 5 of 9
Drawn: CPS	Date: 19 Nov 2010		
Revised: TL	Date: 3 Dec 2010		

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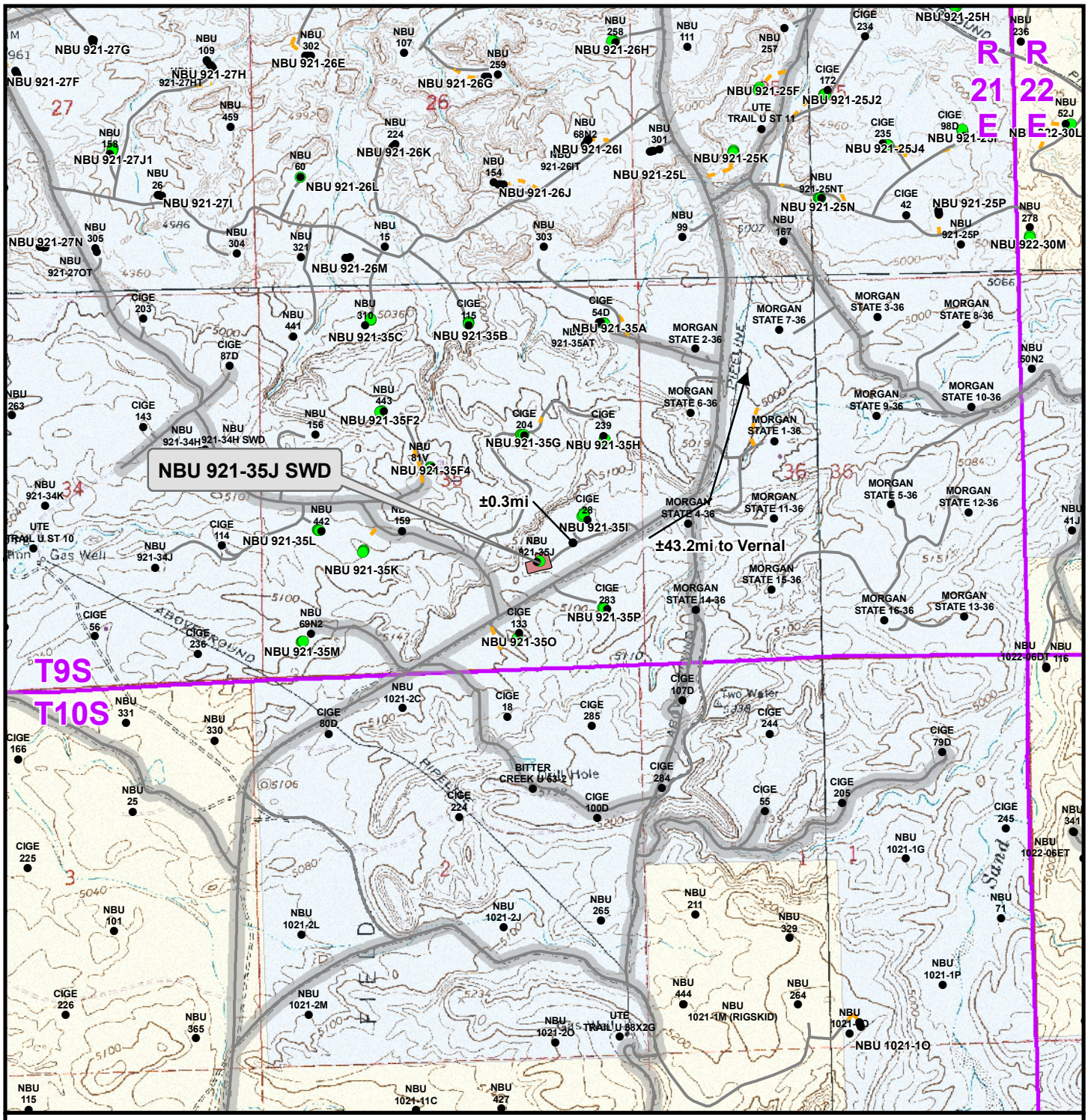
API Well Number: 43047513960000



Legend

Total Proposed Road Length: ±0ft

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

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

WELL PAD - NBU 921-35J

TOPO B
NBU 921-35J SWD
1467' FSL, 1427' FEL
NW¼ SE¼, SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 6 of 9
Drawn: CPS	Date: 19 Nov 2010	
Revised: TL	Date: 3 Dec 2010	

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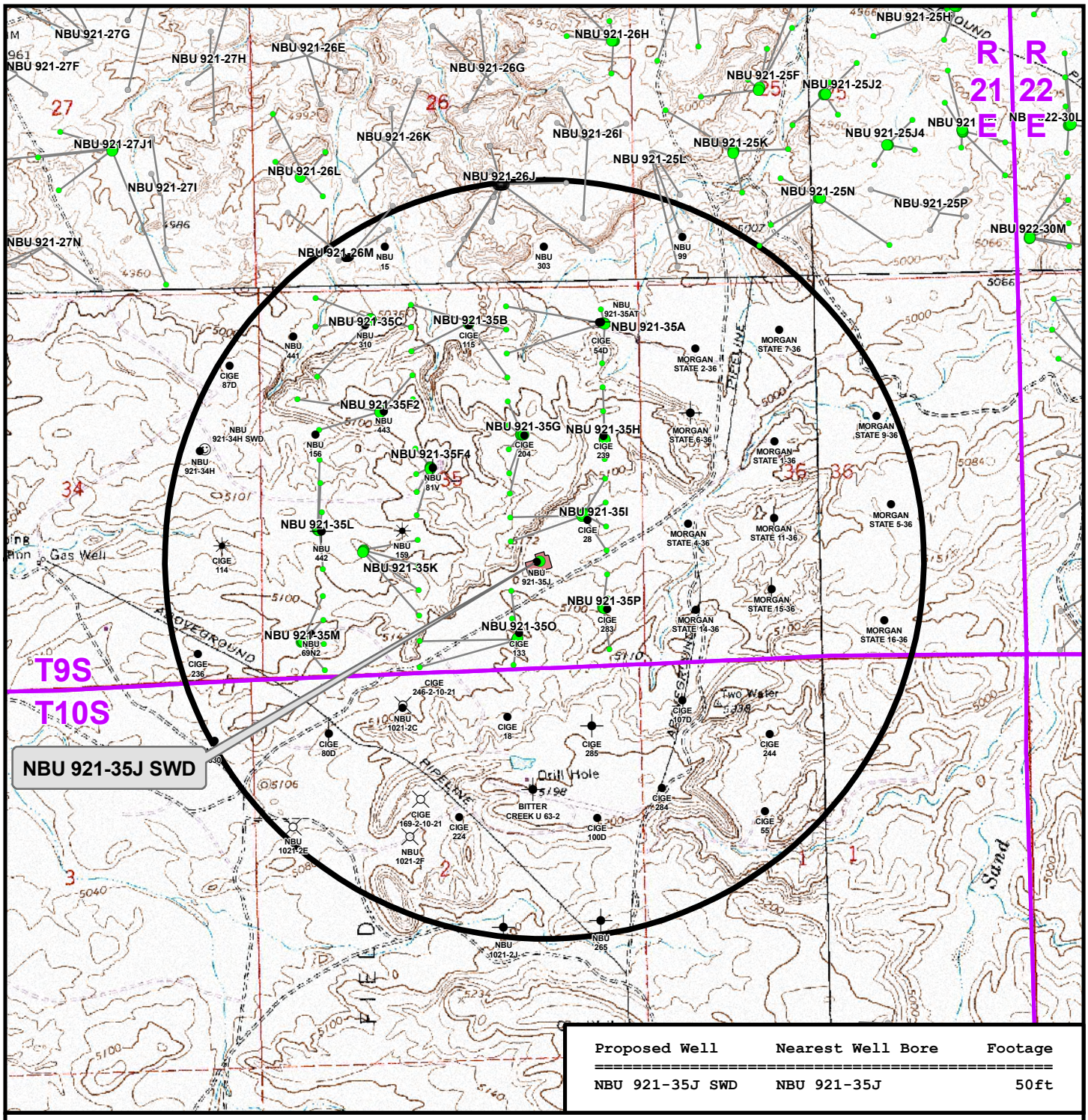
API Well Number: 43047513960000



Proposed Well	Nearest Well Bore	Footage
NBU 921-35J SWD	NBU 921-35J	50ft

Legend

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

- Well - Proposed
- Well Path
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Pad
- Well - 1 Mile Radius

- Producing
- Active
- Spudded (Drilling commenced: Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)

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

WELL PAD - NBU 921-35J

TOPO C
NBU 921-35J SWD
1467' FSL, 1427' FEL
NW¼ SE¼, SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

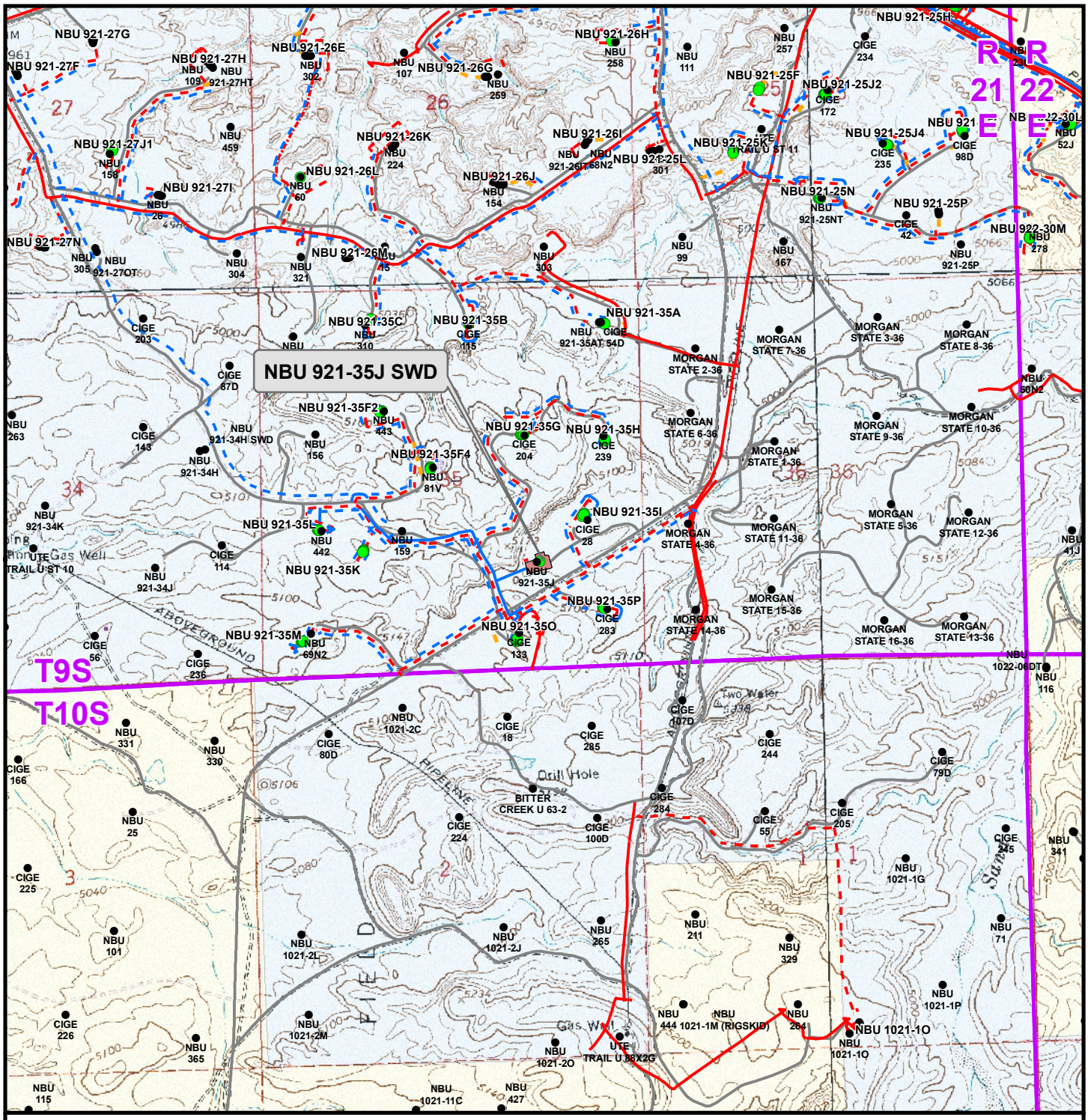
609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Nov 2010	7 of 9
Revised: TL	Date: 3 Dec 2010	

RECEIVED: Dec. 07, 2010

API Well Number: 43047513960000



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

WELL PAD - NBU 921-35J

TOPO D
NBU 921-35J SWD
1467' FSL, 1427' FEL
NW¼ SE¼, SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 8	8 of 9
Drawn: CPS	Date: 19 Nov 2010		
Revised: TL	Date: 3 Dec 2010		

RECEIVED: Dec. 07, 2010

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 921-35J
WELLS – NBU 921-35J SWD
Section 35, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 19.7 miles to a service road to the northwest. Exit right and proceed in a northwesterly then southwesterly direction along the service road approximately 0.3 miles to the NBU 921-35J well pad.

Total distance from Vernal, Utah to the well location is approximately 43.5 miles in a southerly direction.

RECEIVED: Dec. 07, 2010

NBU 921-35J SWD

1,467' FSL 1,427' FEL (NW/4SE/4)

Section 35 T9S R21E
Mineral Lease: ML 22582

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

RECEIVED: Dec. 07, 2010

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This SWD well will be on the existing pad for the NBU 921-35J well location. This well is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 30, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram): There will be an injection skid building and associated piping to connect the injection well to the existing fiberspar line that is already on the location.

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.
Gathering facilities:

No new gas or liquid pipeline is proposed (see Topo Map D).

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

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.

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E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods of Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
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
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

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The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as 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.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs “Reporting Oil and Gas Undesirable Events” rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition,

no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where

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possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

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

K. Other Information:

There will be no new disturbance to the existing well pad with the addition of the NBU 921-35J SWD well, therefore Arch and/or Paleo reports are not needed,

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M. **Lessee's or Operators' Representative & Certification:**

Danielle Piernot
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

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.

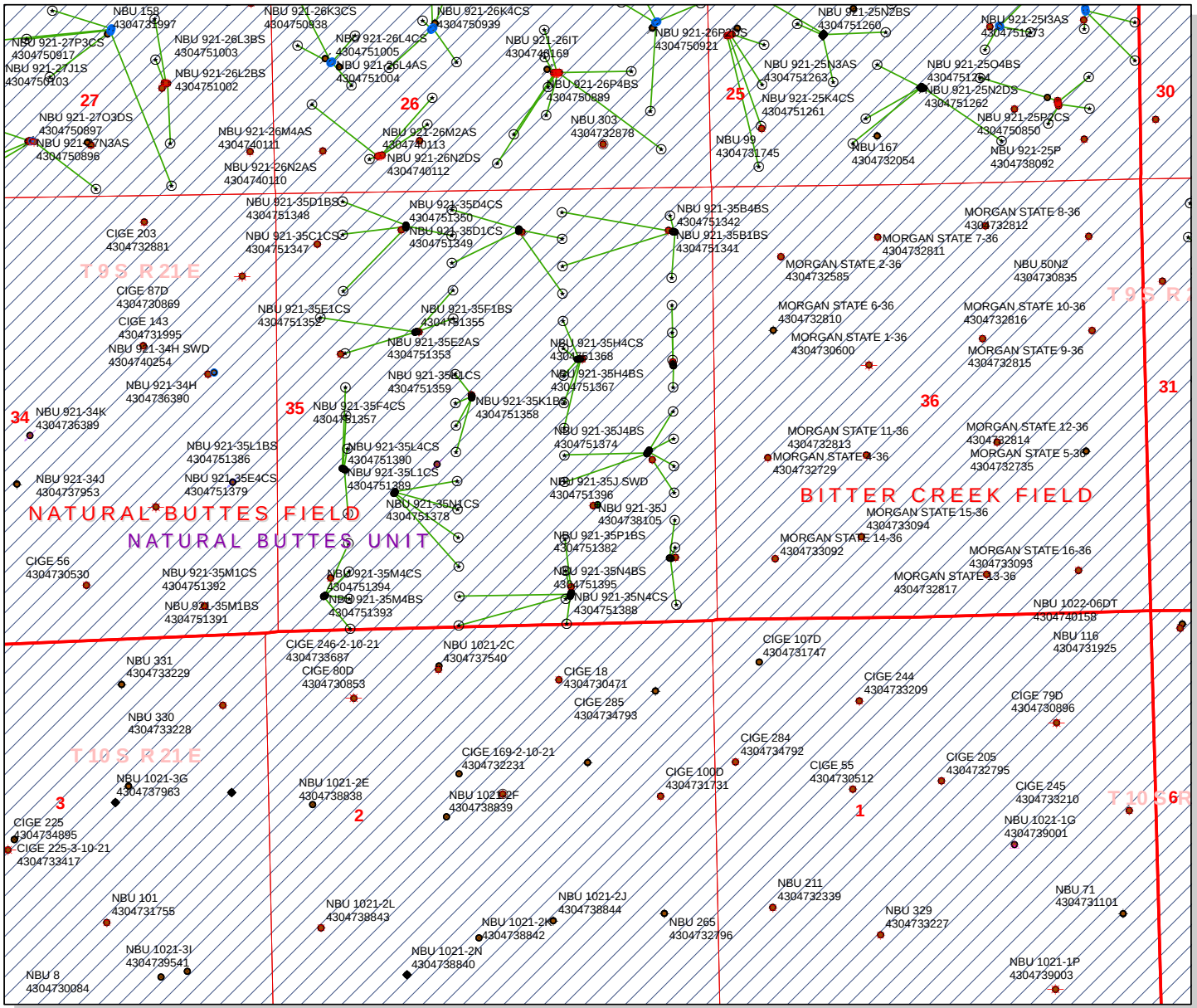
Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

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.

Danielle Piernot
Danielle Piernot

December 7, 2010
Date

API Well Number: 43047513960000



API Number: 4304751396

Well Name: NBU 921-35J SWD

Township 09.0 S Range 21.0 E Section 35

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
Sections
Township
Bottom Hole Location - AGRC

Wells Query
<all other values>
Status
APD - Aproved Permit
DRL - Spuded (Drilling Commenced)
GIW - Gas Injection
GS - Gas Storage
LA - Location Abandoned
LOC - New Location
OPS - Operation Suspended
PA - Plugged Abandoned
PGW - Producing Gas Well
POW - Producing Oil Well
RET - Returned APD
SGW - Shut-in Gas Well
SOW - Shut-in Oil Well
TA - Temp. Abandoned
TW - Test Well
WDW - Water Disposal
WIW - Water Injection Well
WSW - Water Supply Well

1,600 800 0 1,600 Feet

1:15,030

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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)

December 9, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 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 water disposal well is planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed IZ Green River)		
43-047-51396	NBU 921-35J SWD	Sec 35 T09S R21E 1467 FSL 1427 FEL

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

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2010.12.09 07:24:42 -07'00'

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

MCoulthard:mc:12-9-10

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BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35J SWD 43047513960000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35J SWD 430475139			
String	Surf			
Casing Size(")	7.000	6.250		
Setting Depth (TVD)	1580	1890		
Previous Shoe Setting Depth (TVD)	0	1580		
Max Mud Weight (ppg)	8.4	8.4		
BOPE Proposed (psi)	500	500		
Casing Internal Yield (psi)	4360	4360		
Operators Max Anticipated Pressure (psi)	700	7.1		

Calculations	Surf String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	690	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	500	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	342	YES
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	342	NO Common depth in area
Required Casing/BOPE Test Pressure=		500	psi
***Max Pressure Allowed @ Previous Casing Shoe=**		0	psi *Assumes 1psi/ft frac gradient

Calculations	String	6.250	"
Max BHP (psi)	.052*Setting Depth*MW=	826	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	599	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	410	YES OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	758	YES OK
Required Casing/BOPE Test Pressure=		500	psi
***Max Pressure Allowed @ Previous Casing Shoe=**		1580	psi *Assumes 1psi/ft frac gradient

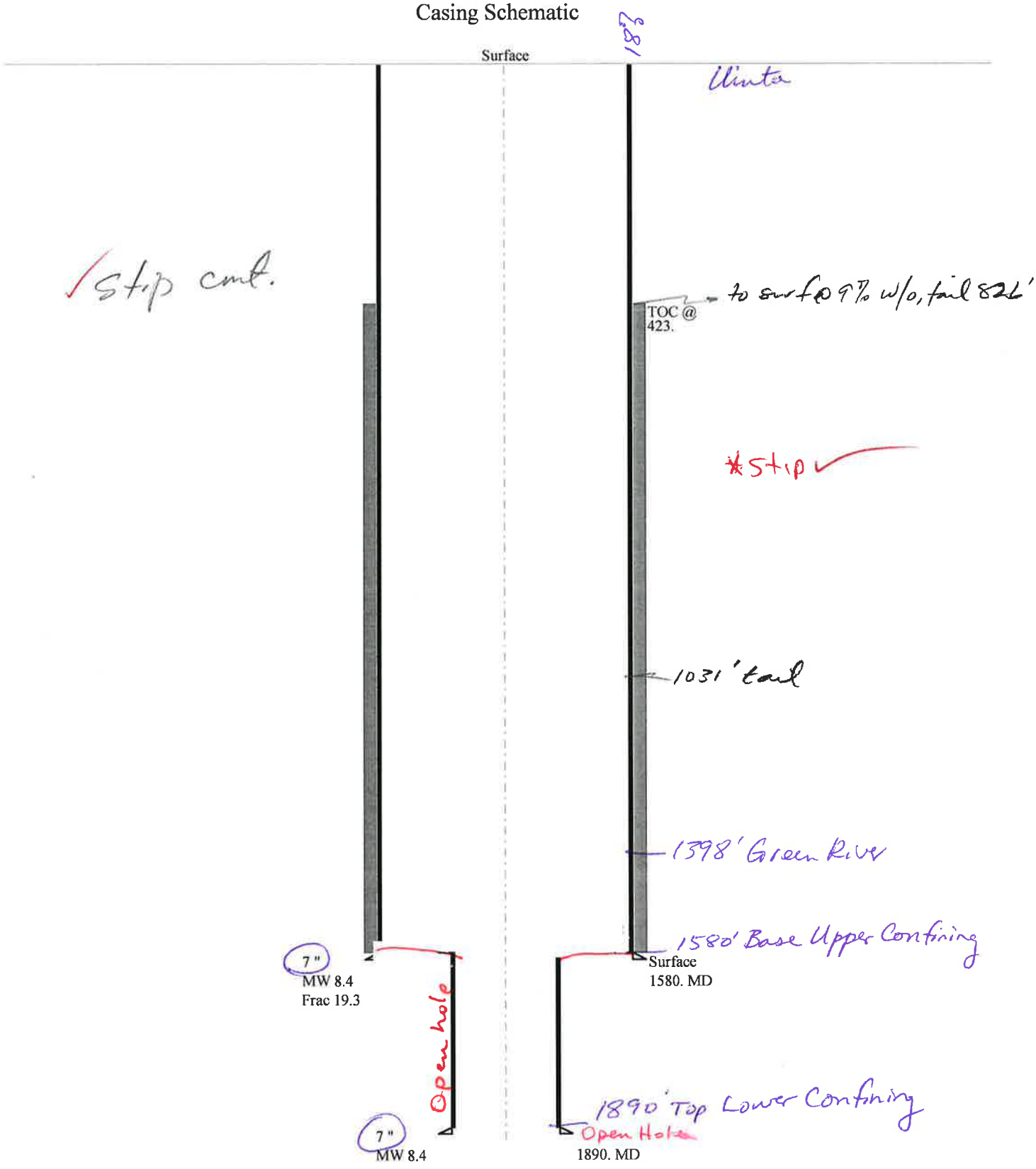
Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous 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 BHP (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

RECEIVED: Jan. 05, 2011

43047513960000 NBU 921-35J SWD

Casing Schematic



RECEIVED: Jan. 05, 2011

Well name:	**43047513960000 NBU 921-35J SWD**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-51396
Location:	UINTAH COUNTY

Design parameters:

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

Burst
Max anticipated surface pressure: 591 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 779 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: 1,379 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 96 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 423 ft

Directional well information:
Kick-off point 0 ft
Departure at shoe: 183 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 10.75 °

Re subsequent strings:
Next setting depth: 1,869 ft
Next mud weight: 8.400 ppg
Next setting BHP: 816 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,580 ft
Injection pressure: 1,580 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	1580	7	23.00	J-55	LT&C	1564	1580	6.25	8290

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	683	3270	4.790	779	4360	5.60	36	313	8.70 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: December 30,2010
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 1564 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.

RECEIVED: Jan. 05, 2011

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 WYNKOOP STREET
DENVER, CO 80202-1129
http://www.epa.gov/region8

JAN 2 8 2011

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

43 047 51396

Grizz Oleen
Kerr McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078

Re: FINAL Permit
EPA UIC Permit UT21201-08265
Well: NBU 921-35J SWD
NWSE Sec. 35-T9S-R21E
Uintah County, UT

RECEIVED
FEB 09 2011
DIV. OF OIL, GAS & MINING

Dear Mr. Oleen:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Program Permit for the proposed NBU 921-35J SWD injection well. A Statement of Basis that discusses the conditions and requirements of this Environmental Protection Agency (EPA) UIC Permit, is also included.

The public comment period for this permit ended on DEC 09 2010. No comments on the draft permit were received during the public notice period; therefore the effective date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

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

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

If you have any questions on the enclosed final permit or Statement of Basis, please call Tricia Pfeiffer of my staff at (303) 312-6271, or toll-free at (800) 227-8917, ext. 312-6271.

Sincerely,

Colleen Gillespie

for Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit
Statement of Basis

cc: Uintah & Ouray Business Committee
Richard Jenk, Jr., Chairman
Frances Poowegup, Vice-Chairwoman
Curtis Cesspooch, Councilman
Irene Cuch, Councilwoman
Stewart Pike, Councilman
Phillip Chimbraus, Councilman

Daniel Picard
BIA - Uintah & Ouray Indian Agency

with enclosures:

Mike Natchees
Environmental Coordinator
Ute Indian Tribe

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

Fluid Minerals Engineering Office
BLM - Vernal Office

Robin Hansen
Fluid Minerals Engineering Office
BLM - Vernal Office

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

bcc:

8P-TA, Randy Brown

EPA

UNDERGROUND INJECTION CONTROL PROGRAM

PERMIT

PREPARED: January 2011

Permit No. UT21201-08265

Class II Salt Water Disposal Well

NBU 921-35J SWD
Uintah County, UT

Issued To

Kerr-McGee Oil Gas Onshore, L.P.
1368 South 1200 East
Vernal, UT 84078

Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

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

Kerr-McGee Oil & Gas Onshore, L.P.
1368 South 1200 East
Vernal, UT 84078

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

NBU 921-35J SWD
1485 FSL and 1365 FEL, NWSE S35, T9S, R21E
Uintah County, UT

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

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

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

Issue Date: JAN 28 2011 Effective Date JAN 28 2011

Colleen Gillespie
for Stephen S. Tuber
Assistant Regional Administrator*
Office of Partnerships and Regulatory Assistance

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

PART II. SPECIFIC PERMIT CONDITIONS

Section A. WELL CONSTRUCTION REQUIREMENTS

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

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

1. Casing and Cement.

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

2. Injection Tubing and Packer.

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

3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

(a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and

(b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:

(i) on the injection tubing; and

(ii) on the tubing-casing annulus (TCA); and

(c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and

(d) a non-resettable cumulative volume recorder attached to the injection line.

4. Well Logging and Testing

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

5. Postponement of Construction or Conversion

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

6. Workovers and Alterations

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

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

Section B. MECHANICAL INTEGRITY

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

An injection well has mechanical integrity if:

(a) There is no significant leak in the casing, tubing, or packer (Part I); and

(b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

1. Demonstration of Mechanical Integrity (MI).

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

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

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

2. Mechanical Integrity Test Methods and Criteria

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

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

3. Notification Prior to Testing.

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

4. Loss of Mechanical Integrity.

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

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

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

Section C. WELL OPERATION

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

Injection is approved under the following conditions:

1. Requirements Prior to Commencing Injection.

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

(a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and

(i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or

(ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

2. Injection Interval.

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

In order to establish how the Bird's Nest reacts to injection, permit conditions will require the injection well to undergo monitoring of annual fluid levels. During these tests, the injection well is shut-in and the static fluid level is allowed to stabilize. After the fluid level has stabilized, the static fluid level is measured, cumulative injected volume determined, and the fluid in the well is sampled and analyzed for specific gravity in order to determine the pressure in the Bird's Nest. This information will be tracked year-to-year in order to show the buildup of pressure in the Bird's Nest and the relationship between that pressure and the cumulative volume of fluid injected into the disposal well.

3. Injection Pressure Limitation

(a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.

(b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permitee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

4. Injection Volume Limitation.

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

5. Injection Fluid Limitation.

Injected fluids are limited to those which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). The well also may be used to inject approved Class II wastes brought to the surface such as drilling fluids and spent well completion, treatment and stimulation fluids. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved. This well is NOT approved for commercial brine or other fluid disposal operation.

6. Tubing-Casing Annulus (TCA)

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

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

Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Monitoring Parameters, Frequency, Records and Reports.

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

Monitoring records must include:

(a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;

(b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;

(c) the analytical techniques or methods used for analysis.

2. Monitoring Methods.

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

(b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.

(c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.

(d) Pressures are to be measured in pounds per square inch (psi).

(e) Fluid volumes are to be measured in standard oil field barrels (bbl).

(f) Fluid rates are to be measured in barrels per day (bbl/day).

3. Records Retention.

(a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.

(b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

4. Annual Reports.

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D. The report of fluids injected during the year must identify each new fluid source by well name and location, and the field name or facility name.

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

Section E. PLUGGING AND ABANDONMENT

1. Notification of Well Abandonment, Conversion or Closure.

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

2. Well Plugging Requirements

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

3. Approved Plugging and Abandonment Plan.

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

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

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

5. Plugging and Abandonment Report.

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

(a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or

(b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

6. Inactive Wells.

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

(a) Provides written notice to the Director;

(b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and

(c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

PART III. CONDITIONS APPLICABLE TO ALL PERMITS

Section A. EFFECT OF PERMIT

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

Section B. CHANGES TO PERMIT CONDITIONS

1. Modification, Reissuance, or Termination.

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

2. Conversions.

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

3. Transfer of Permit.

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

4. Permittee Change of Address.

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

5. Construction Changes, Workovers, Logging and Testing Data

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

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

Section C. SEVERABILITY

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

Section D. CONFIDENTIALITY

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

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

Section E. GENERAL PERMIT REQUIREMENTS

1. Duty to Comply.

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

2. Duty to Reapply.

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

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

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

4. Duty to Mitigate.

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

5. Proper Operation and Maintenance.

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

6. Permit Actions.

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

7. Property Rights.

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

8. Duty to Provide Information.

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

9. Inspection and Entry.

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

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

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

10. Signatory Requirements.

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

11. Reporting Requirements.

(a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.

(b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.

(d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.

(e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:

(i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or

(ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

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

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

(f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website http://www.nrc.uscg.mil/index.htm.

(g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.

(h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

Section F. FINANCIAL RESPONSIBILITY

1. Method of Providing Financial Responsibility.

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

2. Insolvency.

In the event of:

(a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or

(b) suspension or revocation of the authority of the trustee institution to act as trustee; or

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

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

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

APPENDIX A

WELL CONSTRUCTION REQUIREMENTS

See diagram.

FORMATION DATA:

* Base of USDWs: Publication 92 shows the depth at 2973'.
* Confining Zone: Green River Formation intervals between 1398' - 1580' and 1890' - 1966'.
* Permitted Injection Zone: Bird's Nest member of the Green River Formation between approximately 1580' - 1890'.

WELL CONSTRUCTION:

All depths are estimates based on NBU 921-35J (producer). The well construction process will involve the following generalized procedure:

1. RURT. Drill 20" hole and set 14" conductor casing to 40' using rotary air rig tools. Cement to surface. Drill an 8.75" hole from surface to 1580' using rotary air rig tools. Sample any water influxes that may occur on the way to TD.
2. Run 7" 23# J-55 LTC casing from surface to 1580'. A float collar will be placed at ~1560'.
3. Cement the well with excess premium light weight Class "G" cement (15.8 ppg, 1.15 cuft/sx yield) to fill from 1580-surface'. If cement falls down the annulus, stage top jobs until hole stays full. RDRT. WOC.
4. MIRU a workover air rig. Pressure test casing to 1000 psi for 30 minutes.
5. PU a 6 ¼ bit and drill out float collar and continue to drill down to the shoe at ±1580'. POOH w/ bit and tubing
6. Run a GR-CBL-CCL from 1580' (cement shoe) to surface with pressure on if needed. Send log in to engineering (Robert Miller) for evaluation.
7. If CBL look OK, drill out cement shoe and continue drilling to TD of 1890' (which is the top of the lower confining zone) with a 6 1/4" bit. NOTE: Keep track of any water lost to the Bird's nest to account for later during water sampling. POOH w/ bit, collars, and tubing
8. Run logs per appendix B.
9. RDMOL and await for EPA corrective action plan.
10. Pending EPA approval, commence corrective action or well completion operations.
11. MIRU. Pick up and run work string to 1580'.
12. Run pressure bomb to 1735' (middle of Bird's nest) and obtain static 24 hour bottom-hole pressure. POOH w/ pressure bomb.
13. Obtain a Bird's nest water sample via nitrogen lifting or swabbing (per Anadarko approved Injection zone water sampling procedure) for analysis. Pull tubing.
14. Run 7" retrievable packer and 3.5" 9.3# J-55 Fiberline tubing to within 50' of casing shoe. Displace annulus with corrosion inhibited packer fluid and set packer.

15. Land tubing, nipple up wellhead.
16. Conduct a step rate test.
17. Conduct internal mechanical integrity test per EPA guidelines.
18. RDMO.

See schematic of the well after completion. Confining zone, open hole and packer setting depths are approximate pending cased-hole logging results. The schematic assumes no corrective action such as remedial cementing will be required. A detailed completion procedure will be submitted for EPA approval after the well is drilled, cased, cemented and logged.

WELL: NBU 921-35J SWD
FIELD: NATURAL BUTTES
API #
LEASE #: ML-22582
EPA PERMIT #:

CNTY: UINTAH
STATE: UTAH

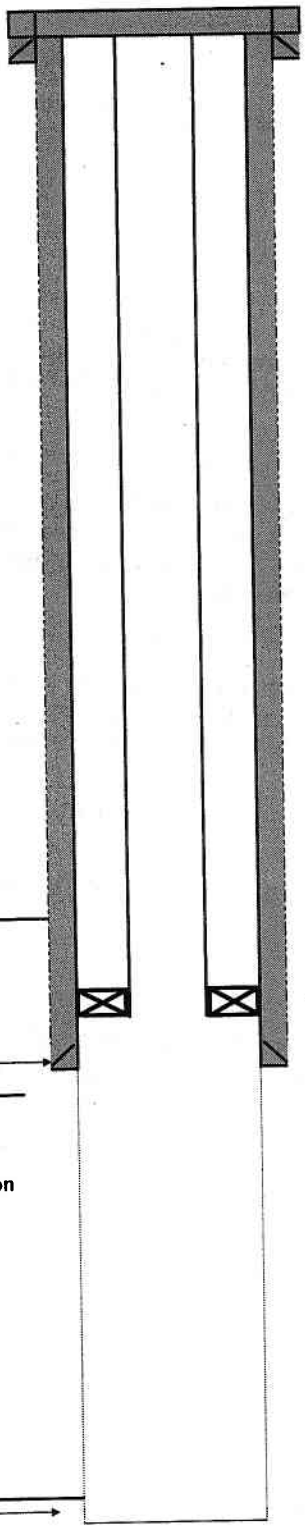
FT.: 1485' FSL 1365' FEL
Q-Q: NWSE
SEC.: 35
TWS: 9S
RGE: 21E

PROPOSED WELLBORE DIAGRAM

KB (ft): 5073
GL (ft): 5073

TD (ft): 1890
PBTD (ft): 1890

Cement Top at Surface



Top of Green River @ ~1398'
Upper Confining Zone, ~1398' to ~1580'

7.00" csg. @ ~1580

6 1/4" Open hole Injection Zone ~1580' to ~1890'

TD @ ~1890'

Packer within 100' of top casing shoe

CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
20	14	Conductor		0	40
8 3/4	7	23	J-55	0	1580

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
3 1/2	9.3	J-55	0	~1530'
3 1/2	Packer			~1530'

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
6 1/4" Open hole 1580' - 1890'					

APPENDIX B

LOGGING AND TESTING REQUIREMENTS

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

WELL NAME: NBU 921-35J SWD

TYPE OF LOG	DATE DUE
TEMP	AoR Well CIGE 283: Prior to receiving authorization to inject and at least once annually thereafter. Log should be run from 100 feet below lower confining zone to surface.
CBL or Radial/VDL/GAMMA RAY	Injection Well: Prior to receiving authorization to inject.
TEMP	AoR NBU 921-35J: Prior to receiving authorization to inject. Log shall be ran 3 months, 6 months and annually thereafter . Log should be run from 100 ft. below lower confining zone to surface.
Open Hole Log	Injection Well: Prior to injection.
Radial/GAMMA RAY	AoR Well CIGE 28: Prior to receiving authorization to inject and at least once annually thereafter. Log should be run from 100 feet below lower confining zone to surface.
TEMP	Injection Well: Prior to injection. If CBL does not show adequate cement.
RATS	Injection Well: Prior to injection. If CBL does not show adequate cement.

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

WELL NAME: NBU 921-35J SWD

TYPE OF TEST	DATE DUE
Injection Zone Water Sample	A representative isolated sample of the injection zone formation water will be collected and analyzed for TDS, pH, specific gravity, and conductivity as described in Appendix G.
Pore Pressure	Injection well: Prior to authorization to begin injection and at least once annually. (To monitor the Bird's Nest injection formation pressure buildup.)
Standard Annulus Pressure	Injection well: Prior to authorization to inject and at least once every five years after the last successful demonstration of Part I Mechanical Integrity.
Step Rate Test	Injection well: Prior to receiving authorization to commence injection.
Injectate Sample	Injection Well: A random representative sample of the injection water will be collected annually at sampling tap as described in the permit under Part II Sec.A.3(a).

APPENDIX C

OPERATING REQUIREMENTS

MAXIMUM ALLOWABLE INJECTION PRESSURE:

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

	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
WELL NAME	ZONE 1 (Upper)
NBU 921-35J SWD	300

INJECTION INTERVAL(S):

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

WELL NAME: NBU 921-35J SWD

	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT
FORMATION NAME	TOP	BOTTOM	(psi/ft)
Green River - Bird's Nest	1,580.00	1,890.00	0.630

ANNULUS PRESSURE:

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

MAXIMUM INJECTION VOLUME:

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

APPENDIX D

MONITORING AND REPORTING PARAMETERS

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

OBSERVE WEEKLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

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

APPENDIX E

PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

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

1. MIRU. ND WH AND NU BOPE.

2. KILL WELL AND RELEASE PACKER. TOH AND LAY DOWN TUBING AND EQUIPMENT.

3. PICK UP CASING SCRAPER AND WORK STRING AND TIH TO ~1570'. TOH.

4. PLUG #1: OPEN HOLE, TOP OF GREEN RIVER, USDW PROTECTION. PICK UP CIBP AND TIH. SET SAME AT ~1550'. SET A BALANCED PLUG FROM ±1550' TO 1298' USING ~56 CUFT OR ~49 SX CLASS G CEMENT (15.8 PPG, 1.15 CUFT/SX YIELD). CIRCULATE HOLE CLEAN.

5. DISPLACE TO 500' WITH 10 PPG BRINNE. TOH LAYING DOWN TO 500'.

6. PLUG #2: SURFACE PLUG. DISPLACE CASING WITH ~111 CUFT OR ~96 SXS CLASS G CEMENT (15.8 PPG, 1.15 CUFT/SX YIELD) TO FILL CASING FROM 500' TO SURFACE. LAY DOWN TUBING, FILL HOLE IF NEEDED.

7. ND BOPE, CUT OFF WELLHEAD AND INSTALL MARKER AS DIRECTED.

8. RDMO. REHAB LOCATION.

WELL: NBU 921-35J SWD
FIELD: NATURAL BUTTES
API #:
LEASE #: ML-22582
EPA PERMIT #:

CNTY: UINTAH
STATE: UTAH

FT.: 1485' FSL 1365' FEL
Q-Q: NWSE
SEC.: 35
TWS: 9S
RGE: 21E

P&A PLAN WELLBORE DIAGRAM

KB (ft): 5073
GL (ft): 5073

TD (ft): 1890
PBTD (ft): 1890

Cement Top at Surface

PLUG #2, 0-500'
~111 CUFT OR 96 SXS
CLASS G CEMENT

10 PPG
BRINE

Top of Green River
@ ~1398'
Upper Confining Zone,
~1398' to ~1580'

PLUG #1, ~1298'-~1550',
CIBP @ ~1550' WITH
~56 CUFT OR 49 SX
CLASS G CEMENT

7.00" csg. @ ~1580

6 1/4" Open hole Injection
Zone ~1580' to ~1890'

TD @ ~1890'

CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
20	14	Conductor		0	40
8 3/4	7	23	J-55	0	1580

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
6 1/4" Open hole 1580' - 1890'					

APPENDIX F

CORRECTIVE ACTION REQUIREMENTS

TEMPERATURE LOGGING FOR AOR WELLS (CIGE 283, NBU 921-35J, CIGE 28)

Wells within the Area of Review (AOR) that are shown in Appendix B1 were typically drilled and completed without running Cement Bond Logs (CBLs) to show the quality and top of cement behind the surface casing. For this reason, each well within Appendix B1 shall undergo annual temperature logging as proof that each well is completed in a manner that prevents fluids within the injection formation from migrating above or below the Bird's Nest through pathways behind the AOR well's surface casing.

These logs shall be submitted annually to the Director as part of the Annual Report.

If the results of Temperature logging shows any indication of Bird's Nest formation fluids moving out of zone, injection shall be shut-in and corrective action may be required in order to insure that Bird's Nests fluids remain within the Bird's Nest and do not migrate out of the approved injection zone.

Specific Requirements (schematics attached):

CIGE 283
775' FSL & 504' FEL
SESE-SEC. 35 T9S R21E
Uintah County, UT

CORRECTIVE ACTION PROCEDURE: PERFORATION DEPTHS FROM CUTTERS GR-CBL-CCL, DATED 16 OCTOBER 2003.

NOTE: THERE ARE TWO STRINGS OF CASING ACROSS THE BIRD'S NEST AND CONFINING ZONES IN THIS WELL. THE 7" STRING IS SET @ 5968' AND THE 4 ½" IS SET AT 9565'. THE 7" WAS CEMENTED WITH 820 SXS 50-50 POZ AND TWO TOP JOBS TOTALING 300 SXS CEMENT (A TOTAL OF ±130% EXCESS), BUT NO CBL WAS RUN. A CBL WAS RUN ON THE 4 ½" CASING AND THE TOC IS AT ±210'.

1. DETERMINE BASELINE FORMATION TEMPERATURE GRADIENT: SHUT WELL IN FOR 24 HOURS AND RIH W/TEMPERATURE LOG. RECORD BASELINE TEMPERATURE GRADIENT FROM TO SURFACE ±200' BELOW THE BASE OF THE LOWER CONFINING ZONE OF 1969'.

2. MONITOR FLUID MIGRATION BEHIND PIPE: PERFORM YEARLY TEMPERATURE LOGGING OPERATIONS TO ENSURE THAT FLUID MIGRATION IS CONTAINED WITHIN THE PROPOSED INJECTION INTERVAL AT 1572-1891' MD.

NBU 921-35J
1454' FSL & 1481' FEL
NWSE - Section 35 T9S R21E
Uintah County, UT

CORRECTIVE ACTION PROCEDURE: FROM CUTTERS GR-CBL-CCL, DATED 25 JANUARY 2007 (ON 9 5/8" CASING).

NOTE: THERE ARE TWO STRINGS OF CASING ACROSS THE BIRD'S NEST AND THE CONFINING ZONES IN THIS WELL. THE 9 5/8" CASING STRING IS SET @ 2298' AND THE 4 ½" IS SET AT 9530'. THE 9 5/8" WAS CEMENTED WITH 305 SXS CLASS G AND THREE TOP JOBS TOTALING 595 SXS G CEMENT. A CBL WAS RUN ON THE 9 5/8" AND THE PRIMARY JOB SHOWED CMT FROM 1090'-2298' AND TOP JOBS FROM 0-602'. A CBL WAS RUN ON THE 4 ½" CASING AND THE TOC IS AT ±110'.

1. DETERMINE BASELINE FORMATION TEMPERATURE GRADIENT: SHUT WELL IN FOR 24 HOURS AND RIH WITH A TEMPERATURE LOG. RECORD BASELINE TEMPERATURE GRADIENT FROM SURFACE TO ±200' BELOW THE BASE OF THE LOWER CONFINING ZONE OF 1987'.

2. MONITOR FLUID MIGRATION BEHIND PIPE: PERFORM ADDITIONAL TEMPERATURE LOGGING SURVEYS AT 3 MONTHS AND 6 MONTHS. IF SURVEYS LOOK OK, WILL CONVERT TO YEARLY TEMPERATURE LOGGING OPERATIONS TO ENSURE THAT FLUID MIGRATION IS CONTAINED WITHIN THE PROPOSED INJECTION INTERVAL OF 1602-1912' MD.

CIGE 28
2013' FSL & 755' FEL
NESE-SEC. 35 T9S R21E
Uintah County, UT

CORRECTIVE ACTION PROCEDURE: DEPTHS FROM THE SCHLUMBERGER COMPENSATED NEUTRON-FORMATION DENSITY LOG, DATED 22 SEPTEMBER 1980.

1. MIRU. N/D WH & N/U BOPE. KILL WELL & POOH W/ TBG. RIH W/GAUGE RING TO 4700' MD. POOH W/WIRELINE.

2. ISOLATE EXISTING PERFORATIONS, PRESSURE TEST WELLBORE, AND RUN CBL: SET RETRIEVABLE BRIDGE PLUG (RBP) AT 4675' (TOP OF WASATCH) W/ 2-3/8" 4.7# J-55 TBG. FILL-UP WELLBORE AND PRESSURE TEST CASING TO 1000 PSI. RUN A RADIAL CBL FROM 4675' TO SURFACE HOLDING 1000 PSI ON CASING. EVALUATE CBL. IF CBL SHOWS ADEQUATE BONDING, CONTINUE WITH THE BELOW STEPS. IF CBL SHOWS POOR BONDING, A P&A WILL BE RECOMMENDED.

3. DETERMINE BASELINE FORMATION TEMPERATURE GRADIENT: RIH

W/TEMPERATURE LOG AND RECORD A BASELINE TEMPERATURE GRADIENT FROM SURFACE TO 4675' (MAKE SURE WELL HAS BEEN SI FOR ±24 HOURS). RIH AND RETRIEVE THE RBP. N/D BOPE AND N/U WH. RDMO.

4. MONITOR FLUID MIGRATION BEHIND PIPE: PERFORM YEARLY TEMPERATURE LOGGING OPERATIONS TO ENSURE THAT FLUID MIGRATION IS CONTAINED WITHIN THE PROPOSED INJECTION INTERVAL OF 1595-1895' MD.

CIGE 133 will be plugged and abandoned prior to Authorization to Inject. The schematic is attached. The general process is described below. The final procedure and scehmatic will be provided to the Director after the work is completed.

CIGE 133 PLUG & ABANDONMENT PROCEDURE
CIGE 133
469' FSL & 1740' FEL
SWSE - Section 35 T9S R21E
Uintah County, UT

*H2S MAY BE PRESENT. CHECK FOR H2S AND TAKE APPROPRIATE PRECAUTIONS.
CEMENT QUANTITIES BELOW ASSUME NEAT CLASS G, YIELD 1.145 CUFT/SX. IF A DIFFERENT PRODUCT IS USED, WELLSITE PERSONNEL ARE RESONSIBLE FOR CORRECTING QUANTITIES TO YIELD THE STATED SLURRY VOLUME. WHEN SQUEEZING, INCLUDE 10% EXCESS PER 1000' OF DEPTH.

*TREATED FRESH WATER WILL BE PLACED BETWEEN ALL PLUGS INSTEAD OF BRINE.
ALL DISPLACEMENT FLUID SHALL CONTAIN CORROSION INHIBITOR AND BIOCIDE. PREMIX 5 GALLONS PER 100 BBLS FLUID.

*NOTIFY UDOGM/BLM 24 HOURS BEFORE MOVING ON LOCATION. THIS PROCEDURE WILL MEET OR EXCEED THE STATE REQUIREMENTS AND THE APPROVED SUNDRY WITH ANY COA's FROM THE STATE WILL BE SENT TO THE EPA DIRECTOR.

PROCEDURE
Note: An estimated 293 sx Class G cement needed for procedure
Note: Gyro ran 6/10/10 to 5900'

1. MIRU. KILL WELL AS NEEDED. ND WH, NU AND TEST BOPE.

2. PULL TBG & LD SAME. RU WIRELINE AND MAKE A GAUGE RING RUN TO CHECK FOR FILL. A GPS READING WILL NEED TO BE TAKEN AT THE WELL SITE AND RECORDED IN OPENWELLS. PLEASE TAKE IT TO THE 6TH DECIMAL PLACE.

3. PLUG #1, ISOLATE WASATCH PERFORATIONS (4952'- 5952') & TOP OF WASATCH (4690'): RIH W/ 5 ½" CIBP. SET @ ~4902'. PRESSURE TEST THE

CASING TO 1000 PSI AND HOLD FOR 15 MIN. PUH 10', BRK CIRC W/ FRESH WATER. DISPLACE A MINIMUM OF 36 SX / 7.3 BBL / 40.72 CUFT. ON TOP OF PLUG. PUH ABOVE TOC ~4590' (312' COVERAGE). REVERSE CIRCULATE W/ TREATED 1O PPG BRINE.

4. PLUG #2, PROTECT BASE OF USDW (~3122') & BASE OF PARACHUTE (3071'): PUH TO ~3222'. BRK CIRC W/ FRESH WATER. DISPLACE 29 SX / 5.8 BBL / 32.77 CUFT AND BALANCE PLUG W/ TOC @ ~2971' (251' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED BRINE.

5. PLUG #3, PROTECT TOP OF MAHOGANY (2218'): PUH TO ~2320'. BRK CIRC W/ FRESH WATER. DISPLACE 23 SX / 4.8 BBL / 26.76 CUFT AND BALANCE PLUG W/ TOC @ ~2115' (205' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED 1O PPG BRINE.

6. PLUG #4, PROTECT TOP OF BIRD'S NEST (~1602') & TOP OF GREEN RIVER (1440'): POOH W/ TUBING. RIH W/ WIRELINE & PERFORATE @ 1705' W/ 4 SPF. POOH. PU & RIH W/ 5 ½" CICR, SET @ ~1340'. RIH W/ TBG & STING INTO CICR & SQUEEZE PERFS W/ APPROXIMATELY 118 SX / 24.2 BBL / 135.65 CUFT (CALCULATION INCLUDES 15% EXCESS) OR SUFFICIENT VOLUME TO FILL CSG & BOREHOLE ANNULUS TO 1340'. STING OUT OF CICR AND SPOT 6 SX / 1.2 BBL / 6.53 CUFT CMT ON TOP OF CICR. BRK CIRC W/ FRESH WATER. POOH ABOVE TOC (~1290'). REVERSE CIRCULATE W/ 10 PPG BRINE.

7. PLUG #5, SURFACE SHOE (~260' KB) & SURFACE HOLE: POOH W/ TBG. RIH W/ WIRELINE, PERFORATE @ 310' W/ 4 SPF. POOH W/ WIRELINE. RU CEMENT SERVICE TO PROD CSG. PUMP 87 SX / 17.7 BBL / 99.21 CUFT OR SUFFICIENT VOLUME TO FILL ANNULUS AND CASING TO SURFACE.

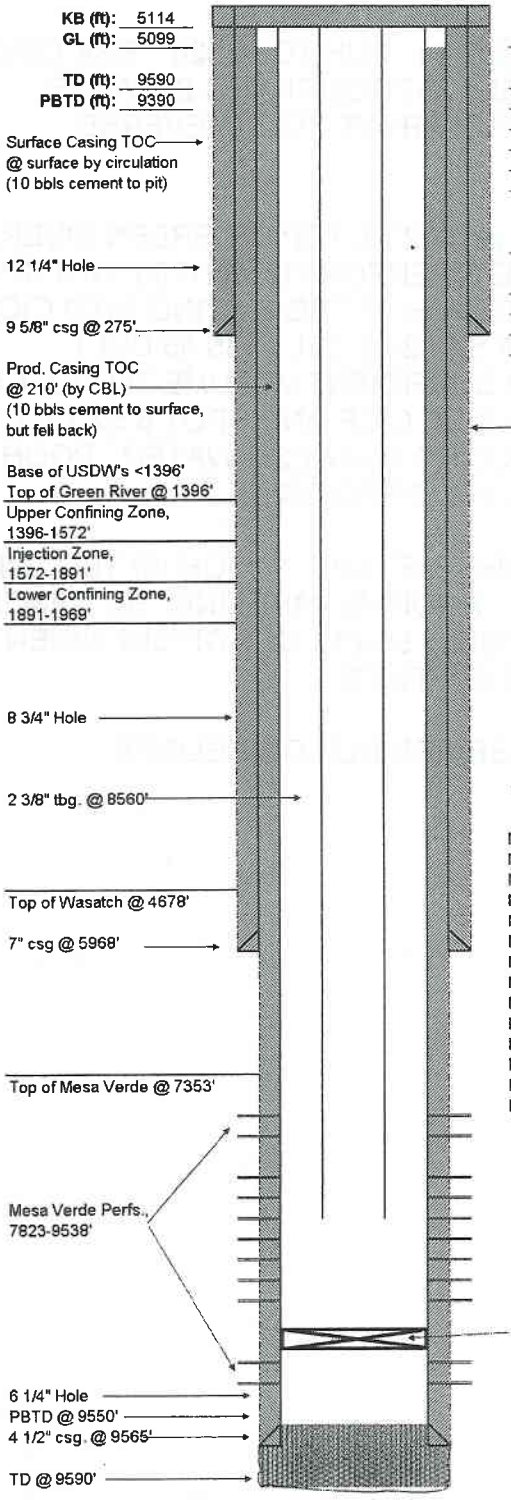
8. CUT OFF WELLHEAD AND INSTALL MARKER PER BLM GUIDELINES.

WELL:	CIGE 283	CNTY:	UINTAH	FT.:	775' FSL 504' FEL
FIELD:	NATURAL BUTTES	STATE:	UTAH	Q-Q:	SESE
API #	43-047-34790			SEC.:	35
LEASE #:	ML-22582			TWS:	9S
EPA PERMIT #:				RGE:	21E

CURRENT WELLBORE DIAGRAM

KB (ft): 5114
GL (ft): 5099

TD (ft): 9590
PBTD (ft): 9390



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
12 1/4	9 5/8	32.3	H-40	0	275
8 3/4	7	23.0	J-55	0	5968
6 1/4	4 1/2	11.6	M-80	0	9565

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
2 3/8	4.7	J-55	0	8597

PERFORATIONS

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
Mesa Verde	7,823	7,827	2	10/28/03	Open
Mesa Verde	7,888	7,892	2	10/28/03	Open
Mesa Verde	8,140	8,145	4	10/28/03	Open
Mesa Verde	8,490	8,498	4	10/28/03	Open
Mesa Verde	8,501	8,509	4	10/28/03	Open
Mesa Verde	8,670	8,692	2	10/27/03	Open
Mesa Verde	8,724	8,740	2	10/27/03	Open
Mesa Verde	8,768	8,780	2	10/27/03	Open
Mesa Verde	8,790	8,801	2	10/27/03	Open
Mesa Verde	8,803	8,806	2	10/27/03	Open
Mesa Verde	9,076	9,078	4	10/27/03	Open
Mesa Verde	9,270	9,271	4	10/27/03	Open
Mesa Verde	9,485	8,489	4	10/27/03	Excl. - CIBP
Mesa Verde	9,532	9,538	4	10/27/03	Excl. - CIBP

WELL: NBU 921-35J
FIELD: NATURAL BUTTES
API # 43-047-38105
LEASE #: ML-22582
EPA PERMIT #:

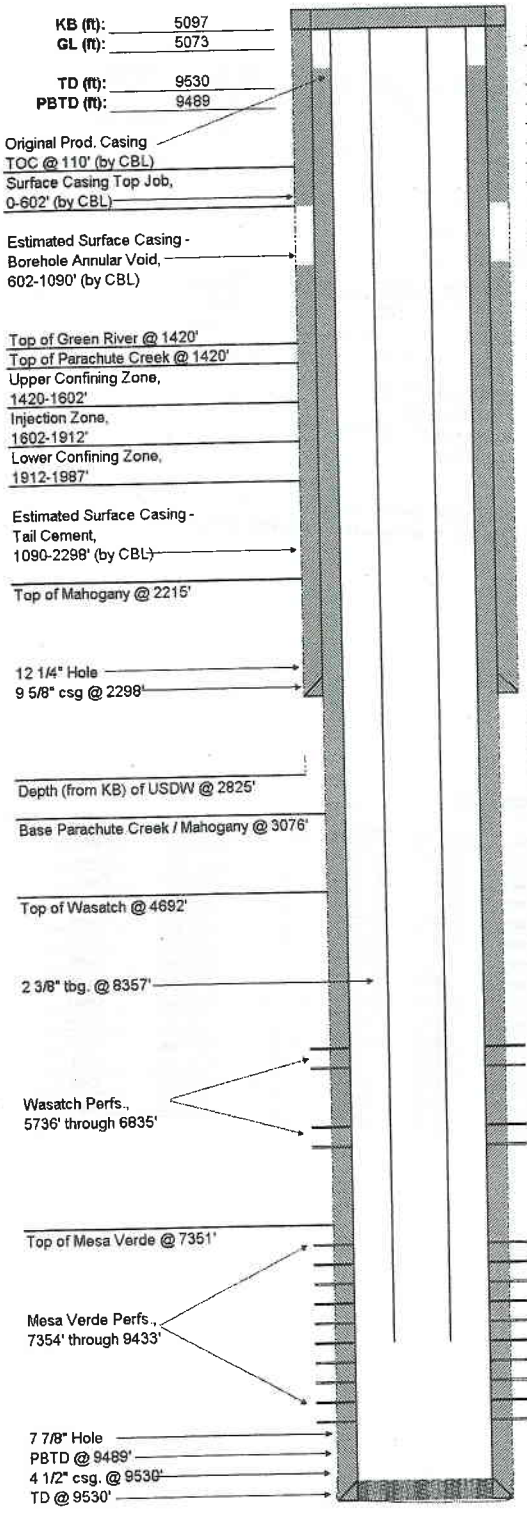
CNTY: UINTAH
STATE: UTAH

FT.: 1454' FSL 1481' FEL
Q-Q: NWSE
SEC.: 35
TWS: 9S
RGE: 21E

CURRENT WELLBORE DIAGRAM

KB (ft): 5097
GL (ft): 5073

TD (ft): 9530
PBTD (ft): 9489



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
12 1/4	9 5/8	32.3	H-40	0	2272
7 7/8	4 1/2	11.6	I-80	0	9530

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
2 3/8	4.7	J-55	0	8357'

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
Wasatch	5,736	5,740	4	03/21/07	Open
Wasatch	5,748	5,755	4	03/21/07	Open
Wasatch	6,502	6,508	4	03/21/06	Open
Wasatch	6,830	6,835	4	03/21/06	Open
Mesa Verde	7,354	7,359	4	03/21/06	Open
Mesa Verde	7,387	7,390	4	03/21/06	Open
Mesa Verde	7,639	7,642	4	03/21/06	Open
Mesa Verde	7,805	7,809	4	03/21/06	Open
Mesa Verde	7,905	7,911	4	03/21/06	Open
Mesa Verde	8,105	8,107	4	03/21/06	Open
Mesa Verde	8,263	8,266	4	03/21/06	Open
Mesa Verde	8,434	8,440	4	03/21/06	Open
Mesa Verde	8,755	8,759	3	03/21/06	Open
Mesa Verde	8,856	8,860	4	03/21/06	Open
Mesa Verde	8,995	8,997	4	03/21/06	Open
Mesa Verde	9,107	9,109	4	03/21/06	Open
Mesa Verde	9,234	9,236	3	03/20/06	Open
Mesa Verde	9,332	9,334	4	03/20/06	Open
Mesa Verde	9,383	9,388	4	03/20/06	Open
Mesa Verde	9,429	9,433	3	03/20/06	Open

Permit UT21201-08265

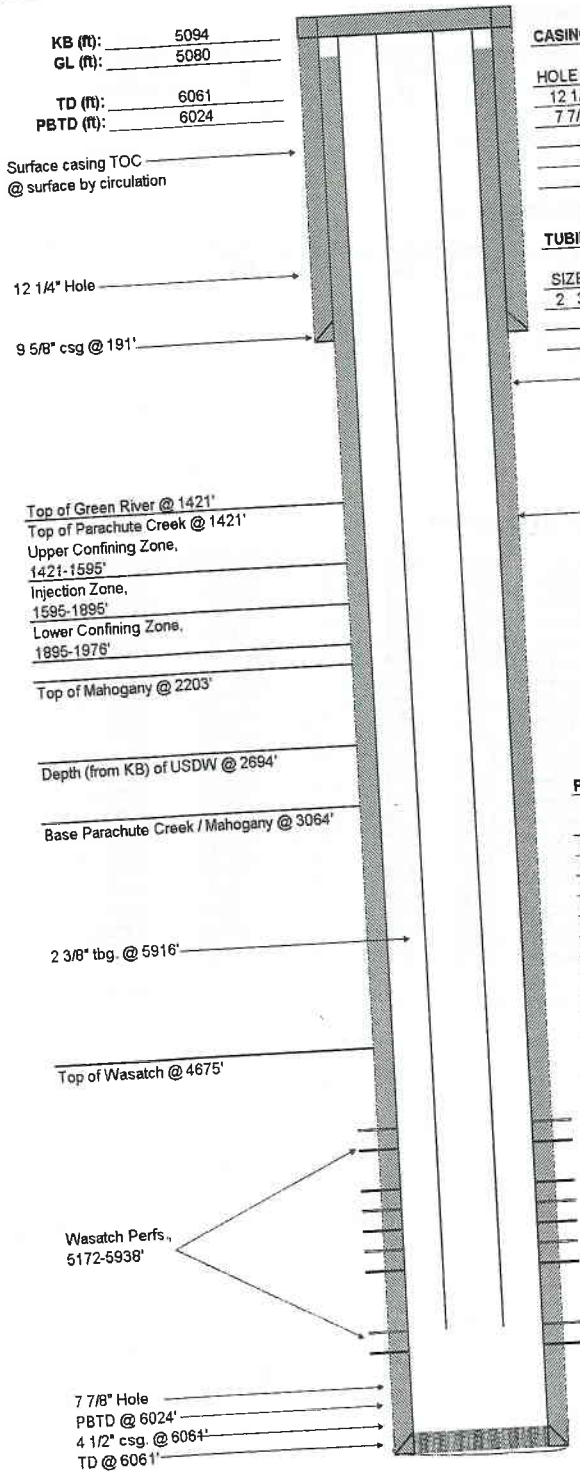
FINAL PERMIT

WELL: Cige 28
FIELD: NATURAL BUTTES
API # 43-047-30739
LEASE #: ML-22582
EPA PERMIT #:

CNTY: UINTAH
STATE: UTAH

FT.: 2013' FSL 755' FEL
Q-Q: NESE
SEC.: 35
TWS: 9S
RGE: 21E

CURRENT WELLBORE DIAGRAM



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
12 1/4	9 5/8	36.0	N-80	0	191
7 7/8	4 1/2	11.6	N-80	0	6061

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
2 3/8	4.7	J-55	0	5916

PERFORATIONS

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
Wasatch	5,172	5,172	1	10/21/80	Open
Wasatch	5,177	5,177	1	10/21/80	Open
Wasatch	5,181	5,181	1	10/21/80	Open
Wasatch	5,454	5,454	1	10/21/80	Open
Wasatch	5,460	5,460	1	10/21/80	Open
Wasatch	5,463	5,463	1	10/21/80	Open
Wasatch	5,486	5,486	1	10/21/80	Open
Wasatch	5,488	5,488	1	10/21/80	Open
Wasatch	5,490	5,490	1	10/21/80	Open
Wasatch	5,580	5,580	1	10/21/80	Open
Wasatch	5,581	5,581	1	10/21/80	Open
Wasatch	5,932	5,932	1	10/21/80	Open
Wasatch	5,935	5,935	1	10/21/80	Open
Wasatch	5,938	5,938	1	10/21/80	Open

WELL: CIGE 133
FIELD: NATURAL BUTTES
API # 43-047-31978
LEASE #: ML-22582
EPA PERMIT #:

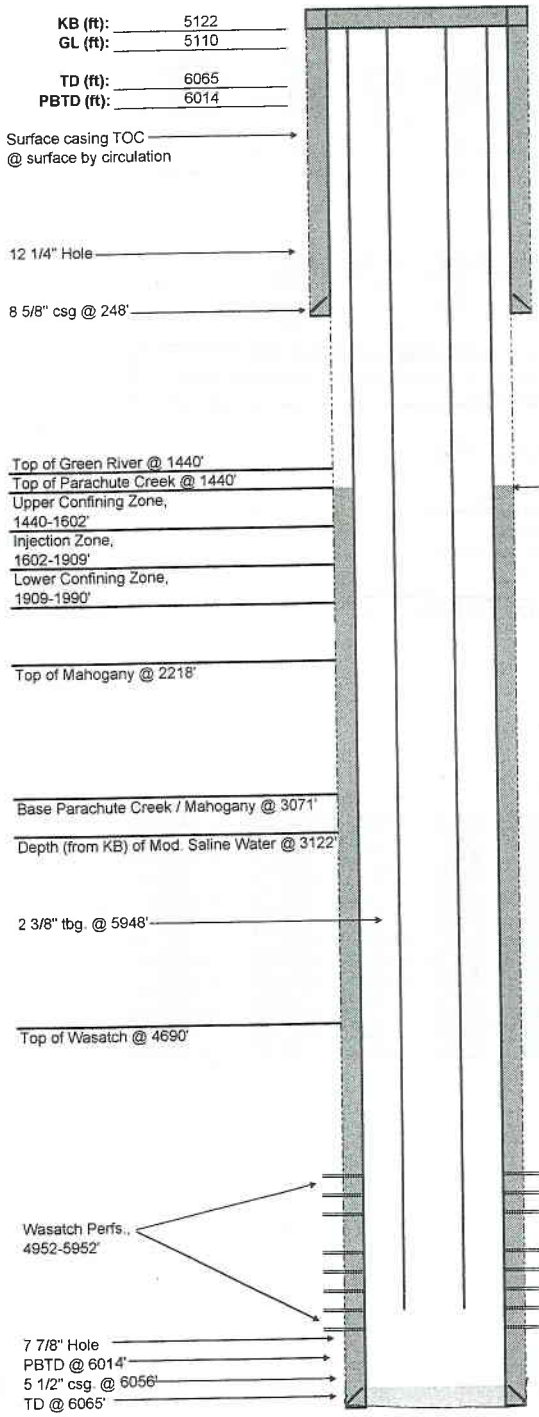
CNTY: UINTAH
STATE: UTAH

FT.: 469' FSL 1740' FEL
Q-Q: SWSE
SEC.: 35
TWS: 9S
RGE: 21E

CURRENT WELLBORE DIAGRAM

KB (ft): 5122
GL (ft): 5110

TD (ft): 6065
PBTD (ft): 6014



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
12 1/4	8 5/8	24.0	K-55	0	248
7 7/8	5 1/2	17.0	J-55	0	6056

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
2 3/8	4.7	J-55	0	5948

PERFORATIONS

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
Wasatch	4,952	4,952	1	05/01/91	Open
Wasatch	4,955	4,955	1	05/01/91	Open
Wasatch	4,958	4,958	1	05/01/91	Open
Wasatch	4,961	4,961	1	05/01/91	Open
Wasatch	5,360	5,360	1	05/01/91	Open
Wasatch	5,572	5,572	1	05/01/91	Open
Wasatch	5,700	5,700	1	05/01/91	Open
Wasatch	5,704	5,704	1	05/01/91	Open
Wasatch	5,732	5,732	1	05/01/91	Open
Wasatch	5,946	5,946	1	05/01/91	Open
Wasatch	5,949	5,949	1	05/01/91	Open
Wasatch	5,952	5,952	1	05/01/91	Open

WELL: CIGE 133
FIELD: NATURAL BUTTES
API # 43-047-31978
LEASE #: ML-22582
EPA PERMIT #:

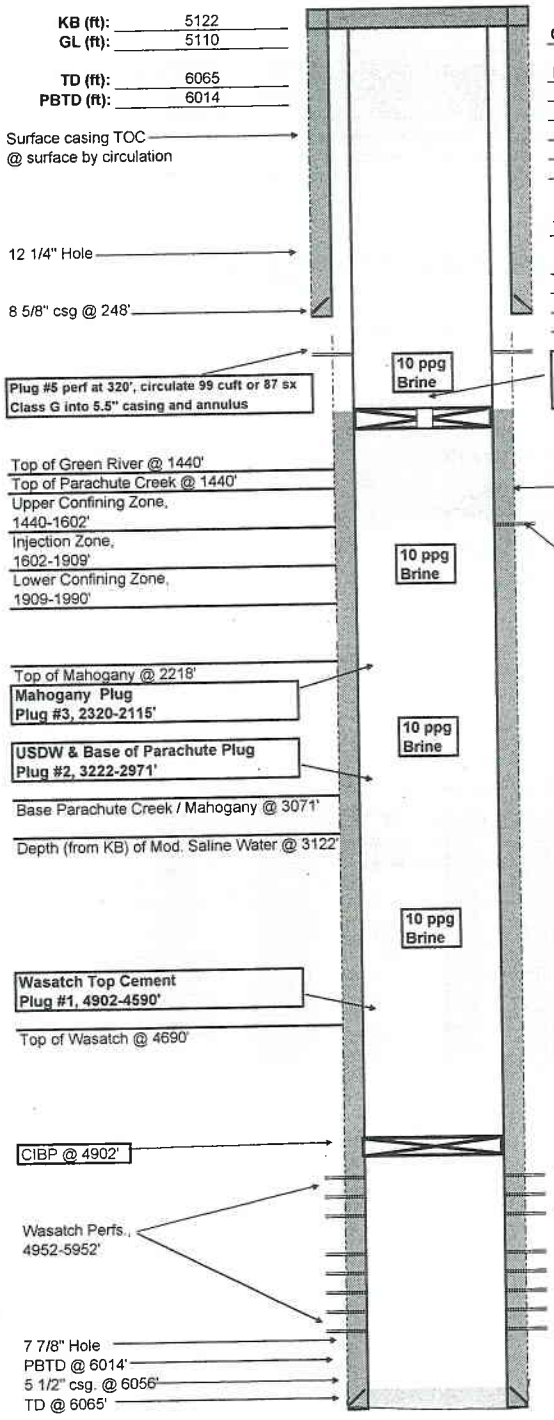
CNTY: UINTAH
STATE: UTAH

FT.: 469' FSL 1740' FEL
Q-Q: SWSE
SEC.: 35
TWS: 9S
RGE: 21E

P&A DIAGRAM

KB (ft): 5122
GL (ft): 5110

TD (ft): 6065
PBTD (ft): 6014



CASING RECORD

HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
12 1/4	8 5/8	24.0	K-55	0	248
7 7/8	5 1/2	17.0	J-55	0	6056

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
2 3/8	4.7	J-55	0	5948

PERFORATIONS

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
Wasatch	4,952	4,952	1	05/01/91	Open
Wasatch	4,955	4,955	1	05/01/91	Open
Wasatch	4,958	4,958	1	05/01/91	Open
Wasatch	4,961	4,961	1	05/01/91	Open
Wasatch	5,360	5,360	1	05/01/91	Open
Wasatch	5,572	5,572	1	05/01/91	Open
Wasatch	5,700	5,700	1	05/01/91	Open
Wasatch	5,704	5,704	1	05/01/91	Open
Wasatch	5,732	5,732	1	05/01/91	Open
Wasatch	5,946	5,946	1	05/01/91	Open
Wasatch	5,949	5,949	1	05/01/91	Open
Wasatch	5,952	5,952	1	05/01/91	Open

APPENDIX G

INJECTION ZONE WATER SAMPLING FOR SWD WELLS

Data Quality Objectives

To sufficiently purge the well and obtain a representative sample of the injection zone formation water to determine:

- whether injection zone is a underground source of drinking water (USDW, TDS<10,000 mg/L)
- background naturally occurring hydrocarbon concentration

Well Preparation and Sampling Procedure

1. MIRU Workover rig
2. **IF** workover fluid has been pumped into the well for corrective action requirements (i.e. squeeze work, RAT's test, etc) near the proposed injection interval, get an accurate record of the volume pumped to account for and also obtain a sample of the workover fluid for reference purposes.
3. RIH with tubing to the ±top of the injection interval. Rig up swab equipment and swab the fluid level to 500' above injection zone interval so the well can be perforated under-balanced.
4. POOH with the tubing
5. RIH and under-balance perforate the proposed injection interval with the appropriate sized guns. POOH with the perforating guns.
6. RIH with tubing to the ±top of the injection interval
    a. **IF** a pore pressure measurement is required, conduct using down hole pressure tools via wireline OR some other pre-approved method.
    b. POOH with the pressure tools.
7. R/U to swab or foam the well to get a representative fluid sample of the injection interval. **NOTE: It may be necessary to break-down and/or acidize the perforations in order obtain adequate fluid entry into the wellbore.**
    a. Take regular samples and monitor chlorides, potassium, and pH of the water.
    b. Document field readings of Load Water Volume to Recover, Time, Volume of Fluid Recovered, Conductivity, pH, Chlorides, and Potassium during the entire field sampling process (see attached table).
    NOTE: Sampling frequency depends on how much volume needs to be recovered. The objective is to obtain three stabilized samples after a minimum of twice the volume of load is recovered.
    c. Continue swabbing or air lifting the well until all fluid that has been put into the well from corrective action operations has been accounted for.
    d. Once the chlorides, potassium, and pH have stabilized (see table) and look to be representative of the injection zone interval, take three last successive samples (plus selected previous samples for comparisons) in for complete water analysis to measure for TDS, pH, SG, and conductivity.
    e. Collect one additional sample and put into a provided bottle to be sent off to check for the presence of Naturally Occurring Hydrocarbons (head space gas and liquid extract gas chromotography).
    f. **IF** laboratory analysis shows inconsistent results, zone will need to be resampled.

Well Name ______________________________ Date ____________

Location (Qtr/Qtr, Sec, T-R) ______________________________

Injection Zone Formation Name ______________________________

Perforated Interval (ft bgs) __________ Total Load Water Volume (bbls) __________

Time	Cumulative Volume Recovered (bbls)	Load Left to Recover (bbls)	Conductivity ± 3%	pH ± 0.1 pH units	Chlorides ± 10%	Potassium ± 10%

STATEMENT OF BASIS

KERR-MCGEE OIL & GAS ONSHORE, L.P.
NBU 921-35J SWD
UINTAH COUNTY, UT

EPA PERMIT NO. UT21201-08265

CONTACT: Patricia Pfeiffer
U. S. Environmental Protection Agency
Ground Water Program, 8P-W-GW
1595 Wynkoop Street
Denver, Colorado 80202-1129
Telephone: 1-800-227-8917 ext. 312-6271

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

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

PART I. General Information and Description of Facility

Kerr-McGee Oil & Gas Onshore, L.P.
1368 South 1200 East
Vernal, UT 84078

on

May 18, 2010

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

NBU 921-35J SWD
1485 FSL and 1365 FEL, NWSE S35, T9S, R21E
Uintah County, UT

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

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

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

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

TABLE 1.1

WELL STATUS / DATE OF OPERATION

NEW WELLS

Well Name	Well Status	Date of Operation
NBU 921-35J SWD	New	N/A

PART II. Permit Considerations (40 CFR 146.24)

Hydrogeologic Setting

All depths are approximated and based on log analysis from a nearby producer (NBU921-35J).

THE UINTA FORMATION (0'-1398')

The Uinta Formation is calcareous shale, some limestone, claystone, siltstone, and sandstone. It is a fluvial facies in the eastern and western ends of the basin that interfingers with rocks similar in appearance to the overlying Duchesne River Formation. It grades laterally into thinner bedded calcareous lake deposits in the center of the basin.

The Uinta is very low to very high permeability. Largest primary intergranular permeability of the sandstone seems to be about the same as that of the median for sandstone in the Duchesne River Formation. Most of the formation is finer grained, and, therefore, of lower primary permeability than the Duchesne River Formation. Permeability is greatly increased where the Uinta Formation is fractured. In most of the area, the formation yields only a few gallons per minute of saline water to wells and springs. In some areas the water has high fluoride and boron concentrations. Locally, flowing wells yield fresh to slightly saline water. In the fluvial facies, particularly where the rocks are fractured, yields are larger.

THE GREEN RIVER FORMATION (1398'- 4692')

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

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

BIRDS NEST MEMBER OF THE GREEN RIVER FORMATION (1580'-1890')

The Bird's Nest member (the proposed injection interval) occurs within the Green River formation. The Bird's Nest occurs at a depth between 1580'-1890' at the site of the injection well. The Bird's Nest consists of nahcolite nodules set in marlstone overlain by a zone of thin, brittle shale beds, and by a fine-grained homogeneous sandstone.

THE WASATCH FORMATION (4692'-7351')

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

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

to very saline; generally, however, the water is less mineralized than is water from the Green River Formation.

THE MESAVERDE FORMATION (7351'-9530')

Continental deposits of shale, sandstone, and coal beds. Interfingers with the upper part of the underlying Mancos Shale and may interfinger with the overlying Currant Creek and North Horn Formations. Maximum thickness ranges from 550 to 4,000 feet in the western part of the basin and from 400 to 1,160 feet in the eastern part of the basin.

Very low to high permeability. In areas of outcrop, water in the formation is fresh to slightly saline, but samples of water from petroleum tests in the eastern part of the basin reportedly were very saline to briny.

(Reference: Base of Moderately Saline Ground Water in the Uinta Basin, UT. Technical Publication No.92; State of Utah-Department of Natural Resources; USGS Open File Report 87-394.)

Geologic Setting (TABLE 2.1)

TABLE 2.1
GEOLOGIC SETTING
NBU 921-35J SWD

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uintah	0	1,398	< 10,000	Calcerous shale, some limestone, claystone, siltstone, and sandstone.
Green River	1,398	4,692	> 10,000	Mostly lacustrine shale that contains some limestone, marlstone, and siltstone.
Mahogany Bench	2,215	3,076		Oil Shale.
Wasatch	4,692	7,351	3,000 - 35,000	Shale and claystone interbedded with conglomerate and sandstone.
Mesa Verde	7,351	9,530	> 10,000	Interbedded sandstone, siltstone, and shale with minor coal beds.

Proposed Injection Zone(s) (TABLE 2.2)

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

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

The proposed injection into the Bird's Nest formation is of concern to nearby oil-shale mining interests in the area.

The Bird's Nest member of the Green River formation, proposed for injection, lies approximately 200 ft above the top of the Mahogany Shale formation. The Mahogany Shale is being proposed

for oil-shale development in the vicinity of this injection well. Concerns have been raised regarding injection into the Bird's Nest and the effect of that injection on proposed oil-shale mining. Of primary concern is the proximity of the Bird's Nest to the Mahogany shale, and the possibility of the injection causing water intrusion into the mine works.

Research conducted on this topic may be found in the report, "Final Environmental Baseline Report - Federal Prototype Oil Shale Leasing Program, Tracts U-a and U-b Utah, White River Shale Project," VTN Colorado, Inc., October 1977. This report, conducted in part to identify potential problems from adjacent aquifers on the proposed mining project, concludes that the "proposed mining program is not expected to create any interconnection between the bird's nest aquifer and the Douglas Creek member nor is it expected to create vertical flow from either aquifer into the mine workings. However, because of the lack of conclusive proof of the separation of aquifers, it would be advantageous to design an intensified monitoring program in the event that large flows are encountered in the workings."

"Providing that there are no subflows from the Bird's Nest aquifer into the workings, the only effect of development upon the movement of ground water and water level fluctuations will be during the sinking of the mine shaft through the bird's nest aquifer. Inflow to the shaft will be stopped as soon as practicable by cementing and casing as stipulated in the DDP. Inflows to the shaft will be temporary, as will be the effect upon water levels. Specific monitoring should not be necessary for this aspect of development."

In order to establish how the Bird's Nest reacts to injection, permit conditions will require the injection well to undergo monitoring of annual fluid levels. During these tests, the injection well is shut-in and the static fluid level is allowed to stabilize. After the fluid level has stabilized, the static fluid level is measured, cumulative injected volume determined, and the fluid in the well is sampled and analyzed for specific gravity in order to determine the pressure in the Bird's Nest. This information will be tracked year-to-year in order to show the buildup of pressure in the Bird's Nest and the relationship between that pressure and the cumulative volume of fluid injected into the disposal well.

Annually, and in conjunction with the Annual Report to the Director, the results of this monitoring shall be reported to the Director. This report shall include the results of the annual fluid level monitoring in order to determine how the Bird's Nest injection interval responds to the injected volumes.

TABLE 2.2
INJECTION ZONES
NBU 921-35J SWD

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River - Bird's Nest	1,580	1,890	> 10,000	0.630		N/A

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

Confining Zone(s) (TABLE 2.3)

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

The upper confining zone is located between the depths of ~1398' to 1580'. The upper confining zone consists of interbedded impermeable lacustrine shales, impermeable marlstones and low porosity siltstones. Density porosities in the siltstones (assuming 2.65 g/cc matrix density) range from 3 to 6%.

The lower confining zone is located between the depths of ~1890' to 1966'. The lower confining zone consists of interbedded impermeable calcerous shales with minor amounts of low porosity siltstones. The lower confining zone is needed to protect the underlying Mahogany Shale.

TABLE 2.3
CONFINING ZONES
NBU 921-35J SWD

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River - Upper Confining Zone	Mostly lacustrine shale that contains some limestone, marlstone, and siltstone.	1,398	1,580
Green River - Lower Confining Zone	Mostly lacustrine shale that contains some limestone, marlstone, and siltstone.	1,890	1,966

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

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

The location of USDWs has been predicted from the State of Utah Technical Publication No. 92 entitled "Base of Moderately Saline Ground Water in the Uinta Basin, Utah," U.S. Geologic Survey Open File Report 87-394. This prediction identified the depth of 2973' below the ground level as

the probable base of USDWs in the area, with the USDWs being interspersed above this base. The Bird's Nest exists within this area, however the operator has successfully shown that fluid samples within the Bird's Nest, though it lies within the Publication No. 92 identified area of USDWs, are above 10,000 mg/l for total dissolved solids..

TABLE 2.4
UNDERGROUND SOURCES OF DRINKING WATER (USDW)
NBU 921-35J SWD

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uintah (Tech Pub 92)	Calcerous shale, some limestone, claystone, siltstone, and sandstone.	0	2,973	< 10,000

PART III. Well Construction (40 CFR 146.22)

TABLE 3.1
WELL CONSTRUCTION REQUIREMENTS
NBU 921-35J SWD

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Conductor	20.00	14.00	0 - 40	0 - 40
Surface	8.75	7.00	0 - 1,580	0 - 1,580

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

Casing and Cementing (TABLE 3.1)

The construction plan for the well or wells proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for the well or wells are shown in TABLE 3.1.

The cement bond log required as part of this permit will need to meet the requirements for establishing Part II Mechanical Integrity. For 7" pipe, guidelines require 80% or greater bonding for 33 continuous feet through the confining zone(s).

In the event that the cement bond log does not meet this threshold, the injection well will be required to perform periodic Radioactive Tracer Surveys and Temperature Logs to prove confinement of fluids within the injection interval (Part II Mechanical Integrity).

Tubing and Packer

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to

prevent injection fluid from coming into contact with the outermost casing.

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

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

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

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

Temperature Logging for Area of Review wells:

In order to verify that these wells are cased and cemented in a manner to prevent fluid movement from the injection formation into USDWs, these Area of Review wells are required to undergo Temperature logging (frequency is described in the Appendix F). Temperature logs will be conducted after the Area of Review wells are shut-in and the temperature in the wells is recovering to the background temperature. Review of the logging results will be performed to identify any Bird's Nest fluids which appear to be moving out of the Bird's Nest formation through channels behind casing. The results will be evaluated annually to determine if the requirement can be removed.

If the results of Temperature logging shows any indication of Bird's Nest formation fluids moving out of zone, injection shall be shut-in and corrective action performed to insure that Bird's Nests fluids will remain within the Bird's Nest and will not migrate into USDWs.

There are no known gilsonite veins or drinking water wells in the nearby area.

The logging program requirements are discussed in the Permit in Appendix B - Logging and Testing Requirements, and in Appendix D - Monitoring and Reporting Parameters.

TABLE 4.1
AOR AND CORRECTIVE ACTION

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
CIGE 133	Producer	No	6,065	1,494	Yes
CIGE 28	Producer	No	6,061	1,500	Yes
CIGE 283	Producer	No	9,590	0	Yes
NBU 921-35J	Producer	No	9,530	1,090	Yes

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

Area Of Review

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

Corrective Action Plan

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

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

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

Corrective action in the form of Teperature Logs is being required on all Area of Review wells prior to the well receiving authorization to begin injection.

All four of the Area of Review (AoR) wells require demonstration that fluid movement behind pipe is not occurring. This corrective action plan is incorporated into Appendix B and Appendix F. If the results of any of the temperature logging show any indication of Bird's Nest formation fluids moving out of zone, injection shall be shut-in and corrective action will be required in order to insure that Bird's Nest fluids remain within the Bird's Nest and do not migrate out of the improved injection zone.

PART V. Well Operation Requirements (40 CFR 146.23)

TABLE 5.1
INJECTION ZONE PRESSURES
NBU 921-35J SWD

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River - Bird's Nest	1,580	0.630	300

Approved Injection Fluid

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

A random representative sample of the injection water will be collected annually at the sampling tap as described in the Permit under Part II Section A.3(a) .

This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The source of the injected fluids is limited to oil and gas production wells operated by the permittee.

Injection Pressure Limitation

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

The operator is required to monitor the pore pressure in the Bird's Nest annually by recording a stabilized fluid level. These results shall be reported to the Director as part of the Annual Report. These results shall also be reported to the BLM-Vernal office.

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

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

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

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

Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

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

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

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

PART VI. Monitoring, Recordkeeping and Reporting Requirements

Injection Well Monitoring Program

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

Possible conflict with oil-shale mining in the area:

The Bird's Nest member of the Green River formation, proposed for injection, lies approximately 361 ft above the top of the Mahogany Shale formation. The Mahogany Shale is being proposed for oil-shale development in the vicinity of this injection well. Concerns have been raised regarding injection into the Bird's Nest and the effect of that injection on proposed oil-shale mining. Of primary concern is the proximity of the Bird's Nest to the Mahogany shale, and the possibility of the injection increasing water intrusion into the mine works.

Research conducted on this topic may be found in the report, "Final Environmental Baseline Report - Federal Prototype Oil Shale Leasing Program, Tracts U-a and U-b Utah, White River Shale Project," VTN Colorado, Inc., October 1977. This report, conducted in part to identify potential problems from adjacent aquifers on the proposed mining project, concludes that the "proposed mining program is not expected to create any interconnection between the bird's nest aquifer and the Douglas Creek member nor is it expected to create vertical flow from either aquifer into the mine workings. However, because of the lack of conclusive proof of the separation of aquifers, it would be advantageous to design an intensified monitoring program in the event that large flows are encountered in the workings."

"Providing that there are no subflows from the bird's nest aquifer into the workings, the only effect of development upon the movement of ground water and water level fluctuations will be during the sinking of the mine shaft through the bird's nest aquifer. Inflow to the shaft will be stopped as soon as practicable by cementing and casing as stipulated in the DDP. Inflows to the shaft will be

temporary, as will be the effect upon water levels. Specific monitoring should not be necessary for this aspect of development."

Due to the high permeabilities found in the Bird's Nest, the injection wells operate on a vacuum during the early stages of the injection project life. Although each permit requires a well test designed to determine fracture pressures in the Bird's Nest, tests conducted on nearby Bird's Nest injection wells have been unable to build up pressure in the Bird's Nest to a degree needed to determine a fracture pressure.

In order to establish how the Bird's Nest reacts to injection, permit conditions require the injection well to undergo annual fluid level determinations. During these tests, the injection well is shut-in and the static fluid level allowed to stabilize. After the fluid level has stabilized, the static fluid level is measured, cumulative injected volume determined, and the fluid in the well is sampled and analyzed for specific gravity in order to determine the pressure in the Bird's Nest. This information will be tracked year-to-year in order to show the buildup of pressure in the Bird's Nest and the relationship between that pressure and the cumulative volume of fluid injected into the disposal well.

Annually, and in conjunction with the Annual Report to the Director, the results of this monitoring shall be reported to the Director. This report shall include the results of the annual fluid level monitoring in order to determine how the Bird's Nest injection interval responds to the injected volumes.

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

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

Plugging and Abandonment Plan

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

PART VIII. Financial Responsibility (40 CFR 144.52)

Demonstration of Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The

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

Financial Statement, received October 1, 2008.
Surety Bond, received September 22, 2008

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

From: Chris Fausett
To: Mason, Diana
Date: 4/11/2011 11:49 AM
Subject: Re: Fwd: Well clearance

Diana,

SITLA approves the APD for Kerr McGee Oil & Gas Onshore, LP's NBU 921-35J SWD well. A surface lease (SULA 1700) has been approved and is in the process of being finalized. Let me know if you have any questions.

Thanks,

Chris Fausett
Resource Specialist
State of Utah
School and Institutional Trust Lands Administration
675 East 500 South, Suite 500
Salt Lake City, UT 84102-2818
Phone: (801) 538-5139

>>> Diana Mason 4/5/2011 9:34 AM >>>
Hi Jim,

Do you have a well clearance on this one?

12/7/2010 3259 43047513960000 82995.1 NBU 921-35J SWD UINTAH

Thank you,
Diana

RECEIVED: **Apr. 11, 2011**

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3259	43047513960000	LOCKED	WI	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 921-35J SWD		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NWSE 35 9S 21E S 1467 FSL 1427 FEL		GPS Coord (UTM)	626883E 4427411N	

Geologic Statement of Basis

Kerr McGee proposes to set 1,580’ of casing at this location. Total depth is estimated to be 1,890 feet. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,570'. EPA will re-evaluate the base of the moderately saline ground water as a part of their UIC application review process. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill	12/20/2010
APD Evaluator	**Date / Time**

Surface Statement of Basis

The 921-35J SWD well is proposed on the existing NBU 921-J Pad which has contains a producing gas well by the same name and API #4304738105. This well was permitted after a pre-site evaluation completed May 31, 2006. Both the pre-site and 3 subsequent annual inspections following its completion show no stability concerns for the pad. No changes are planned to the site except a small reserve pit up to 60 feet x 100 feet will be dug in the original location and lined. The well will be drilled with a air-mist rig to a planned depth of 1890 feet.

SITLA own both the surface and minerals. Mr. Chris Faucett of SITLA was contacted regarding the need to visit the site. He said from their standpoint a site visit was not warranted.

Based on the original pre-site and subsequent inspections it is recommended the proposal be approved as submitted.

Floyd Bartlett	12/15/2010
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	The reserve pit shall be fenced upon completion of drilling operations.

RECEIVED: Apr. 14, 2011

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/7/2010 **API NO. ASSIGNED:** 43047513960000
WELL NAME: NBU 921-35J SWD
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156
CONTACT: Danielle Piernot

PROPOSED LOCATION: NWSE 35 090S 210E **Permit Tech Review:** ☑
SURFACE: 1467 FSL 1427 FEL **Engineering Review:** ☑
BOTTOM: 1467 FSL 1427 FEL **Geology Review:** ☑
COUNTY: UINTAH
LATITUDE: 39.98925 **LONGITUDE:** -109.51385
UTM SURF EASTINGS: 626883.00 **NORTHINGS:** 4427411.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 3 - State
LEASE NUMBER: ML 22582 **PROPOSED PRODUCING FORMATION(S):** GREEN RIVER
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 197-1
Effective Date: 4/29/1982
Siting: 1000' Fr Ext Drilling Unit Boundary

- ☐ **R649-3-11. Directional Drill**

Comments: Presite Completed

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

RECEIVED: Apr. 14, 2011

GARY R. HERBERT
Governor
GREGORY S. 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

Permit To Drill
****

Well Name: NBU 921-35J SWD
API Well Number: 43047513960000
Lease Number: ML 22582
Surface Owner: STATE
Approval Date: 4/14/2011

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 197-1. The expected producing formation or pool is the GREEN RIVER 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

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 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

API Well No: 43047513960000

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
  801-231-8956 - 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:

For John Rogers
Associate Director, Oil & Gas

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: NBU 921-35J SWD

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

9. API NUMBER: 43047513960000

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

PHONE NUMBER: 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1467 FSL 1427 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 35 Township: 09.0S Range: 21.0E 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:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 6/17/2011	☐ 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
☐ DRILLING REPORT Report Date:	☐ 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.

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 06/17/2011 AT 0800 HRS.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE N/A		**DATE** 6/20/2011

RECEIVED Jun. 20, 2011

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By ANDY LYTLE Phone Number 720.929.6100
Well Name/Number NBU 921-35J SWD
Qtr/Qtr NWSE Section 35 Township 9S Range 21E
Lease Serial Number ML 22582
API Number 4304751396

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 06/17/2011 08:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED
JUN 15 2011
DIV. OF OIL, GAS & MINING

Date/Time 06/25/2011 00:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

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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5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: NBU 921-35J SWD

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

9. API NUMBER: 43047513960000

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

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1467 FSL 1427 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 35 Township: 09.0S Range: 21.0E 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:	☐ 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: 7/6/2011	☐ 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.

MIRU AIR RIG ON JULY 5, 2011. DRILLED HOLE TO 1536'. RAN CASING AND CEMENTED. WELL IS WAITING ON REMAINING 300' OF OPEN HOLE TO BE DRILLED BY A WORKOVER RIG WHEN AVAILABLE. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT AFTER FIRST INJECTION.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 7/12/2011

RECEIVED Jul. 12, 2011

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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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: NBU 921-35J SWD

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

9. API NUMBER: 43047513960000

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

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1467 FSL 1427 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 35 Township: 09.0S Range: 21.0E 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:	☐ 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: 7/6/2011	☐ 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.

MIRU AIR RIG ON JULY 5, 2011. DRILLED HOLE TO 1536'. RAN CASING AND CEMENTED. WELL IS WAITING ON REMAINING 300' OF OPEN HOLE TO BE DRILLED BY A WORKOVER RIG WHEN AVAILABLE. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT AFTER FIRST INJECTION.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 7/12/2011

RECEIVED Jul. 12, 2011

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

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078
Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751360	NBU 921-35G1BS		SWNE	35	9S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	6/17/2011			6/22/11	
Comments: MIRU PETE MARTIN BUCKET RIG. SPUD WELL ON 06/17/2011 AT 0800 HRS. BHL = SWNE							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751363	NBU 921-35G4CS		SWNE	35	9S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	6/17/2011			6/22/11	
Comments: MIRU PETE MARTIN BUCKET RIG. WSTMVD SPUD WELL ON 06/17/2011 AT 1300 HRS. BHL = SWNE							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751396	NBU 921-35J SWD		NWSW	35	9S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18079 GRRV	6/17/2011			6/22/11	
Comments: MIRU PETE MARTIN BUCKET RIG. SPUD WELL LOCATION ON 06/17/2011 AT 0800 HRS.							

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

SHEILA WOPSOCK
Name (Please Print)
Signature
REGULATORY ANALYST
Title
6/20/2011
Date

(5/2000)

RECEIVED
JUN 20 2011
DIV. OF OIL, GAS & MINING

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22582

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
Water Disposal Well

8. WELL NAME and NUMBER:
NBU 921-35J SWD

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

9. API NUMBER:
43047513960000

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

PHONE NUMBER:
720 929-6515 Ext

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1467 FSL 1427 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 35 Township: 09.0S Range: 21.0E 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:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ 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
✓ DRILLING REPORT Report Date: 7/20/2011	☐ 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.

Moved rig back in on July 18, 2011 and finished drilling to TD of 1869'. Ran logs and rigged down and moved out. Waiting on first injection.

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

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE		**DATE**
N/A		8/24/2011

RECEIVED Aug. 24, 2011

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

NOV 16 2011

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Accepted by the
Utah Division of
Oil, Gas and Mining

FOR RECORD ONLY

Robert B. Miller
Senior Staff Production Engineer
Kerr McGee Onshore Oil and Gas, LP
1368 South 1200 East
Vernal, Utah 84078

RE: Underground Injection Control (UIC)
Authority to Commence Injection
EPA UIC Permit UT21201-08265
Well: NBU 921-35J SWD
NW/SE Section 35-T9S-R21E
Uintah County, Utah
API # 43-047-51396

RECEIVED
NOV 21 2011
DIV. OF OIL, GAS & MINING

Dear Mr. Miller:

Kerr McGee Onshore Oil and Gas, LP, has satisfactorily completed the Environmental Protection Agency's "Prior to Commencing Injection" requirements for Final Permit UT21201-08265, effective January 28, 2011. The Part I (Internal) Mechanical Integrity Test (MIT), Temperature Logs of Area of Review wells, Radial Gamma Ray/Cement Bond Logs, Open Hole Logs, current wellbore diagram, completion report form 7520-10, Injection Zone Water Sample analysis, Pore Pressure and Temperature tests, Step Rate Test and injectate water sample analysis were reviewed and approved by the EPA on November 8, 2011.

As of the date of this letter, Kerr McGee is authorized to commence injection into NBU 921-35J SWD well at a maximum authorized injection pressure (MAIP) of 300 psig. Until such time as the permittee demonstrates through a SRT that the Fracture Gradient is other than 0.630 psi/ft., NBU 921-35J SWD well shall be operated at a MAIP no greater than 300 psig.

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

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

You may reach Ms. Roberts at (303) 312-7056 or (800) 227-8927, extension 312-7056.

Please remember that it is your responsibility to be aware of and to comply with all condition of injection well Permit UT21201-08265.

If you have questions regarding the above action, please call Qian Zhang at (303) 312-6267 or (800) 227-8917, extension 312-6267.

Sincerely,

for Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

cc:

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

Daniel Picard
BIA - Uintah & Ouray Indian Agency

Mike Natchees
Environmental Coordinator
Ute Indian Tribe

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

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

Fluid Minerals Engineering Office
BLM - Vernal Office

Robin Hansen
Fluid Minerals Engineering Office
BLM - Vernal Office
Sarah Roberts, 8 ENF-UFO

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 Water Disposal Well

8. WELL NAME and NUMBER: NBU 921-35J SWD

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

9. API NUMBER: 43047513960000

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

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1467 FSL 1427 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 35 Township: 09.0S Range: 21.0E 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:	☐ 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: 11/17/2011	☐ 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.

The subject well first injected on 11/17/2011 at 2:30 p.m. The chronological well history will be submitted with the well completion report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
February 02, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 1/26/2012

RECEIVED: Jan. 26, 2012

RECEIVED
FEB 01 2012
DIV. OF OIL, GAS & MINING

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

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER WD

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

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

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6304

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: NWSE 1467 FSL 1427 FEL S35,T9S,R21E
AT TOP PRODUCING INTERVAL REPORTED BELOW:
AT TOTAL DEPTH:

5. LEASE DESIGNATION AND SERIAL NUMBER: ML22582
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: UTU63047A
8. WELL NAME and NUMBER: NBU 921-35J SWD
9. API NUMBER: 4304751396
10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSE 35 9S 21E S
12. COUNTY: UINTAH
13. STATE: UTAH

14. DATE SPUDDED: 6/17/2011
15. DATE T.D. REACHED: 7/18/2011
16. DATE COMPLETED: 11/17/2011 ABANDONED ☐ READY TO PRODUCE ☑
17. ELEVATIONS (DF, RKB, RT, GL): 5072 GL
18. TOTAL DEPTH: MD 1,869 TVD
19. PLUG BACK T.D.: MD TVD
20. IF MULTIPLE COMPLETIONS, HOW MANY? *
21. DEPTH BRIDGE PLUG SET: MD TVD
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each): SD/DSN/ACTR-BHV
23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☑ YES ☐ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
8.625	7" J-55	23#	0	1,535		300			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
3 1/2"	1,518							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) GRRV				
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☐ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS:

(5/2000)

(CONTINUED ON BACK)

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history.

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

NAME (PLEASE PRINT) JAIME SCHARNOWSKE TITLE REGULATORY ANALYST

SIGNATURE Jaime Scharnowske DATE 1/26/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: PROPETRO 11/11
Event: DRILLING	Start Date: 6/11/2011		End Date: 7/20/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/5/2011	6:00 - 12:00	6.00	DRLPRO	08	A	Z		WORK ON MUD PUMPS
	12:00 - 12:30	0.50	DRLPRO	06	A	P		PICK UP BHA
	12:30 - 14:00	1.50	DRLPRO	02	C	P		DRILL 8.625" HOLE F/ 40' - 210'
	14:00 - 16:30	2.50	DRLPRO	06	A	P		TOOH INSTALL DIRECTIONAL TOOLS AND TIH
	16:30 - 0:00	7.50	DRLPRO	02	C	P		DRILL 8.625" HOLE F/ 210' - 1103'
7/6/2011	0:00 - 6:30	6.50	DRLSUR	02	C	P		DRILL 8 3/4 HOLE F/ 1103' - 1536' T.D.
	6:30 - 7:30	1.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS AND LOGGING
	7:30 - 11:00	3.50	DRLSUR	06	B	P		TRIP OUT OF HOLE FOR LOGS. NO TIGHT HOLE OFF BOTTOM. LD BHA. BREAK 8 3/4" BIT AND LD 6" MUD MOTOR.
	11:00 - 13:30	2.50	DRLSUR	11	D	P		HOLD SAFETY MEETING AND RIG UP HALLIBURTON LOGGERS. LOGGERS DEPTH OF 1536'. RUN TRIPLE COMBO LOGS FROM 1536' TO SURFACE. RIG DOWN HALIBURTON
	13:30 - 15:30	2.00	DRLSUR	12	C	P		READY RIG TO RUN 7" CSG. RUN 37 JT 7" 23# J-55 LTC CSG AND LAND FLOAT SHOE @ 1533' KB, FLOAT COLLAR @ 1483' KB. RUN 40' OF 1" PIPE FOR TOP OUT.

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: PROPETRO 11/11
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Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 16:30	1.00	DRLSUR					HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 60 BBLS OF 8.3# H20 AHEAD. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. PUMP 50 SX(34 BBLS) 11# 3.82 YIELD LEAD CEMENT, PUMP 150 SX (31 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). FULL CIRC. DROP PLUG ON FLY AND DISPLACE W/ 58.3 BBLS OF 8.3# H20. FULL CMT RETURN TO SURFACE @ 52 BBLS INTO DISPLACEMENT, LIFT PRESSURE WAS 300 PSI, BUMP PLUG AND HOLD 900 PSI FOR 5 MIN. FLOAT HELD. * TOP OUT, PUMP 100 SX (17 BBLS) OF 15.8# 1.15 YIELD TAIL(4 % CALC, 1/4# /SK OF FLOCELE) DOWN 1". 58 TOTAL BBLS CMT BACK TO SURFACE& STAYED RIG DOWN AND RELEASE CEMENTERS 16:30 HRS. CONDUCTOR CASING: Cond. Depth set: 40' Cement sx used: 28 SPUD DATE/TIME: 07/05/2011 @ 12:30 HRS SURFACE HOLE: Surface From depth: 40' Surface To depth: 1536 Total SURFACE hours: 15.5 Surface Casing size: 7.00" # of casing joints ran: 37 Casing set MD: 1533' # sx of cement: 50/150/100 Cement blend (ppg:) 11/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: 85 Describe cement issues: NONE Describe hole issues: NONE
	16:30 - 19:00	2.50	DRLSUR	01	E	P		RIG DOWN RIG. MOVE RIG OFF OF HOLE. RELEASE RIG 07/07/2011 @ 19:00 HRS.
7/18/2011	12:00 - 19:30	7.50	MIRU	01	A	P		MOVE RIG IN OFF THE NBU 921-20J4BS
	19:30 - 0:00	4.50	MIRU	01	B	P		UNLAOAD TRUCKS,R/U BLOOIE LINE,MUD PUMP LINES & RESERVE PIT PUMP LINES,CENTER RIG OVER HOLE AND STAND,INSTALLL CATWALK & PIPE RACKS,PRIME RESERVE PIT PUMP & MUD PUMP
7/19/2011	0:00 - 4:30	4.50	MIRU	01	B	P		FINISH RIG UP
	4:30 - 5:00	0.50	DRLPRO	06	A	P		M/U 6 1/4" BIT & BIT SUB W/ FLOAT
	5:00 - 7:30	2.50	DRLPRO	06	A	P		TIH,TAG CEMENT @ 1472'

US ROCKIES REGION

Operation Summary Report

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Project: UTAH-UINTAH	Site: NBU 921-35J SWD	Rig Name No: PROPETRO 11/11
Event: DRILLING	Start Date: 6/11/2011	End Date: 7/20/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 11:30	4.00	DRLPRO	02	F	P		INSTALL RUBBER,DRILL CEMENT F/1472' T/1488',& FLOAT COLLAR & CEMENT IN SHOE TRACK T/1508',(FLOAT COLLAR @ 1468')
	11:30 - 12:00	0.50	DRLPRO	05	C	P		CIRC & COND HOLE
	12:00 - 13:30	1.50	DRLPRO	06	B	P		TOH T/PRESS TEST CSG & RUN CBL LOG(REMOVE DIVERTER & BLOOIE LINE)
	13:30 - 14:00	0.50	DRLPRO	15	A	P		PRESS TEST 7" 23# J-55 LT&C CSG T/ 1000 PSI,F/30 MIN (OK)
	14:00 - 16:30	2.50	DRLPRO	11	E	P		HOLD SAFTEY MEETING,R/U CUTTERS WIRELINE,RUN GAMMA RAY RADIAL BOND LOG F/1502' T/SURF,RIG DOWN LOGGERS,(LOGGERS TD 1505' ,DRILLERS TD 1508')
	16:30 - 18:00	1.50	DRLPRO	06	A	P		INSTALL DIVERTER & BLOOE LINE,M/U 6 1/4" BIT & BIT SUB W/FLOAT,TIH T/1508'
	18:00 - 18:30	0.50	DRLPRO	02	F	P		DRILLL OUT CEMENT IN SHOE TRACK & SHOE F/1508' T/1536'
	18:30 - 0:00	5.50	DRLPRO	02	A	P		DRILL 6 1/4" PROD HOLE CONVENTIONALLY F/1536' -1616' (80' @ 14'/HR) PSI ON/ OFF 1000/1000, UP/ DOWN/ ROT 37/29/31. 130 SPM, 336 GPM, 16-18K WOB, 40 RPM. DRILLING WITH AERATED WATER WITH 1200 CFM. STARTED GETTING BLACK WATER RETURNS FROM 1610'.
7/20/2011	0:00 - 0:30	0.50	DRLPRO	02	A	P		DRILL 1616'- 1620' (4', @ 7' HR) PSI ON/ OFF 1000/1000, UP/ DOWN/ ROT 37/29/31. 130 SPM, 336 GPM, 16-18K WOB, 40 RPM. DRILLING WITH AERATED WATER WITH 1200 CFM. STARTED GETTING BLACK WATER RETURNS FROM 1610'.
	0:30 - 1:00	0.50	MAINT	08	A	Z		BROKE DRIVE LINE ON PIT PUMP. ORDER RENTAL PIT PUMP FROM TOWN.
	1:00 - 3:00	2.00	DRLPRO	06	A	P		TRIP FOR BIT. HOLE STAYING FULL ON TRIP. LDDS. BREAK BIT OFF OF BIT SUB. TRICONE IN GOOD CONDTION.
	3:00 - 5:00	2.00	DRLPRO	06	A	P		MAKE UP DP505F. TRIP IN HOLE TO 1590'. CIRC DOWN LAST JT. WITH AERATED WATER. NO TIGHT HOLE ON TRIP.
	5:00 - 10:30	5.50	DRLPRO	02	D	P		DRILL 1620'-1869'. TD 7/20/2011 10:30. PSI WITH AERATED WATER ON/ OFF 1000/1000,DRILL PSI WITH JUST WATER 550 PSI. UP/ DOWN/ ROT 37/35/36. 105 SPM, 336 GPM, 14-16K WOB, 40 RPM. DRILLING WITH AERATED WATER WITH 1200 CFM. STARTED SEEING LOSS BETWEEN 1772-1802'. MAKING FLUID WHILE CIRC WITH AERATED WATER. START SEEING LOSS WHILE KILLING DRILL STRINGS FOR CONNECTIONS. PIT HAS ACTUALLY GAINED 100 BBLS WHILE DRILLING W/ AERATED WATER.
	10:30 - 11:30	1.00	EVALPR	05	A	P		CIRC WITH AERATED WATER SERVERAL BOTTOMS UP. KILL DRILL STRING WITH WATER.
	11:30 - 13:00	1.50	EVALPR	06	B	P		TRIP OUT OF HOLE. LAY DOWN DRILL STRING. BREAK BIT AND BIT SUB. REMOVE DIVERTER RUBBER AND BLOWIE LINE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: PROPETRO 11/11
Event: DRILLING	Start Date: 6/11/2011		End Date: 7/20/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:00 - 14:30	1.50	EVALPR	11	D	P		HOLD SAFETY MEETING WITH HALLIBURTON LOGGERS. RIG UP LOGGERS. RUN IN HOLE WITH TRIPLE COMBO TOOLS AND LOG FROM LOGGERS DEPTH OF 1869'-1535. PERFORM REPEAT PASS 1869'-1535'. RIG DOWN LOGGERS.
	14:30 - 15:00	0.50	RDMO	01	E	P		RIG DOWN RIG. MOVE RIG OFF OF WELL. PUMP 100 BBLS DOWN HOLE. STOPPED PUMPING DOWN HOLE. FLUID LEVEL FELL INSTANTLY.RELEASE RIG 7/20/2011 15:00
	15:00 - 18:00	3.00	RDMO	14	A	P		WELD ON WELLHEAD. CAP WELL AND AND INSTALL GAUGE.

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: PROPETRO 11/11
Event: DRILLING	Start Date: 6/11/2011		End Date: 7/20/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 18:00	0.00	RDMO					CONDUCTOR CASING: Cond. Depth set: 40' Cement sx used: 28 SPUD DATE/TIME: 07/05/2011 @ 12:30 HRS SURFACE HOLE: Surface From depth: 40' Surface To depth: 1536 Total SURFACE hours: 15.5 Surface Casing size: 7.00" # of casing joints ran: 37 Casing set MD: 1533' # sx of cement: 50/150/100 Cement blend (ppg:) 11/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: 85 Describe cement issues: NONE Describe hole issues: NONE PRODUCTION: Rig Move/Skid start date/time: 7/18/2011 12:00 Rig Move/Skid finish date/time: 7/19/2011 4:30 Total MOVE hours: 16.5 Prod Rig Spud date/time: 7/19/2011 18:00 Rig Release date/time: 7/20/2011 15:00 Total SPUD to RR hours: 21.0 Planned depth MD 1,869 Planned depth TVD 1,869 Actual MD: 1,869 Actual TVD: 1,869 Open Wells $: AFE $: Open wells $/ft: PRODUCTION HOLE: Prod. From depth: 1,536 Prod. To depth: 1,869 Total PROD hours: 11.5 Log Depth: 1869 Float Collar Top Depth: N/A Production Casing size: N/A # of casing joints ran: N/A Casing set MD: N/A # sx of cement: N/A Cement blend (ppg:) N/A Cement yield (ft3/sk): N/A Est. TOC (Lead & Tail) or 2 Stage : N/A Describe cement issues: N/A Describe hole issues: GOOD LOSS ZONE 1772'-1802' DIRECTIONAL INFO: KOP: Max angle: Departure:

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: PROPETRO 11/11
Event: DRILLING	Start Date: 6/11/2011		End Date: 7/20/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								Max dogleg MD:

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-35J SWD	Spud Conductor: 6/17/2011	Spud Date: 7/5/2011	
Project: UTAH-UINTAH	Site: NBU 921-35J SWD		Rig Name No: MILES 2/2
Event: COMPLETION	Start Date: 10/10/2011		End Date: 10/14/2011
Active Datum: RKB @5,076.00usft (above Mean Sea Level)	UWI: NW/SE/0/9/S/21/E/35/0/0/26/PM/S/1467/E/0/1427/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/11/2011	7:00 - 7:30	0.50	MAINT	48		P		RIGGING UP
	7:30 - 7:30	0.00	MAINT	42		P		MIRU, NDWH, NU BOP'S, C/O PIPE RAMS, TEST BOP'S, PU 2 7/8" TBG, TIH 60 JTS TO 1864', POOH LAY DWN 5 JTS, TO 1709', NU SWAB EQUIP, SWAB FROM 1700' TO SURFACE, MAKE 4 RUNS BEFORE PULLING SAMPLES EVERY 15-20 MINS, 18 RUNS, 9 SAMPLES, 166.6 BBLS SWABBED SWIFN
10/12/2011	7:00 - 7:30	0.50	COMP	48		P		SWABBING
	7:30 - 16:30	9.00	COMP	42		P		SWAB WELL, MAKE 60 RUNS, PULL 20 SAMPLES,ND SWAB EQUIP, SDFN
10/13/2011	7:00 - 7:30	0.50	COMP	48		P		RUNNING 3 1/2 FIBER COATED TBG
	7:30 - 18:00	10.50	COMP	31		P		POOH LD 2 7/8" TBG, PU BTM HOLE ASSY WITH PACKER AND RATE SENSOR, TIH WITH 3 1/2" TBG TO 1508.13', 47 JTS, STAPPING SENSOR LINE TO TBG, NU SUB TO HANGER, RUN SENSOR LINE OUT CSG VALVE, LAND TBG, PUMP PACKER FLUID DWN CSG, LAND PACKER, PROMORE HOOKED UP SENSOR, B&C QIUCK TEST, TEST CSG TO 500# 30 MIN, PASSED SWIFN KB 4.00' TBG 47 JTS 1487.13' HANGER .83' SUB .60' PUP 10.16' SENSOR 1.01' PACKER 7.92' NICKEL PLATED SUB 5.61' NC .48' SENSOR 1503.93' PACKER SET AT 1508.13' EOT 1518.40'
10/14/2011	7:00 - 7:30	0.50	COMP	48		P		TESTING WELL
	7:30 - 7:30	0.00	COMP	33		P		RU PLS, RIH WITH BOMBS TO 0000', RU SUPERIOR, PUMP 6 STEPS AN HR EACH, 3/4 BBL/MIN, 1.5 BBL/MIN, 3 BBL/MIN, 6 BBL/MIN, 9 BBL/MIN, 12 BBL/MIN, 15 BBL/MIN, RD PLS, SUPERIOR, RDMO LAST READING PER TEST PSI AT SURFACE .75 BBL 50# 1.5 BBL 55# 3 BBL 75# 6 BBL 320# 9 BBL 720# 12 BBL 1230# 15 BBL 1650#

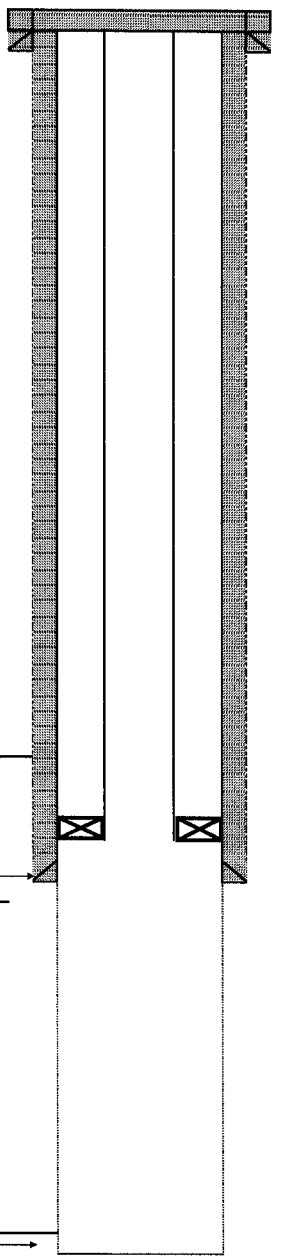
WELL:	NBU 921-35J SWD	CNTY:	UINTAH	FT.:	1467' FSL 1427' FEL
FIELD:	NATURAL BUTTES	STATE:	UTAH	Q-Q:	NWSE
API #	4304751396			SEC.:	35
LEASE #:	ML-22582			TWS:	9S
EPA PERMIT #:	UT21201-08265			RGE:	21E

CURRENT WELLBORE DIAGRAM (10/13/2011)

KB (ft): 5076
GL (ft): 5072

TD (ft): 1869'
PBTD (ft): 1869'

Cement Top at Surface



CASING RECORD

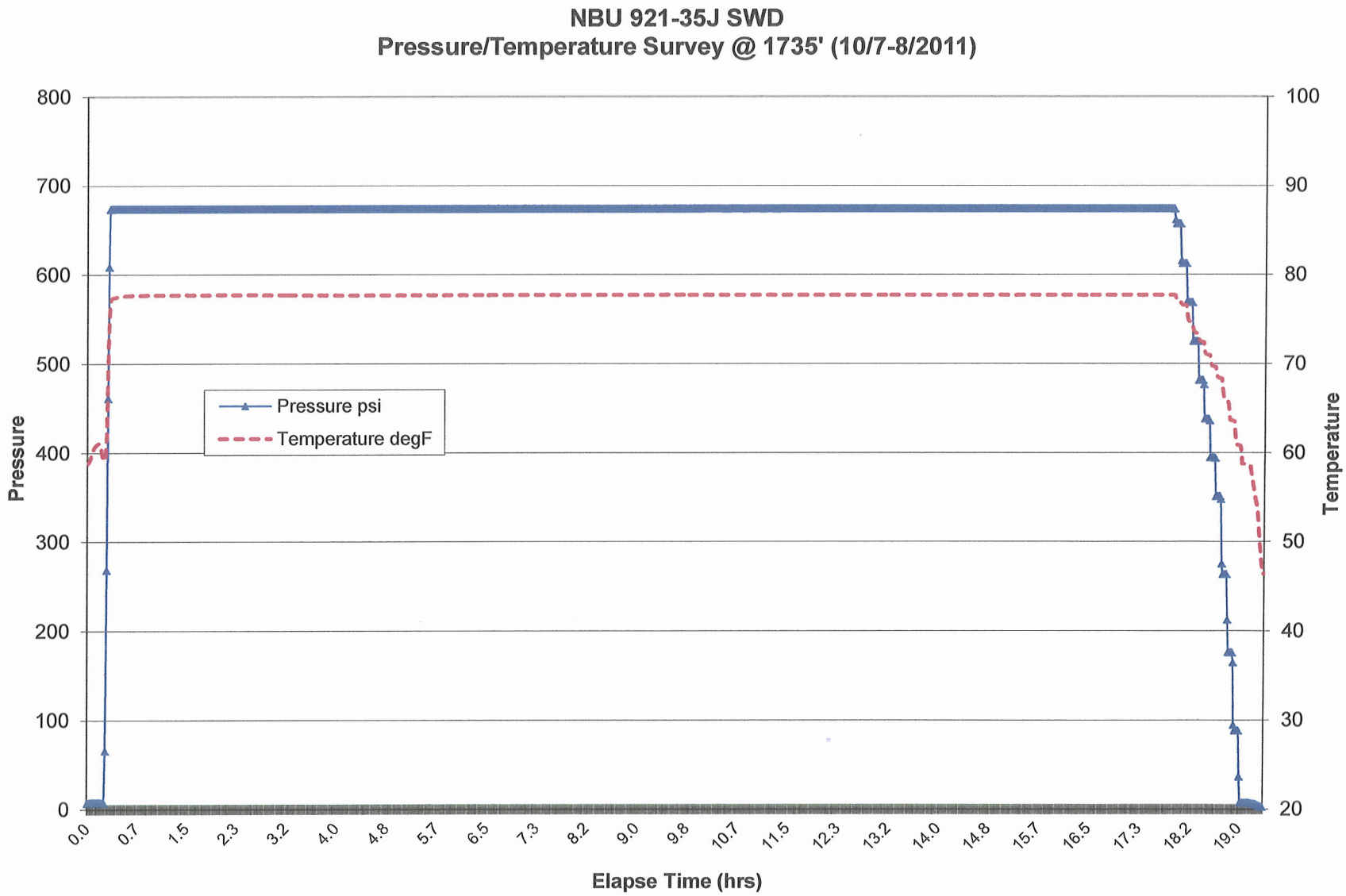
HOLE (in)	SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
22	14	Conductor		0	40
8 3/4	7	23	J-55	0	1533

TUBING RECORD

SIZE (in)	WT (lb/ft)	GRADE	TOP (ft)	BTM (ft)
3 1/2"	9.3	J-55	0	1503
Downhole Pressure-Temp Sensor			1503	1504
3 1/2" x 7" Packer			1504	1512
Nickel Plated Sub w/ NC			1512	1518

PERFORATION RECORD

ZONE	TOP (ft)	BTM (ft)	SPF	DATE SHOT	STATUS
6 1/4" Open hole 1533' - 1869'					


NBU 921-35J SWD
Pressure/Temperature Survey @ 1735' (10/7-8/2011)
Pressure
Temperature
Elapse Time (hrs)
Pressure psi
Temperature degF
800
700
600
500
400
300
200
100
0
100
90
80
70
60
50
40
30
20
0.0
0.7
1.5
2.3
3.2
4.0
4.8
5.7
6.5
7.3
8.2
9.0
9.8
10.7
11.5
12.3
13.2
14.0
14.8
15.7
16.5
17.3
18.2
19.0

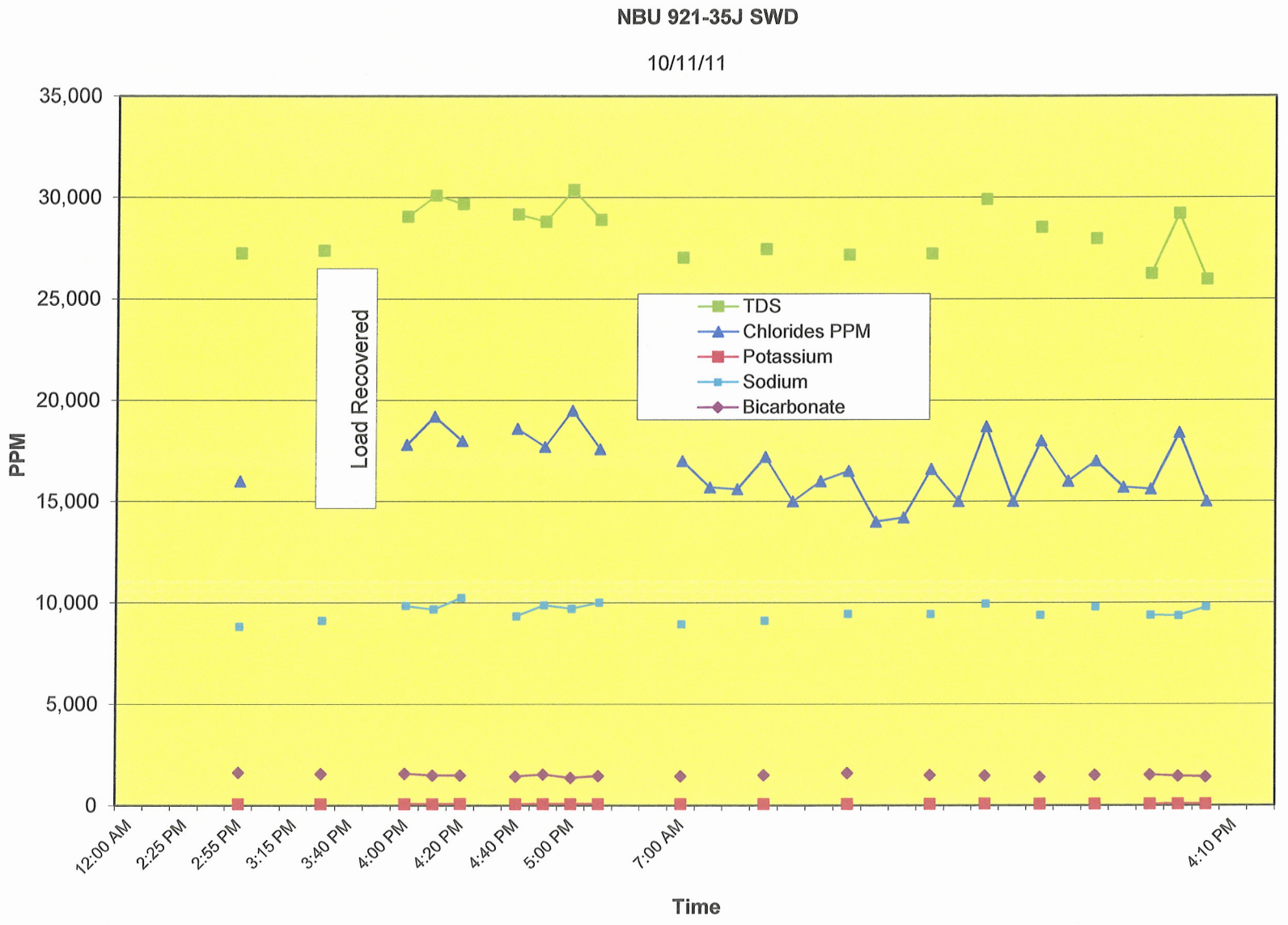
Anadarko Petroleum

Injection Zone Water Sampling

NBU 921-35J SWD
Injection Zone Water Sampling

Time	Vol recovered (bbls)	Cum vol recovered (bbls)	Load left to Recover (bbls)	Chlorides PPM	Potassium	Sodium	Calcium	TDS	SG	Bicarbonate	Sulfate	pH
7/5-6/2011 Drilled 8 ¾" hole form surface to 1536' and ran open hole log. Ran 7" 23# J-55 LT&C to 1533' and cemented in. RDMOL and WOC.												
7/18-20/2011 MIRU and cleaned out to float collar, Pressure tested casing to 1000 psi for 30 minutes, and ran CBL. DO float equipment and drill 6 ¼" hole to Ran open hole logs. Install wellhead												
Completions												
10/11-14/2011 RIH W/ 2-7/8" to 1869' (TD) AND DID NOT TAG ANYTHING. TOH TO 1709' AND RU SWAB. FL IS AT SURFACE Maximum hole volume with no tubing in the well is 74 bbls (7", 23#, J-55 casing to 1533' and 6 1/4" OH below to 1869'; FL @ 0')												
Initial bbls to recover			73	Maximum hole volume to TD								
10/11/11												
2:20 PM	9.8	9.8	63									
2:25 PM	9.8	19.6	53									
2:45 PM	9.8	29.4	44									
2:55 PM	9.8	39.2	34	16000	86	8,831	156.4	27,253		1,635	530	7.98
3:05 PM	9.8	49.0	24									
3:15 PM	9.8	58.8	14									
3:30 PM	9.8	68.6	4	16900	83	9,127	128.7	27,384		1,562	360	7.77
3:40 PM	9.8	78.4	-5									
3:50 PM	9.8	88.2	-15									
4:00 PM	9.8	98.0	-25	17800	87	9,853	150.4	29,049		1,574	400	7.49
4:10 PM	9.8	107.8	-35	19200	85	9,682	136.6	30,109		1,488	290	7.34
4:20 PM	9.8	117.6	-45	18000	89	10,248	173.4	29,674		1,488	440	7.47
4:30 PM	6.8	124.4	-51									
4:40 PM	12.8	137.2	-64	18600	82	9,347	157.0	29,175		1,440	310	7.35
4:50 PM	9.8	147.0	-74	17700	87	9,888	151.5	28,805		1,537	260	7.36
5:00 PM	9.8	156.8	-84	19500	85	9,716	161.2	30,376		1,366	260	7.32
5:10 PM	9.8	166.6	-94	17600	86	10,022	164.1	28,906		1,464	340	7.40
10/12/11												
7:00 AM Made 60 swab runs, recovered 591 bbls, and took 20 samples				17000	79	8,951	154.3	27,038		1,452	180	7.39
				15700								7.59
				15600								7.50
				17200	80	9,122	162.4	27,459		1,501	200	7.40
				15000								7.36
				16000								7.46
				16500	84	9,448	179.6	27,172		1,610	210	7.45
				14000								7.43
				14200								7.40
				16600	82	9,444	178.2	27,227		1,501	220	7.38
				15000								7.50
				18700	96	9,961	196.1	29,910		1,476	220	7.68
				15000								7.53
				18000	82	9,395	182.9	28,539		1,391	220	7.28
				16000								7.56
				17000	85	9,800	192.2	27,967		1,501	180	7.32
				15700								7.54
				15600	82	9,391	164.0	26,236		1,513	290	7.47
				18400	86	9,368	173.3	29,209		1,452	500	7.52
				15000	85	9,795	187.5	25,959		1,415	220	7.32
4:10 PM	600.00	766.6	-694									
Negative sign means amount of fluid taken out of the birds nest past load volume												

Time				Chlorides PPM	Potassium	Sodium	Calcium	TDS	SG	Bicarbonate	Sulfate	pH
Reference samples												
Injection Water @ NBU 159				14042	128	9,321	558.0	26,175		1,250	1,448	7.61
2% KCl				78400	33,320	31,091	616.0	144,553	1.101			7.67
Fresh water				300	15	222	136.0	979	1.001			7.98
T-Mac				1800	15	588	62.0	2,581				7.85


NBU 921-35J SWD
10/11/11
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
PPM
Load Recovered
TDS
Chlorides PPM
Potassium
Sodium
Bicarbonate
12:00 AM
2:25 PM
2:55 PM
3:15 PM
3:40 PM
4:00 PM
4:20 PM
4:40 PM
5:00 PM
7:00 AM
4:10 PM
Time

NBU 921-35 J SWD SRT 10/14/2011

Minutes	BPM 8:21 AM	Surface Pressure	DHP Sensor	BPM 9:22 AM	Surface Pressure	DHP Sensor	BPM 10:23 AM	Surface Pressure	DHP Sensor	BPM 11:24 AM	Surface Pressure	DHP Sensor	BPM 12:25 PM	Surface Pressure	DHP Sensor	BPM 1:25 AM	Surface Pressure	DHP Sensor	BPM 2:26 AM	Surface Pressure	DHP Sensor
0	0.75	0	561	1.5	50	563	3	75	567	6	320	618	9	720	701	12	1230	856	15	1680	921
10	0.75	50	561	1.5	50	563	3	75	567	6	320	635	9	720	762	12	1230	854	15	1680	924
20	0.75	50	561	1.5	55	563	3	75	568	6	320	639	9	720	764	12	1230	877	15	1650	904
30	0.75	50	561	1.5	55	563	3	75	568	6	320	656	9	720	783	12	1230	868	15	1660	926
40	0.75	50	561	1.5	55	563	3	75	568	6	320	657	9	720	790	12	1230	869	15	1650	893
50	0.75	50	561	1.5	55	563	3	75	568	6	320	656	9	720	792	12	1230	873	15	1660	910
60	0.75	50	561	1.5	55	563	3	75	568	6	320	656	9	720	792	12	1230	890	15	1650	887
	9:21 AM			10:22 AM			11:23 AM			12:24 PM			1:25 PM			2:25 AM			3:26 AM		
Fluid density (ppg)	8.35 TMac Water																				
	0.434 psi/ft																				

Final ISIP = 101 psi

FG = (from ISIP) 0.49

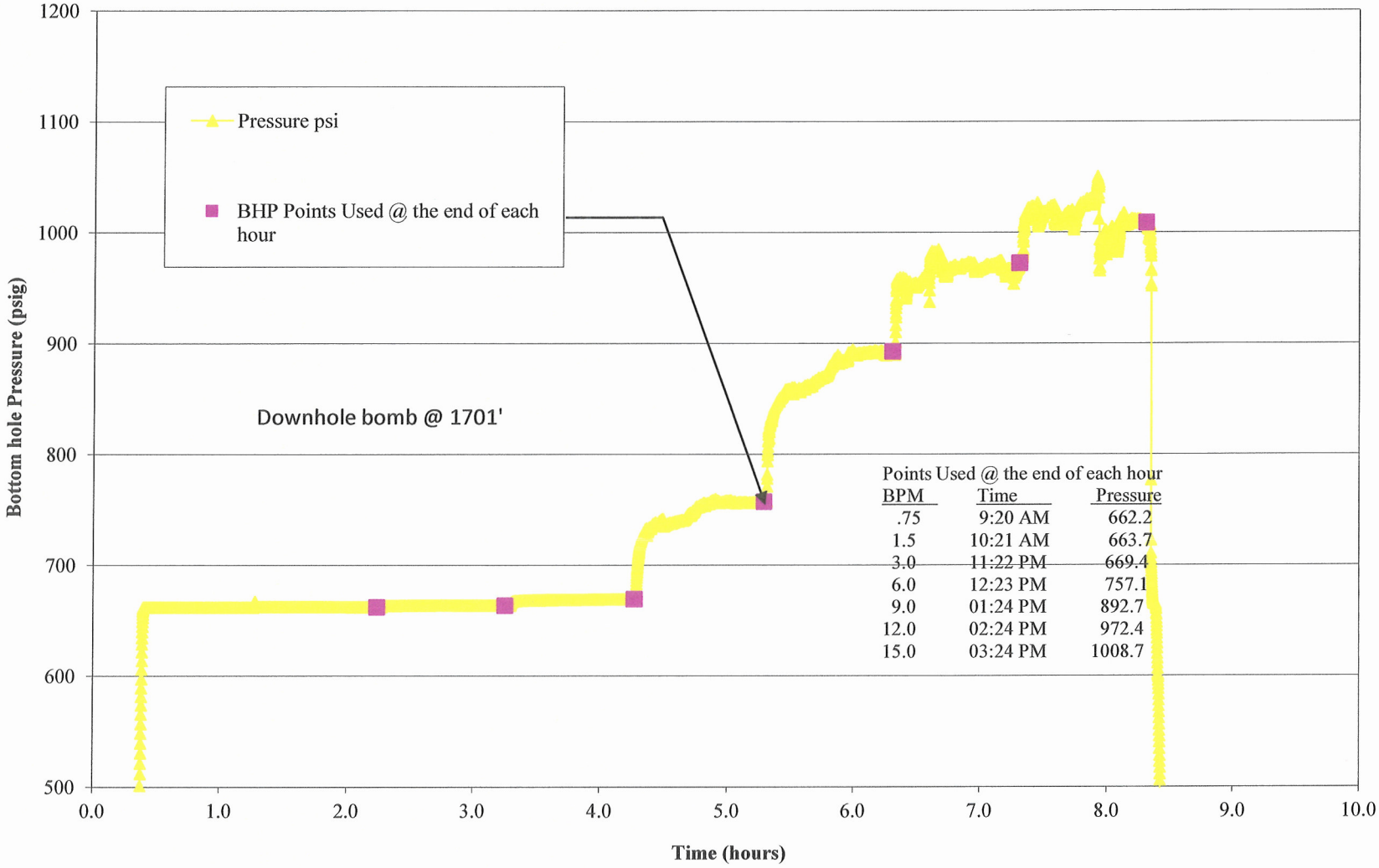
FG = (from SRT plot) N/A **Breakover pressure from SRT = N/A**

Surface pressure before test	0
Packer and EOT	1508 feet
Down hole pressure bombs @	1701 feet (MPP)
Core Lab DHP Sensor	1504 feet
3 1/2" (2.684") FL tubing with no XN Nipple on bottom.	
3 1/2" (2.684" ID)	

	Hyrostatic Pressure Ph (psi)	Last Surf Pressure of each SRT	DHP Sensor @ 1504	DHP Bomb @ 1701
0.75	662	50	561	662.2
1.5	662	55	563	663.7
3	662	75	568	669.4
6	662	320	656	757.1
9	662	720	792	892.7
12	662	1230	890	972.4
15	662	1650	887	1008.7

Friction Based on Sensor	714 34h	783 34l	Friction Pressure @ MPP ff DHP bomb	BJ's Friction Pressure @ EOT	My Calculated friction	From Cameron Hyd data Book @ EOT	From PE Handbook Fig 6.57, page 6-70 @ EOT
15	902.5	710.78	50	3	6	4	
15	954.1	710	53	12	22	15	
15	974.7	718.8	68	42	50	57	
15	1003	734.51	225	145	156	219	
15	1027	758.91	489	302	316	484	
-4	1046	786.99	920	510	525	855	
36	1061	818.63	1303	765	780	1325	

NBU 921-35J SWD
SRT 10/14/2011

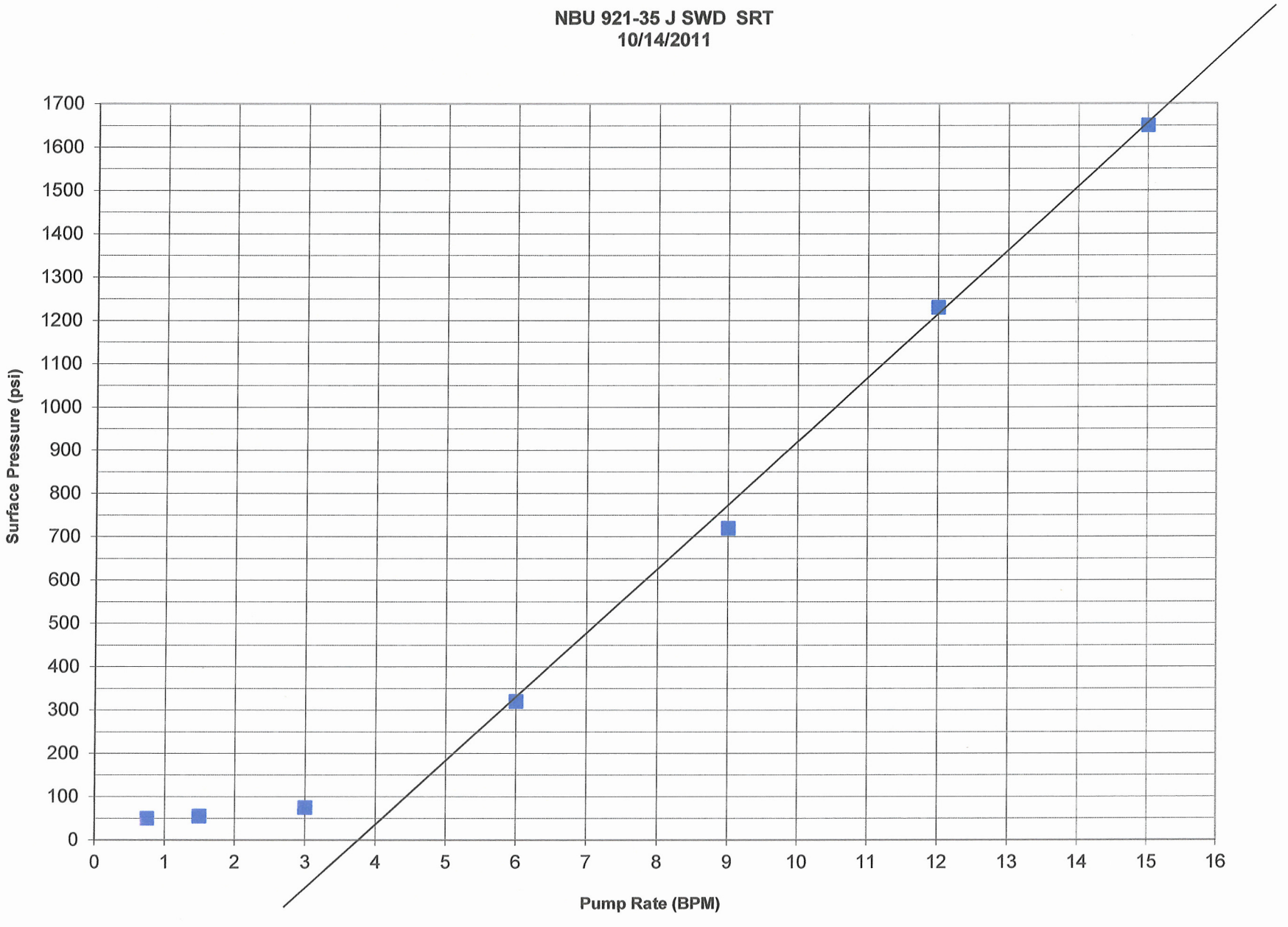


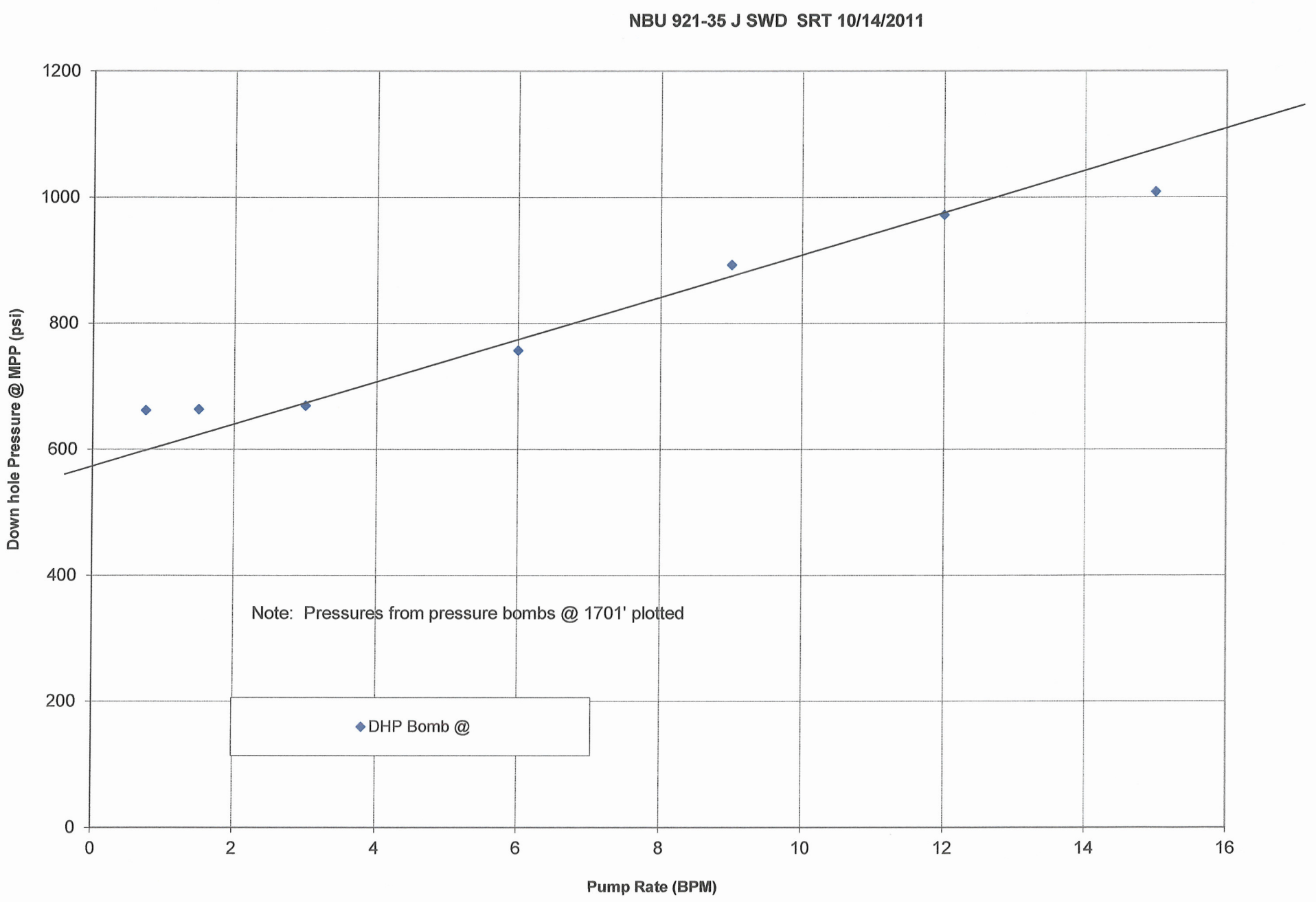
Points Used @ the end of each hour

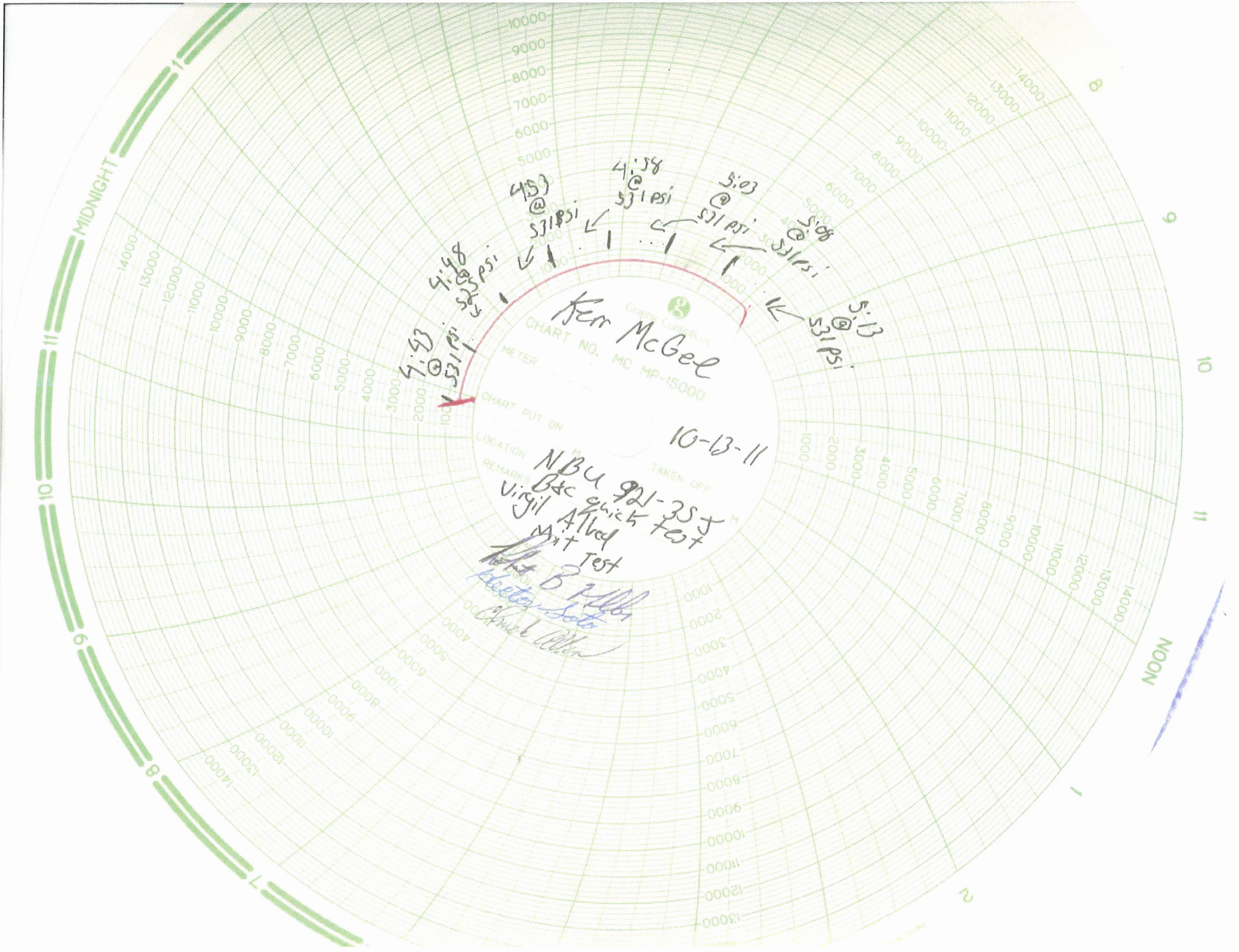
BPM	Time	Pressure
.75	9:20 AM	662.2
1.5	10:21 AM	663.7
3.0	11:22 PM	669.4
6.0	12:23 PM	757.1
9.0	01:24 PM	892.7
12.0	02:24 PM	972.4
15.0	03:24 PM	1008.7

Surface Pressure

NBU 921-35 J SWD SRT
10/14/2011




NBU 921-35 J SWD SRT 10/14/2011
Down hole Pressure @ MPP (psi)
1200
1000
800
600
400
200
0
0
2
4
6
8
10
12
14
16
Pump Rate (BPM)
Note: Pressures from pressure bombs @ 1701' plotted
DHP Bomb @


Graphic Controls
CHART NO. MC MP-15000
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF
MIDNIGHT
NOON
Kerr McGee
10-13-11
NBU 921-35J
Btc quick test
Virgil Allred
MIT test
4:43 @ 531 psi
4:48 @ 525 psi
4:53 @ 531 psi
4:58 @ 531 psi
5:03 @ 531 psi
5:08 @ 531 psi
5:13 @ 531 psi
Hector Soto

Mechanical Integrity Test
Casing or Annulus Pressure Mechanical Integrity Test

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

EPA Witness: None Available Date: 10 / 13 / 2011
Test conducted by: BC Quick Test for Anadarko Petroleum Corporation
Others present: Chuck Allen, Robert Miller, Hector Soto, Virgil Allred

Well Name: NBU 921-35J SWD Type: ER ***SWD*** Status: AC TA UC
Field: Natural Buttes
Location: NWSE Sec: 35 T 9 N / ***S*** R 21 ***E*** / W County: Uintah State: Utah
Operator: Kerr McGee Oil and Gas Company, L.P.
Last MIT: 1st One Maximum Allowable Pressure: _____ PSIG

Is this a regularly scheduled test? [ ] Yes [X] No
Initial test for permit? [X] Yes [ ] No
Test after well rework? [ ] Yes [X] No
Well injecting during test? [ ] Yes [X] No If Yes, rate: _____ bpd

Pre-test casing/tubing annulus pressure: 0 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	0 psig	psig	psig
End of test pressure	0 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	531 psig	psig	psig
5 minutes	525 psig	psig	psig
10 minutes	531 psig	psig	psig
15 minutes	531 psig	psig	psig
20 minutes	531 psig	psig	psig
25 minutes	531 psig	psig	psig
30 minutes	531 psig	psig	psig
RESULT	**[X] Pass [ ]Fail**	**[ ] Pass [ ]Fail**	**[ ] Pass [ ]Fail**

Does the annulus pressure build back up after the test ? [ ] Yes [X] No

MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness:_____

OFFICE USE ONLY - COMPLIANCE FOLLOWUP

Staff _____ Date: ____/____/____

Do you agree with the reported test results? [ ] YES [ ] NO

If not, why?

Possible violation identified? [ ] YES [ ] NO

If YES, what

If YES - followup initiated? [ ] YES

[ ] NO - why not?

[ ] Data Entry [ ] Compliance Staff [ ] 2nd Data Entry [ ] Hardcopy Filing

20111020015358610
.pdf

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NB 921-35J SWD
Qtr/Qtr NWSE Section 35 Township 9S Range 21E
Lease Serial Number ML-22582
API Number 4304751396

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 05/05/2011 0900 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 01/20/2010 0800 HRS AM ☑ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

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Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT ~~KENNY GATHINGS AT 435.781.7048 FOR MORE~~