

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING						FORM 3 AMENDED REPORT <input checked="" type="checkbox"/>
APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 921-35H4BS
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6007
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL Kathy.SchneebeckDulnoan@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22582			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
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 <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2124 FNL 493 FEL	SENE	35	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	2075 FNL 495 FEL	SENE	35	9.0 S	21.0 E	S
At Total Depth	2075 FNL 495 FEL	SENE	35	9.0 S	21.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 495		23. NUMBER OF ACRES IN DRILLING UNIT 321		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 15		26. PROPOSED DEPTH MD: 9660 TVD: 9659		
27. ELEVATION - GROUND LEVEL 5098		28. BOND NUMBER 22013542		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496		
ATTACHMENTS						
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
NAME Danielle Piernot		TITLE Regulatory Analyst		PHONE 720 929-6156		
SIGNATURE		DATE 11/23/2010		EMAIL gnbregulatory@anadarko.com		
API NUMBER ASSIGNED 43047513670000		 Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9660		
Pipe	Grade	Length	Weight			
	Grade I-80 Buttress	9660	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2590		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2590	28.0			

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-35H4BS

Surface:	2124 FNL / 493 FEL	SENE
BHL:	2075 FNL / 495 FEL	SENE

Section 35 T9S R21E

Unitah County, Utah
Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1434	
Birds Nest	1768	Water
Mahogany	2139	Water
Wasatch	4729	Gas
Mesaverde	7492	Gas
MVU2	8332	Gas
MVL1	8909	Gas
TVD	9659	
TD	9660	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 9,659' TVD, approximately equals 5,917 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,792 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

9. **Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie

line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations. 12 of 16

Conclusion

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

10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,590	28.00	IJ-55	LTC	0.87	1.55	4.75
PRODUCTION	4-1/2"	0 to 9,660	11.60	I-80	BTC	1.99	1.05	2.84

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 2.08

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

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
 (Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoyn.Fact. of water)
MASP 3,792 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
 (Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient
 (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoyn.Fact. of water)
MABHP 5,917 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	2,090'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,220'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	300	10%	11.00	3.38
	TAIL	5,440'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,050	10%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

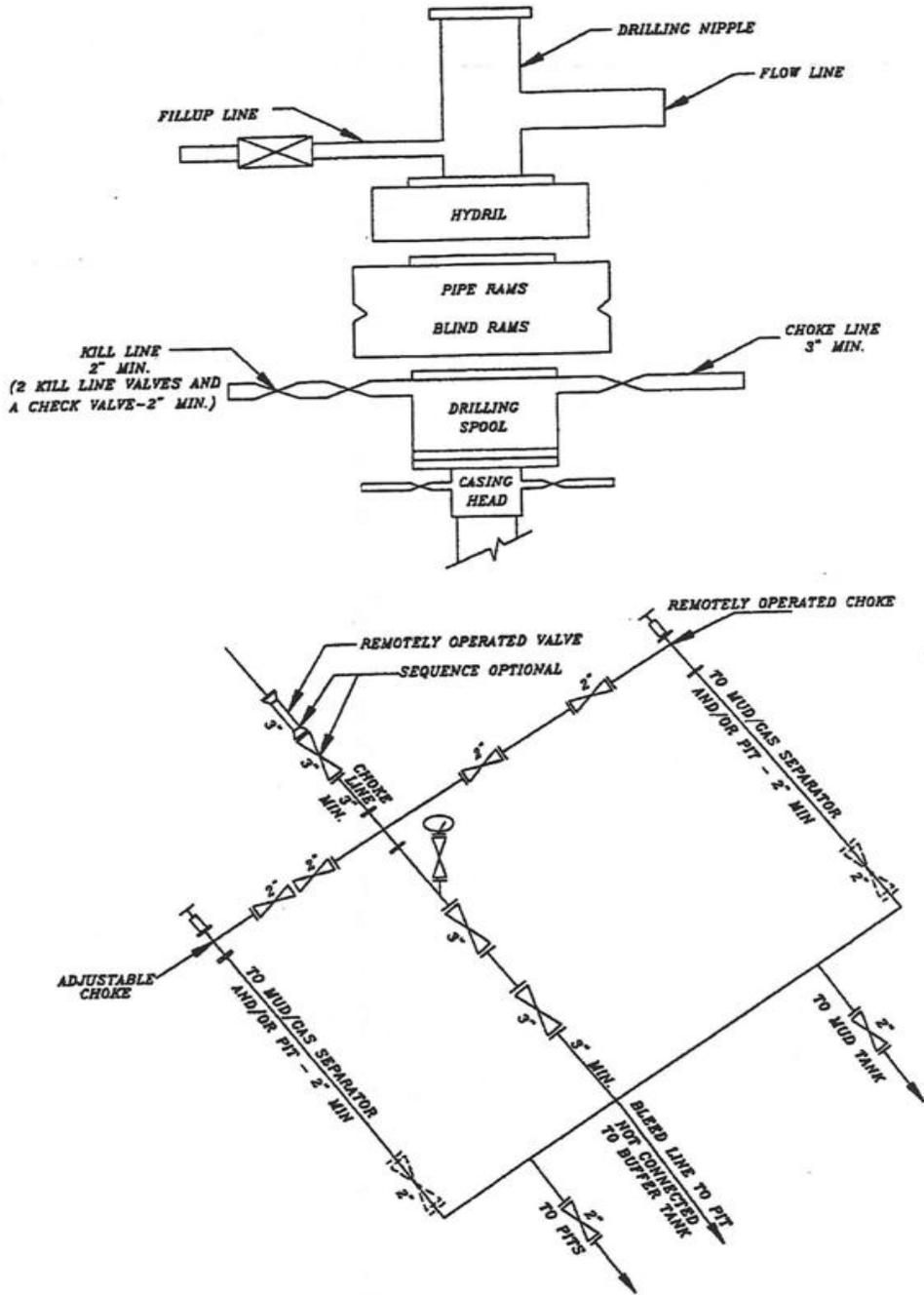
Surveys will be taken at 1,000' minimum intervals.

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

DRILLING ENGINEER: _____ **DATE:** _____
 John Huycke / Emile Goodwin

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

EXHIBIT A NBU 921-35H4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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

WEST - 80.00 (G.L.O.)

N89°47'37"W - 2646.18' (Meas.)

N89°47'25"W - 2645.99' (Meas.)

Found 1" Aluminum Cap on 5/8" Rebar. Pile of Stones.

Found Uintah County Aluminum Cap in Pile of Stones.

Found Uintah County Aluminum Cap in Pile of Stones.

N00°21'17"W - 2645.28' (Meas.)

N00°03'W - 81.10 (G.L.O.)

N00°12'59"E
2703.72' (Measured to C.C.)

N00°03'W - 81.10 (G.L.O.)
2702.74' (Measured to True Corner)

WELL LOCATION: NBU 921-35H4BS

ELEV. UNGRADED GROUND = 5098.3'

35



N00°03'41"W (Basis of Bearings)
2641.51' (Measured)

N00°03'E - 79.80 (G.L.O.)

Found Uintah County Surveyor 1 1/2" Aluminum Cap on 5/8" Rebar in Pile of Stones.

Found 1 1/2" Aluminum Cap on 5/8" Rebar in Pile of Stones.

NBU 921-35H4BS (Surface Position) NAD 83 LATITUDE = 39.993919° (39° 59' 38.109") LONGITUDE = 109.511233° (109° 30' 40.437") NAD 27 LATITUDE = 39.993954° (39° 59' 38.235") LONGITUDE = 109.510546° (109° 30' 37.965")	
NBU 921-35H4BS (Bottom Hole) NAD 83 LATITUDE = 39.994054° (39° 59' 38.594") LONGITUDE = 109.511242° (109° 30' 40.470") NAD 27 LATITUDE = 39.994089° (39° 59' 38.720") LONGITUDE = 109.510555° (109° 30' 37.997")	

LOT 4

LOT 1

Found 1977 Brass Cap in Pile of Stones.

Found 1977 Brass Cap

Found 1977 Brass Cap

Found 1977 Brass Cap

Found 1977 Brass Cap in Pile of Stones.

2.50 (G.L.O.)
164.44'

2501.71'

2.19 (G.L.O.)
144.58'

2543.51'

99.10' (G.L.O.)
1.51'

2678.51' (Meas.)
S89°06'03"W
S89°06'W - 40.59 (G.L.O.)

S89°07'53"W - 2666.15' (Meas.)
S89°06'W - 40.39 (G.L.O.)
Found 1977 Brass Cap in Pile of Stones.

Found 1977 Brass Cap

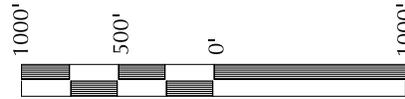
S89°14'29"W - 2688.09' (Meas.)
S89°12'W - 40.73 (G.L.O.)
Found 1977 Brass Cap

Found 1977 Brass Cap

NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- The Bottom of hole bears N02°54'02"W 49.11' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW 1/4 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'.



SCALE
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.

PROF. SEAL
No. 6028691
JOHN R. GAUGH
PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 921-35H

**NBU 921-35H4BS
WELL PLAT**

2075' FNL, 495' FEL (Bottom Hole)
SE 1/4 NE 1/4 OF SECTION 35, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH.



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

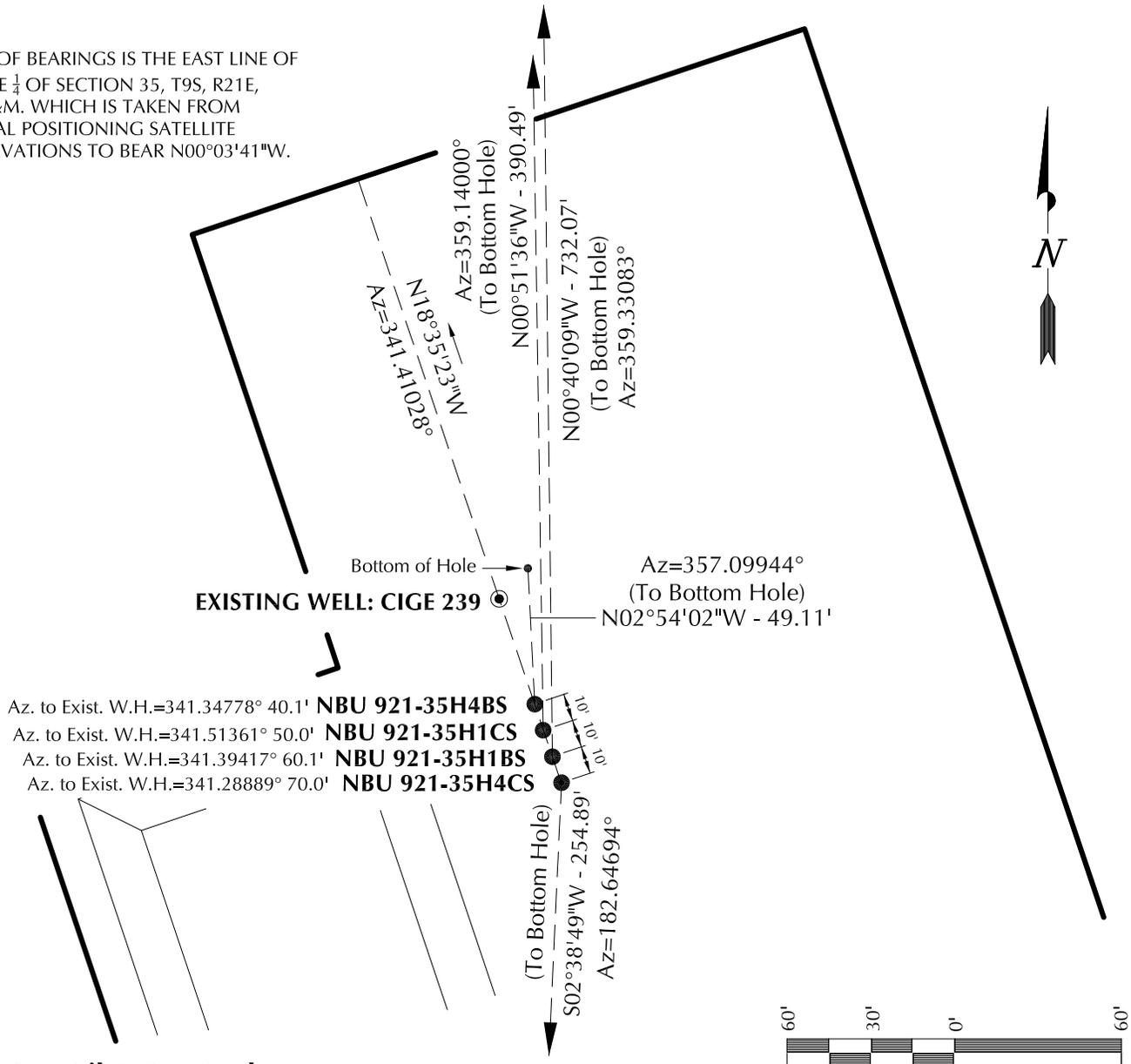
DATE SURVEYED: 9-30-10	SURVEYED BY: M.S.B.	SHEET NO: 1 1 OF 16
DATE DRAWN: 10-01-10	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'		Date Last Revised:

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-35H4BS	39°59'38.109"	109°30'40.437"	39°59'38.235"	109°30'37.965"	2124' FNL 493' FEL	39°59'38.594"	109°30'40.470"	39°59'38.720"	109°30'37.997"	2075' FNL 495' FEL
NBU 921-35H1CS	39°59'38.017"	109°30'40.399"	39°59'38.143"	109°30'37.926"	2133' FNL 490' FEL	39°59'41.874"	109°30'40.477"	39°59'42.000"	109°30'38.004"	1743' FNL 495' FEL
NBU 921-35H1BS	39°59'37.922"	109°30'40.356"	39°59'38.048"	109°30'37.883"	2143' FNL 486' FEL	39°59'45.154"	109°30'40.471"	39°59'45.280"	109°30'37.998"	1411' FNL 494' FEL
NBU 921-35H4CS	39°59'37.829"	109°30'40.313"	39°59'37.956"	109°30'37.841"	2152' FNL 483' FEL	39°59'35.314"	109°30'40.463"	39°59'35.440"	109°30'37.990"	2407' FNL 495' FEL
CIGE 239	39°59'38.485"	109°30'40.602"	39°59'38.611"	109°30'38.130"	2086' FNL 505' FEL	39°59'38.143"	109°30'40.602"	39°59'38.178"	109°30'40.602"	

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-35H4BS	49.0'	-2.5'	NBU 921-35H1CS	390.4'	-5.9'	NBU 921-35H1BS	732.0'	-8.5'	NBU 921-35H4CS	-254.6'	-11.8'

BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 35, T9S, R21E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°03'41"W.



- Az. to Exist. W.H.=341.34778° 40.1' NBU 921-35H4BS
- Az. to Exist. W.H.=341.51361° 50.0' NBU 921-35H1CS
- Az. to Exist. W.H.=341.39417° 60.1' NBU 921-35H1BS
- Az. to Exist. W.H.=341.28889° 70.0' NBU 921-35H4CS

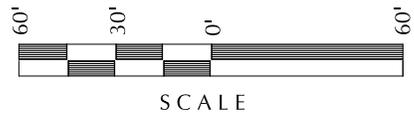
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-35H

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

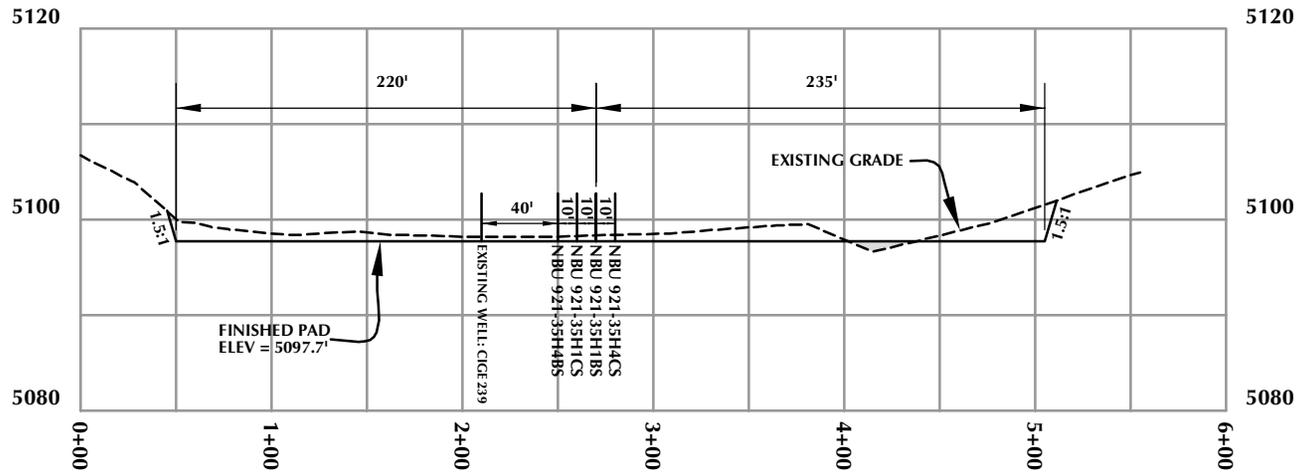


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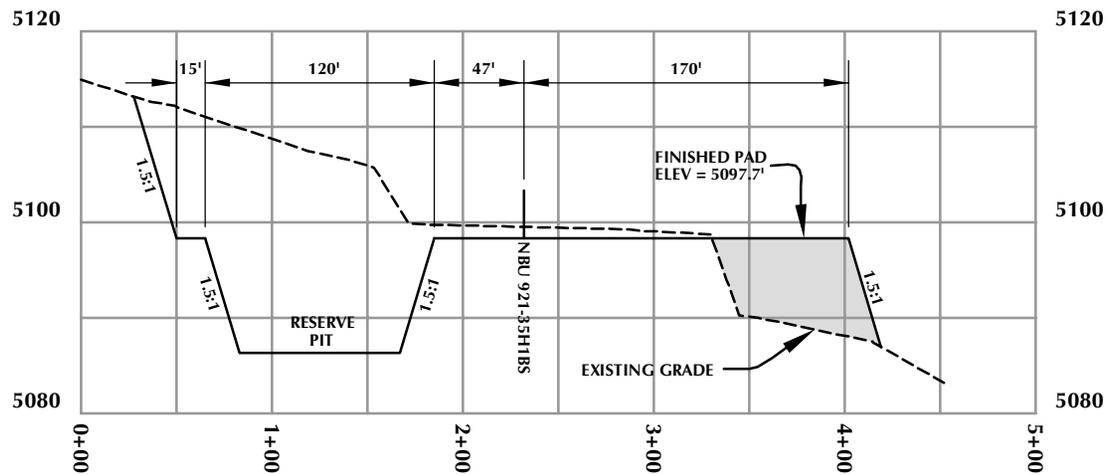


TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-30-10	SURVEYED BY: M.S.B.	SHEET NO: 5
DATE DRAWN: 10-01-10	DRAWN BY: E.M.S.	
SCALE: 1" = 60'		5 OF 16



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 921-35H

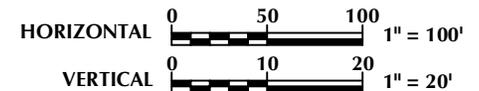
WELL PAD - CROSS SECTIONS
NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., Uintah County, Utah



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Scale: 1"=100'	Date: 10/19/10	SHEET NO:
REVISED:		7 7 OF 16

A:\PIW\A\000000\43047513670000\NBU_921-35H_PAD_ALT_20101004.dwg, 10/19/2010 5:43:03 PM
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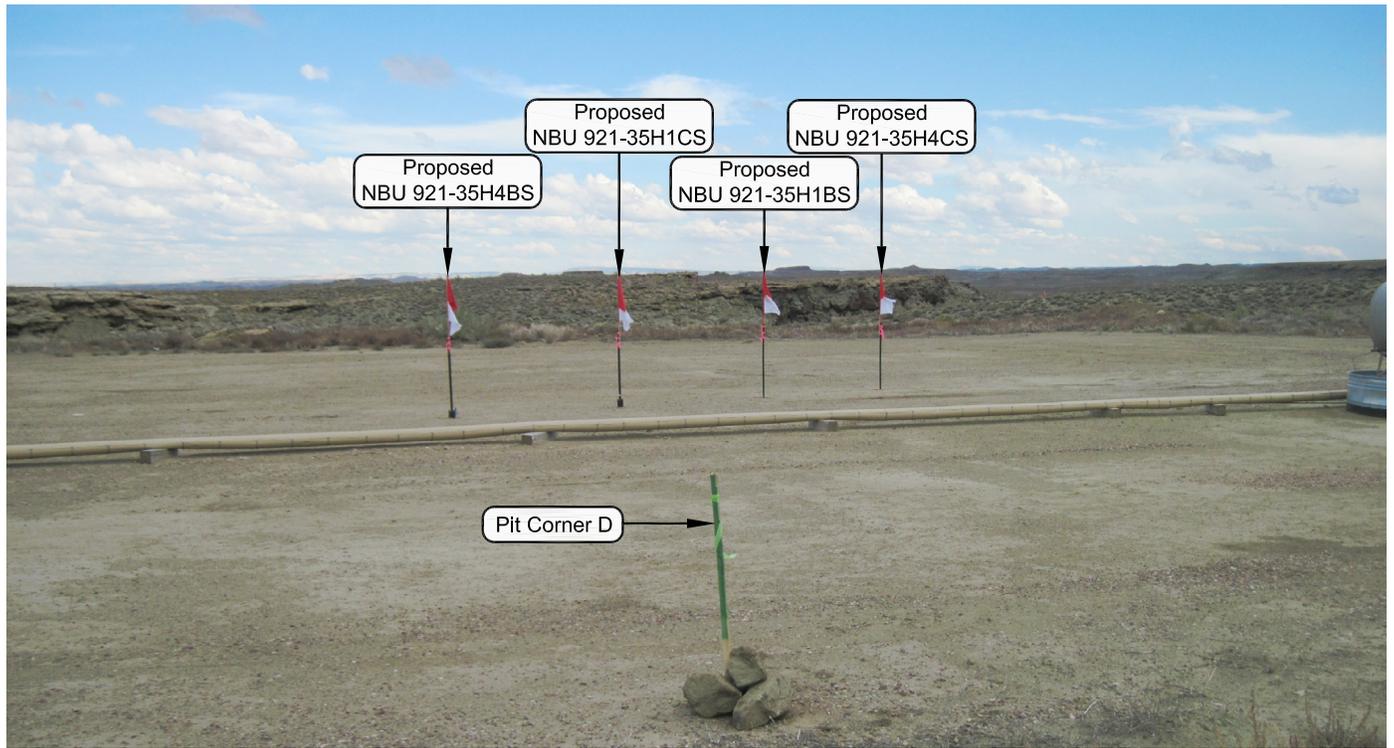


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

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

WELL PAD - NBU 921-35H

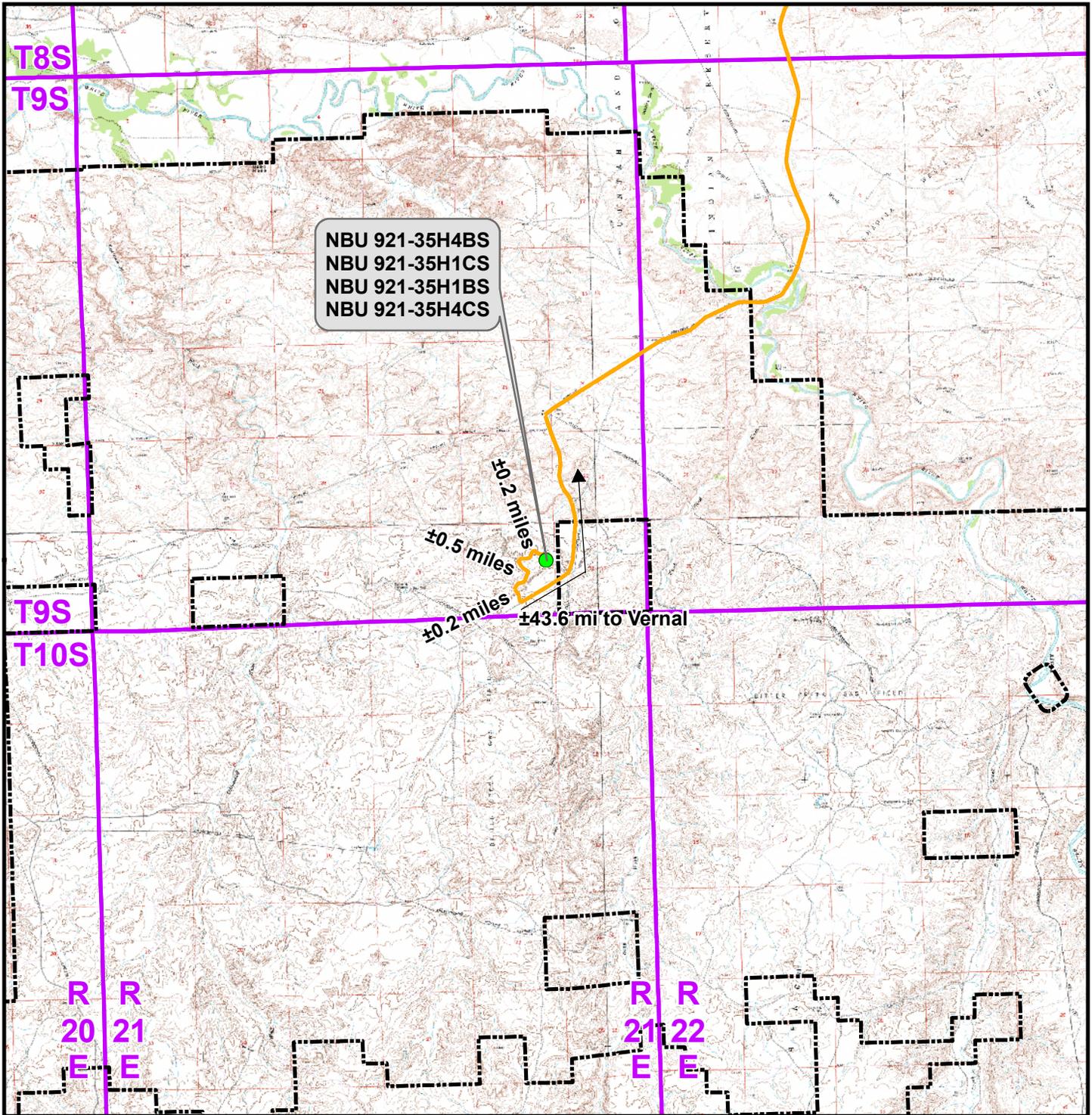
LOCATION PHOTOS
NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.



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: 9-30-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 9 9 OF 16
DATE DRAWN: 10-01-10	DRAWN BY: E.M.S.	
Date Last Revised:		



Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 921-35H To Unit Boundary: ±483ft

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

WELL PAD - NBU 921-35H

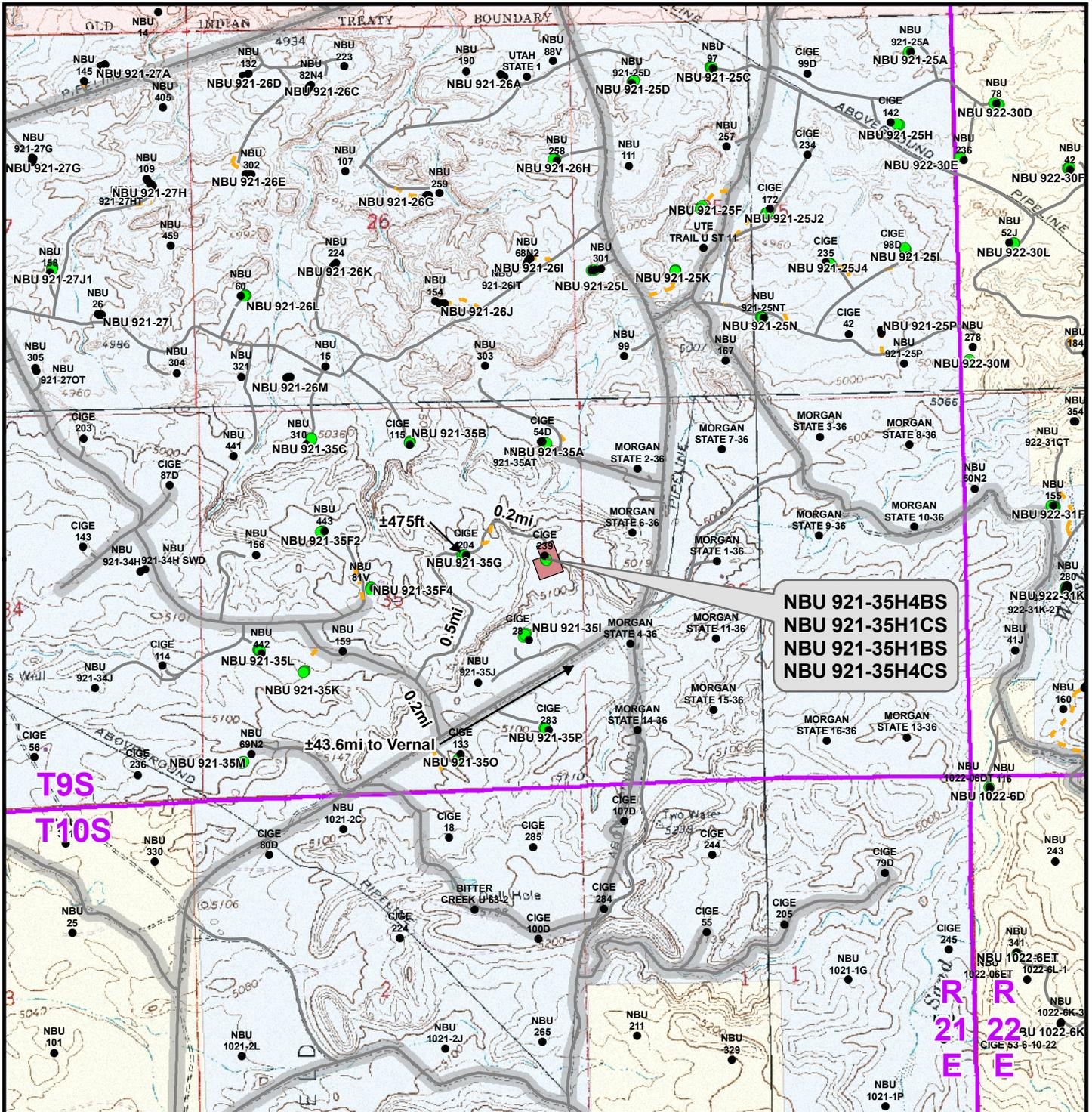
TOPO A
 NBU 921-35H4BS, NBU 921-35H1CS,
 NBU 921-35H1BS & NBU 921-35H4CS
 LOCATED IN SECTION 35, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Oct 2010	10
Revised:	Date:	



**NBU 921-35H4BS
 NBU 921-35H1CS
 NBU 921-35H1BS
 NBU 921-35H4CS**

Legend

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

Total Proposed Road Re-Route Length: ±0ft

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

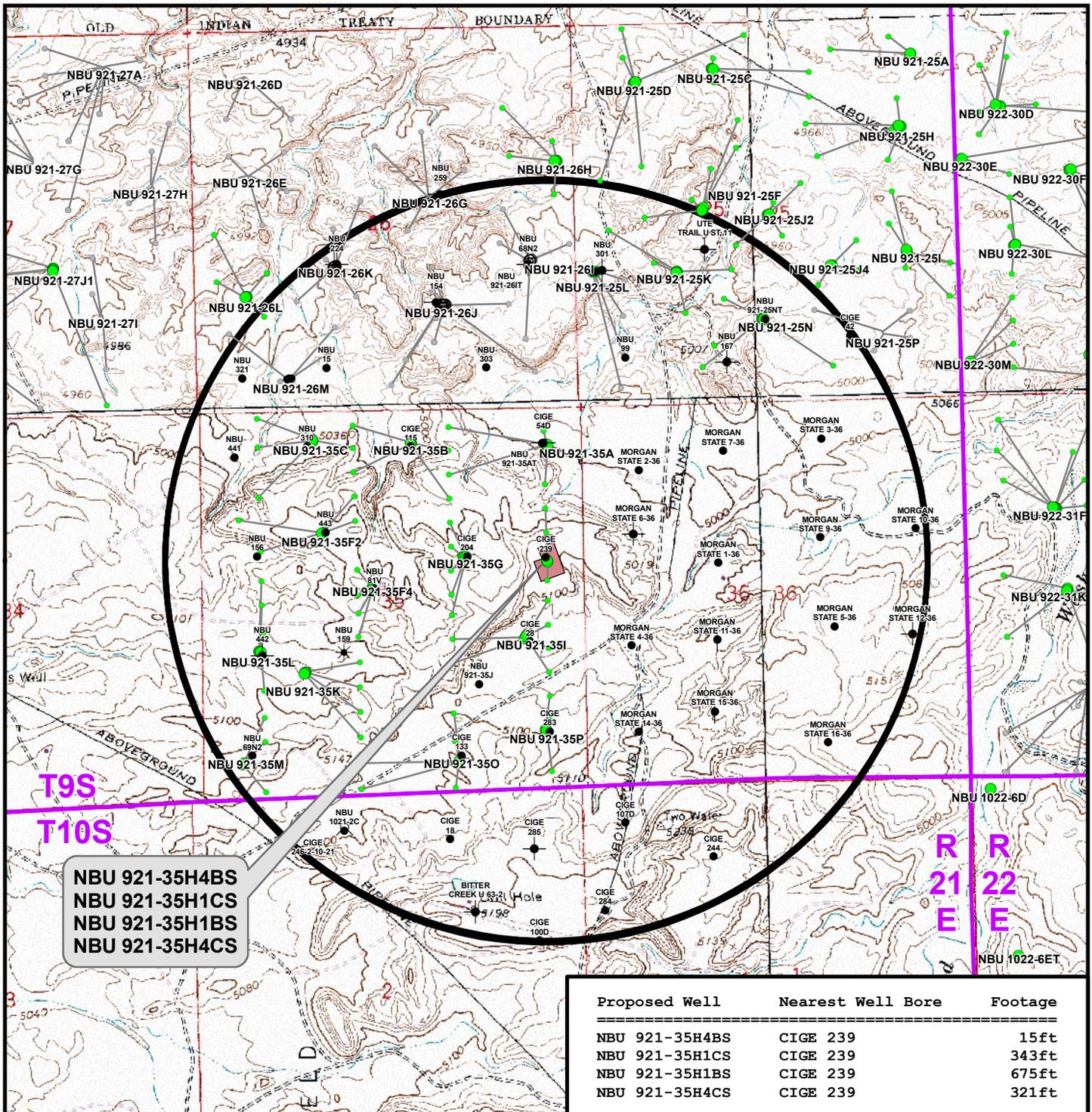
WELL PAD - NBU 921-35H

TOPO B
 NBU 921-35H4BS, NBU 921-35H1CS,
 NBU 921-35H1BS & NBU 921-35H4CS
 LOCATED IN SECTION 35, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH

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 Sheridan, WY 82801
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 Fax (307) 674-0182

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 11
Drawn: CPS	Date: 19 Oct 2010	11 of 16
Revised:	Date:	



Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- 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

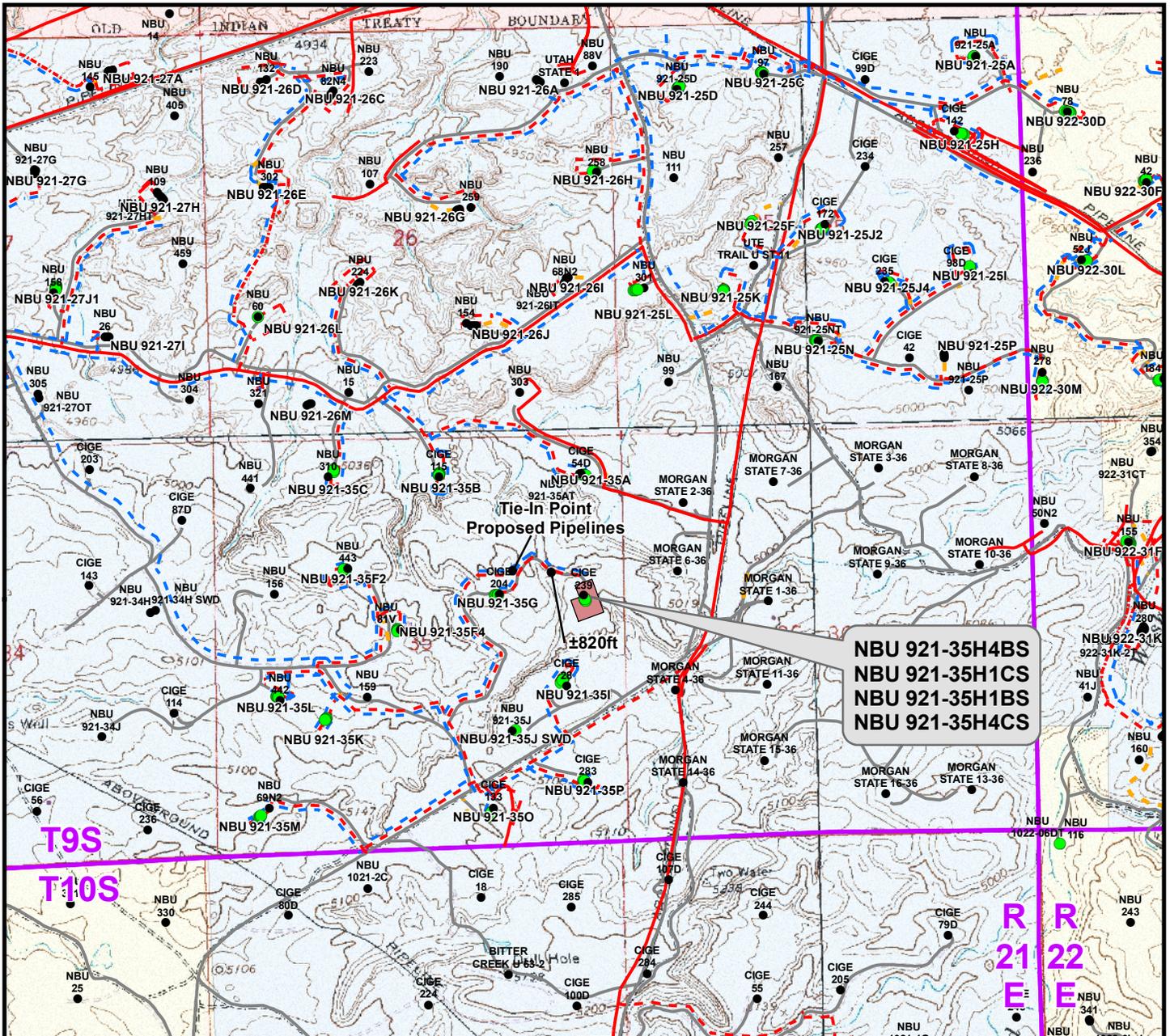
WELL PAD - NBU 921-35H

TOPO C
 NBU 921-35H4BS, NBU 921-35H1CS,
 NBU 921-35H1BS & NBU 921-35H4CS
 LOCATED IN SECTION 35, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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 CONSULTING, LLC
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 Sheridan, WY 82801
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Oct 2010	12
Revised:	Date:	



**NBU 921-35H4BS
NBU 921-35H1CS
NBU 921-35H1BS
NBU 921-35H4CS**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±490ft	Proposed 6" (Meter House to Edge of Pad)	±490ft
Proposed 6" (Max.) (Edge of Pad to 35G Intersection)	±820ft	Proposed 6" (Edge of Pad to 35G Intersection)	±820ft
TOTAL PROPOSED LIQUID PIPELINE =	± 1,310ft	TOTAL PROPOSED GAS PIPELINE =	±1,310ft

Legend

- Well - Proposed
- Well Pad
- - - Gas Pipeline - Proposed
- - - Liquid Pipeline - Proposed
- - - Road - Proposed
- Bureau of Land Management
- Well - Existing
- - - Gas Pipeline - To Be Upgraded
- - - Liquid Pipeline - To Be Upgraded
- - - Road - Existing
- Indian Reservation
- - - Gas Pipeline - Existing
- - - Liquid Pipeline - Existing
- State
- Private

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

WELL PAD - NBU 921-35H

TOPO D
NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH

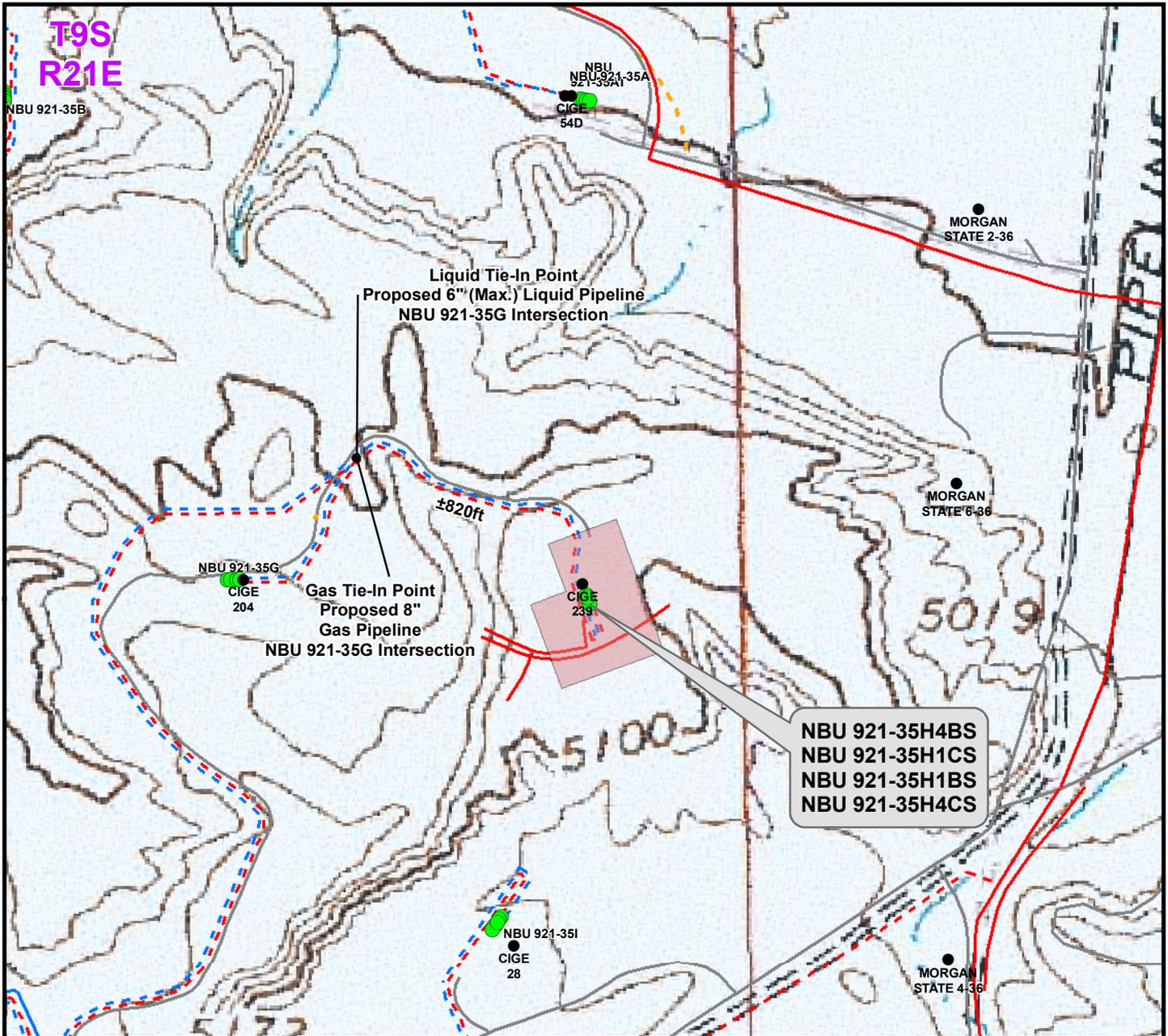
609

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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Oct 2010	13
Revised: TL	Date: 9 Dec 2010	

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NBU 921-35H4BS
 NBU 921-35H1CS
 NBU 921-35H1BS
 NBU 921-35H4CS

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±490ft	Proposed 6" (Meter House to Edge of Pad)	±490ft
Proposed 6" (Max.) (Edge of Pad to 35G Intersection)	±820ft	Proposed 6" (Edge of Pad to 35G Intersection)	±820ft
TOTAL PROPOSED LIQUID PIPELINE =	± 1,310ft	TOTAL PROPOSED GAS PIPELINE =	±1,310ft

Legend

- Well - Proposed
- Well Pad
- - - Gas Pipeline - Proposed
- - - Liquid Pipeline - Proposed
- - - Road - Proposed
- Bureau of Land Management
- Well - Existing
- - - Gas Pipeline - To Be Upgraded
- - - Liquid Pipeline - To Be Upgraded
- - - Road - Existing
- Indian Reservation
- - - Gas Pipeline - Existing
- - - Liquid Pipeline - Existing
- State
- Private

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

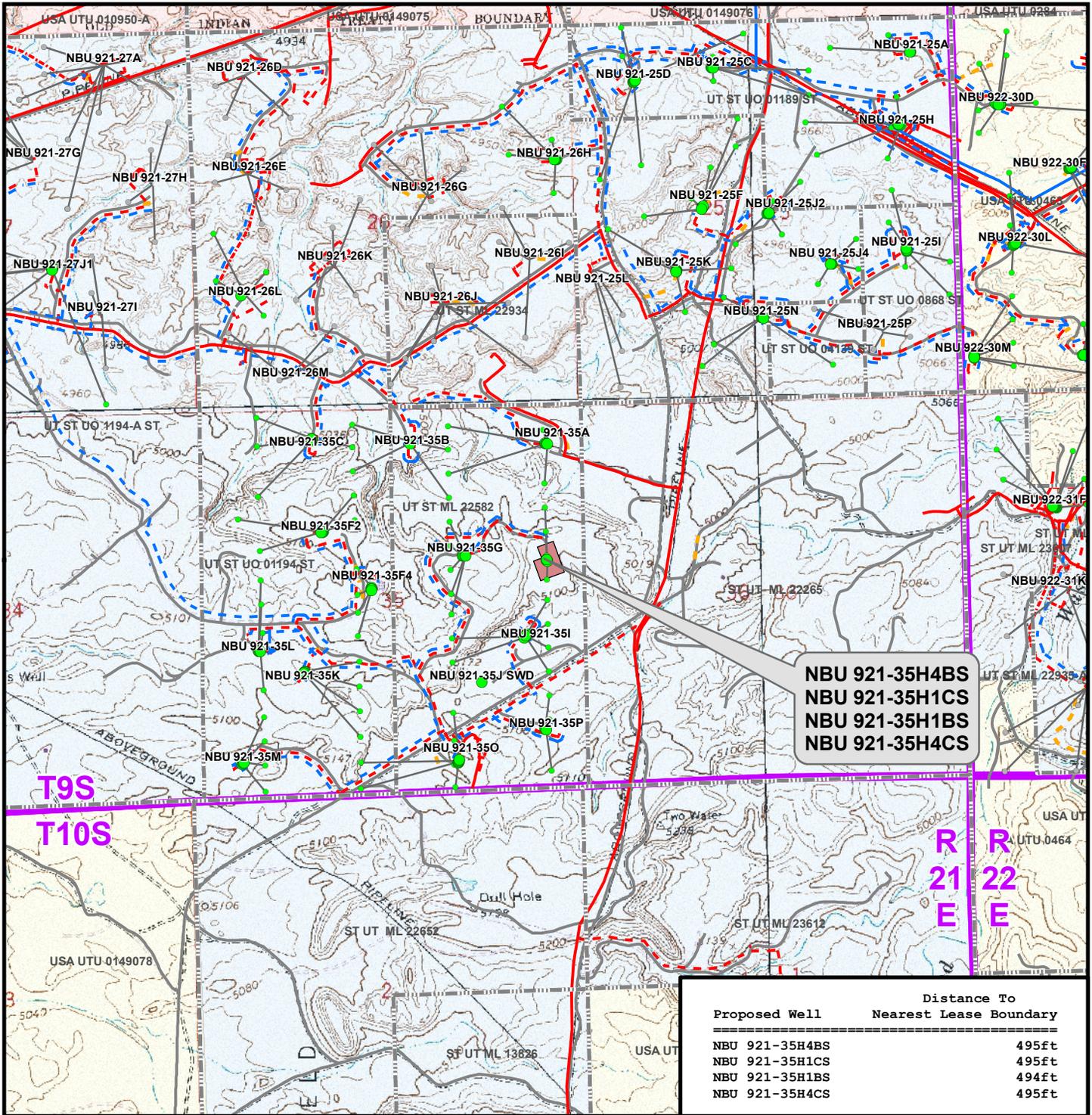
WELL PAD - NBU 921-35H

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 921-35H4BS, NBU 921-35H1CS,
 NBU 921-35H1BS & NBU 921-35H4CS
 LOCATED IN SECTION 35, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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 CONSULTING, LLC
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Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Oct 2010	14
Revised: TL	Date: 9 Dec 2010	



**NBU 921-35H4BS
NBU 921-35H1CS
NBU 921-35H1BS
NBU 921-35H4CS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 921-35H4BS	495ft
NBU 921-35H1CS	495ft
NBU 921-35H1BS	494ft
NBU 921-35H4CS	495ft

Legend

- Well - Proposed
- Well Pad
- - - Gas Pipeline - Proposed
- - - Liquid Pipeline - Proposed
- - - Road - Proposed
- Bureau of Land Management
- Bottom Hole - Proposed
- ▭ Lease Boundary
- - - Gas Pipeline - To Be Upgraded
- - - Liquid Pipeline - To Be Upgraded
- - - Road - Existing
- Indian Reservation
- Bottom Hole - Existing
- - - Gas Pipeline - Existing
- - - Liquid Pipeline - Existing
- - - State
- - - Private
- Well Path

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

WELL PAD - NBU 921-35H

TOPO E
NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
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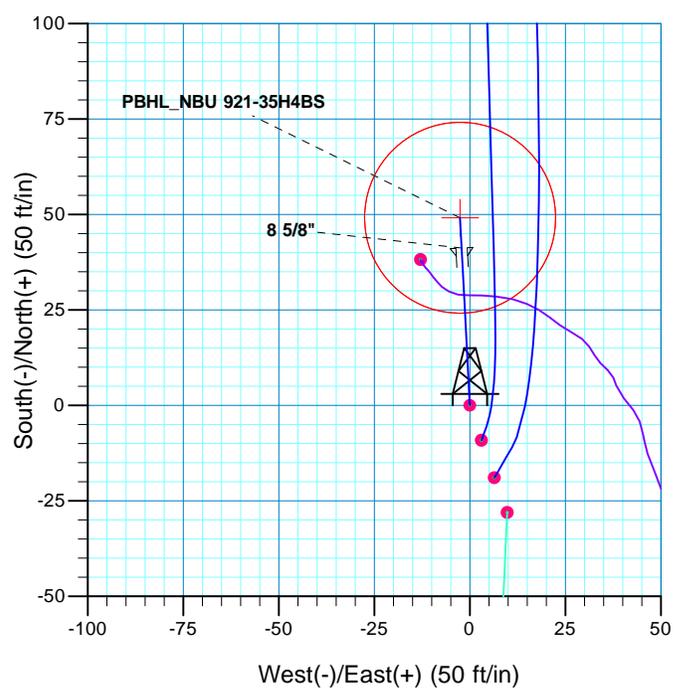
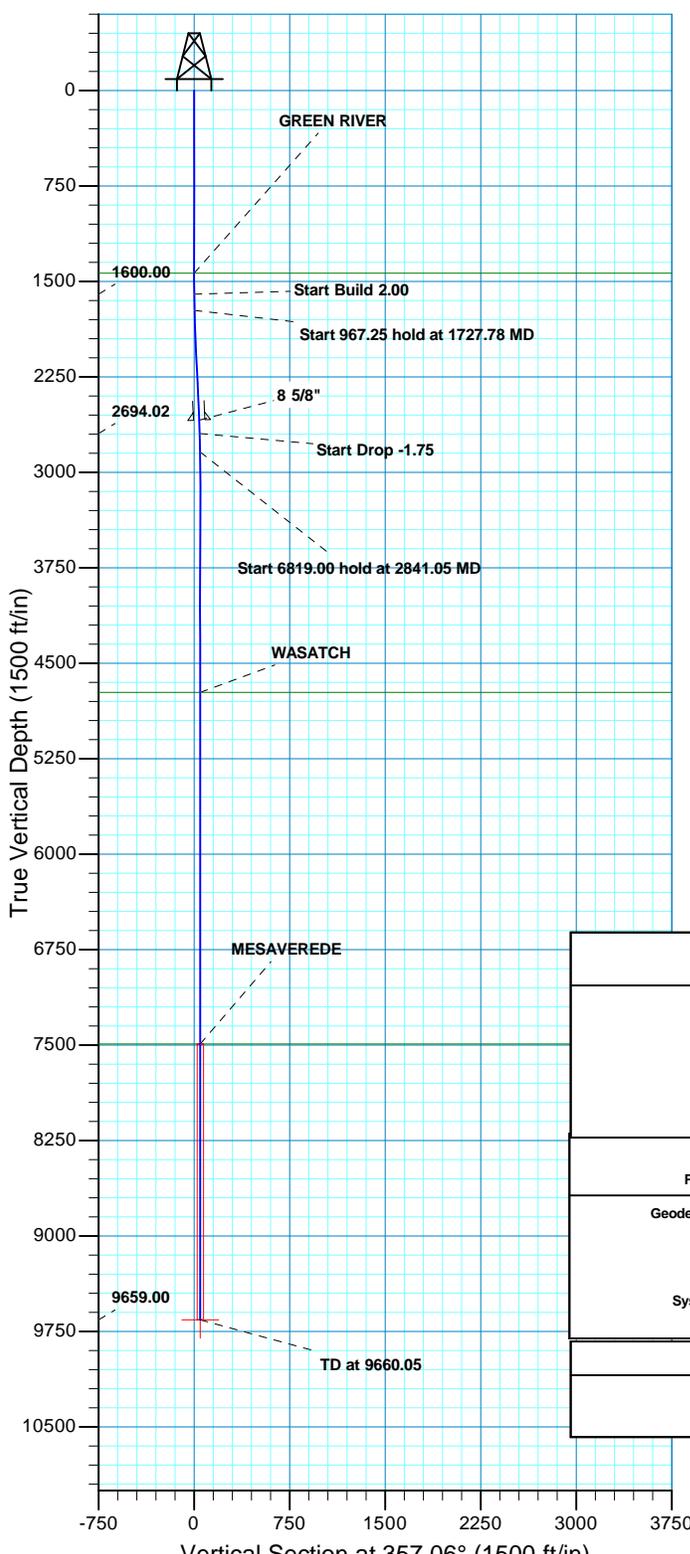
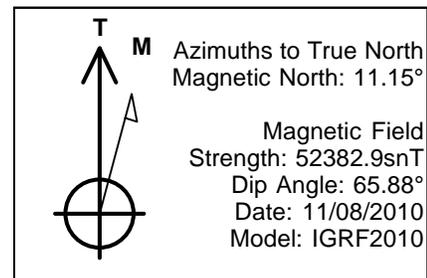
Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 19 Oct 2010	15 15 of 16
Revised: TL	Date: 9 Dec 2010	

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 921-35H
WELLS – NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
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 20.1 miles to a Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the Class D County Road approximately 0.2 miles to a service road to the northeast. Exit right and proceed in a northeasterly direction along the service road approximately 0.5 miles to the proposed NBU 921-35G well pad. Continue in a northeasterly direction through the proposed NBU 921-35G well pad approximately 475 feet. Continue in a northeasterly then southeasterly direction approximately 0.2 miles along the service road to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 44.6 miles in a southerly direction.

WELL DETAILS: P_NBU 921-35H4BS									
GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14527328.31	2057595.69	39° 59' 38.234 N	109° 30' 37.966 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	9659.00	49.17	-2.52	14527377.43	2057592.35	39° 59' 38.720 N	109° 30' 37.998 W	Circle (Radius: 25.00)	
- plan hits target center									



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	
1727.78	2.56	357.06	1727.73	2.85	-0.15	2.00	357.06	2.85	
2695.02	2.56	357.06	2694.02	45.92	-2.35	0.00	0.00	45.98	
2841.05	0.00	0.00	2840.00	49.17	-2.52	1.75	180.00	49.23	
9660.05	0.00	0.00	9659.00	49.17	-2.52	0.00	0.00	49.23	PBHL_NBU 921-35H4BS
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N							FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 35 T9S R21E System Datum: Mean Sea Level							TVDPath	MDPath	Formation
							1434.00	1434.00	GREEN RIVER
							4729.00	4730.05	WASATCH
			7492.00	7493.05	MESAVEREDE				
CASING DETAILS									
	TVD	MD	Name	Size					
	2589.00	2589.90	8 5/8"	8.625					



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-35H PAD

P_NBU 921-35H4BS

P_NBU 921-35H4BS

Plan: PLAN #1 11-8-10 RHS

Standard Planning Report

09 November, 2010



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 921-35H PAD, SECTION 35 T9S R21E				
Site Position:		Northing:	14,527,300.44 usft	Latitude:	39° 59' 37.957 N
From:	Lat/Long	Easting:	2,057,605.96 usft	Longitude:	109° 30' 37.840 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.96 °

Well	P_NBU 921-35H4BS, 2124' FNL 493' FEL					
Well Position	+N/-S	28.04 ft	Northing:	14,527,328.31 usft	Latitude:	39° 59' 38.234 N
	+E/-W	-9.80 ft	Easting:	2,057,595.68 usft	Longitude:	109° 30' 37.966 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,098.00 ft

Wellbore	P_NBU 921-35H4BS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/08/2010	11.16	65.88	52,383

Design	PLAN #1 11-8-10 RHS				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	357.06	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,727.78	2.56	357.06	1,727.73	2.85	-0.15	2.00	2.00	0.00	357.06	
2,695.02	2.56	357.06	2,694.02	45.92	-2.35	0.00	0.00	0.00	0.00	
2,841.05	0.00	0.00	2,840.00	49.17	-2.52	1.75	-1.75	0.00	180.00	
9,660.05	0.00	0.00	9,659.00	49.17	-2.52	0.00	0.00	0.00	0.00	PBHL_NBU 921-35H4

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,434.00	0.00	0.00	1,434.00	0.00	0.00	0.00	0.00	0.00	0.00	
GREEN RIVER										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
1,700.00	2.00	357.06	1,699.98	1.74	-0.09	1.75	2.00	2.00	0.00	
1,727.78	2.56	357.06	1,727.73	2.85	-0.15	2.85	2.00	2.00	0.00	
Start 967.25 hold at 1727.78 MD										
1,800.00	2.56	357.06	1,799.89	6.06	-0.31	6.07	0.00	0.00	0.00	
1,900.00	2.56	357.06	1,899.79	10.51	-0.54	10.53	0.00	0.00	0.00	
2,000.00	2.56	357.06	1,999.69	14.97	-0.77	14.99	0.00	0.00	0.00	
2,100.00	2.56	357.06	2,099.59	19.42	-1.00	19.45	0.00	0.00	0.00	
2,200.00	2.56	357.06	2,199.49	23.87	-1.22	23.90	0.00	0.00	0.00	
2,300.00	2.56	357.06	2,299.39	28.33	-1.45	28.36	0.00	0.00	0.00	
2,400.00	2.56	357.06	2,399.29	32.78	-1.68	32.82	0.00	0.00	0.00	
2,500.00	2.56	357.06	2,499.19	37.23	-1.91	37.28	0.00	0.00	0.00	
2,589.90	2.56	357.06	2,589.00	41.24	-2.11	41.29	0.00	0.00	0.00	
8 5/8"										
2,600.00	2.56	357.06	2,599.09	41.68	-2.14	41.74	0.00	0.00	0.00	
2,695.02	2.56	357.06	2,694.02	45.92	-2.35	45.98	0.00	0.00	0.00	
Start Drop -1.75										
2,700.00	2.47	357.06	2,698.99	46.13	-2.37	46.19	1.75	-1.75	0.00	
2,800.00	0.72	357.06	2,798.95	48.91	-2.51	48.98	1.75	-1.75	0.00	
2,841.05	0.00	0.00	2,840.00	49.17	-2.52	49.23	1.75	-1.75	0.00	
Start 6819.00 hold at 2841.05 MD										
2,900.00	0.00	0.00	2,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,000.00	0.00	0.00	2,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,000.00	0.00	0.00	3,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,730.05	0.00	0.00	4,729.00	49.17	-2.52	49.23	0.00	0.00	0.00	
WASATCH										
4,800.00	0.00	0.00	4,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,493.05	0.00	0.00	7,492.00	49.17	-2.52	49.23	0.00	0.00	0.00	
MESAVEREDE										
7,500.00	0.00	0.00	7,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,698.95	49.17	-2.52	49.23	0.00	0.00	0.00	



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-35H PAD

P_NBU 921-35H4BS

P_NBU 921-35H4BS

Plan: PLAN #1 11-8-10 RHS

Standard Planning Report - Geographic

09 November, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 921-35H PAD, SECTION 35 T9S R21E				
Site Position:		Northing:	14,527,300.44 usft	Latitude:	39° 59' 37.957 N
From:	Lat/Long	Easting:	2,057,605.96 usft	Longitude:	109° 30' 37.840 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.96 °

Well	P_NBU 921-35H4BS, 2124' FNL 493' FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,527,328.31 usft	Latitude:	39° 59' 38.234 N
	+E/-W	0.00 ft	Easting:	2,057,595.68 usft	Longitude:	109° 30' 37.966 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,098.00 ft

Wellbore	P_NBU 921-35H4BS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/08/2010	11.16	65.88	52,383

Design	PLAN #1 11-8-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	357.06

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,727.78	2.56	357.06	1,727.73	2.85	-0.15	2.00	2.00	0.00	357.06	
2,695.02	2.56	357.06	2,694.02	45.92	-2.35	0.00	0.00	0.00	0.00	
2,841.05	0.00	0.00	2,840.00	49.17	-2.52	1.75	-1.75	0.00	180.00	
9,660.05	0.00	0.00	9,659.00	49.17	-2.52	0.00	0.00	0.00	0.00	PBHL_NBU 921-35H4

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
100.00	0.00	0.00	100.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
200.00	0.00	0.00	200.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
300.00	0.00	0.00	300.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
400.00	0.00	0.00	400.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
500.00	0.00	0.00	500.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
600.00	0.00	0.00	600.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
700.00	0.00	0.00	700.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
800.00	0.00	0.00	800.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
900.00	0.00	0.00	900.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,434.00	0.00	0.00	1,434.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
GREEN RIVER										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,328.31	2,057,595.68	39° 59' 38.234 N	109° 30' 37.966 W	
Start Build 2.00										
1,700.00	2.00	357.06	1,699.98	1.74	-0.09	14,527,330.05	2,057,595.57	39° 59' 38.252 N	109° 30' 37.967 W	
1,727.78	2.56	357.06	1,727.73	2.85	-0.15	14,527,331.16	2,057,595.49	39° 59' 38.263 N	109° 30' 37.967 W	
Start 967.25 hold at 1727.78 MD										
1,800.00	2.56	357.06	1,799.89	6.06	-0.31	14,527,334.37	2,057,595.27	39° 59' 38.294 N	109° 30' 37.970 W	
1,900.00	2.56	357.06	1,899.79	10.51	-0.54	14,527,338.82	2,057,594.97	39° 59' 38.338 N	109° 30' 37.973 W	
2,000.00	2.56	357.06	1,999.69	14.97	-0.77	14,527,343.26	2,057,594.67	39° 59' 38.382 N	109° 30' 37.975 W	
2,100.00	2.56	357.06	2,099.59	19.42	-1.00	14,527,347.71	2,057,594.36	39° 59' 38.426 N	109° 30' 37.978 W	
2,200.00	2.56	357.06	2,199.49	23.87	-1.22	14,527,352.16	2,057,594.06	39° 59' 38.470 N	109° 30' 37.981 W	
2,300.00	2.56	357.06	2,299.39	28.33	-1.45	14,527,356.61	2,057,593.76	39° 59' 38.514 N	109° 30' 37.984 W	
2,400.00	2.56	357.06	2,399.29	32.78	-1.68	14,527,361.06	2,057,593.46	39° 59' 38.558 N	109° 30' 37.987 W	
2,500.00	2.56	357.06	2,499.19	37.23	-1.91	14,527,365.51	2,057,593.15	39° 59' 38.602 N	109° 30' 37.990 W	
2,589.90	2.56	357.06	2,589.00	41.24	-2.11	14,527,369.51	2,057,592.88	39° 59' 38.642 N	109° 30' 37.993 W	
8 5/8"										
2,600.00	2.56	357.06	2,599.09	41.68	-2.14	14,527,369.96	2,057,592.85	39° 59' 38.646 N	109° 30' 37.993 W	
2,695.02	2.56	357.06	2,694.02	45.92	-2.35	14,527,374.18	2,057,592.56	39° 59' 38.688 N	109° 30' 37.996 W	
Start Drop -1.75										
2,700.00	2.47	357.06	2,698.99	46.13	-2.37	14,527,374.40	2,057,592.55	39° 59' 38.690 N	109° 30' 37.996 W	
2,800.00	0.72	357.06	2,798.95	48.91	-2.51	14,527,377.17	2,057,592.36	39° 59' 38.718 N	109° 30' 37.998 W	
2,841.05	0.00	0.00	2,840.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
Start 6819.00 hold at 2841.05 MD										
2,900.00	0.00	0.00	2,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,000.00	0.00	0.00	2,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,100.00	0.00	0.00	3,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,200.00	0.00	0.00	3,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,300.00	0.00	0.00	3,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,400.00	0.00	0.00	3,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,500.00	0.00	0.00	3,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,600.00	0.00	0.00	3,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,700.00	0.00	0.00	3,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,800.00	0.00	0.00	3,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
3,900.00	0.00	0.00	3,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,000.00	0.00	0.00	3,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,100.00	0.00	0.00	4,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,200.00	0.00	0.00	4,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,300.00	0.00	0.00	4,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,400.00	0.00	0.00	4,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,500.00	0.00	0.00	4,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,600.00	0.00	0.00	4,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,700.00	0.00	0.00	4,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,730.05	0.00	0.00	4,729.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
WASATCH										
4,800.00	0.00	0.00	4,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
4,900.00	0.00	0.00	4,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,000.00	0.00	0.00	4,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,100.00	0.00	0.00	5,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,200.00	0.00	0.00	5,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,300.00	0.00	0.00	5,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,400.00	0.00	0.00	5,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,500.00	0.00	0.00	5,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,600.00	0.00	0.00	5,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,700.00	0.00	0.00	5,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,800.00	0.00	0.00	5,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
5,900.00	0.00	0.00	5,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,000.00	0.00	0.00	5,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,100.00	0.00	0.00	6,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,200.00	0.00	0.00	6,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,300.00	0.00	0.00	6,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,400.00	0.00	0.00	6,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,500.00	0.00	0.00	6,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,600.00	0.00	0.00	6,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,700.00	0.00	0.00	6,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,800.00	0.00	0.00	6,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
6,900.00	0.00	0.00	6,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,000.00	0.00	0.00	6,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,100.00	0.00	0.00	7,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,200.00	0.00	0.00	7,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,300.00	0.00	0.00	7,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,400.00	0.00	0.00	7,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,493.05	0.00	0.00	7,492.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
MESAVEREDE										
7,500.00	0.00	0.00	7,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,600.00	0.00	0.00	7,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,700.00	0.00	0.00	7,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,800.00	0.00	0.00	7,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
7,900.00	0.00	0.00	7,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,000.00	0.00	0.00	7,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,100.00	0.00	0.00	8,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,200.00	0.00	0.00	8,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,300.00	0.00	0.00	8,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,400.00	0.00	0.00	8,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,500.00	0.00	0.00	8,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,600.00	0.00	0.00	8,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,700.00	0.00	0.00	8,698.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
8,800.00	0.00	0.00	8,798.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
8,900.00	0.00	0.00	8,898.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,000.00	0.00	0.00	8,998.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,100.00	0.00	0.00	9,098.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,200.00	0.00	0.00	9,198.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,300.00	0.00	0.00	9,298.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,400.00	0.00	0.00	9,398.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,500.00	0.00	0.00	9,498.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,600.00	0.00	0.00	9,598.95	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
9,660.05	0.00	0.00	9,659.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
PBHL_NBU 921-35H4BS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL_NBU 921-35H4B:	0.00	0.00	9,659.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	
- plan hits target center										
- Circle (radius 25.00)										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,589.90	2,589.00	8 5/8"	8.625	11.000		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,434.00	1,434.00	GREEN RIVER				
4,730.05	4,729.00	WASATCH				
7,493.05	7,492.00	MESAVEREDE				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,600.00	1,600.00	0.00	0.00	Start Build 2.00	
1,727.78	1,727.73	2.85	-0.15	Start 967.25 hold at 1727.78 MD	
2,695.02	2,694.02	45.92	-2.35	Start Drop -1.75	
2,841.05	2,840.00	49.17	-2.52	Start 6819.00 hold at 2841.05 MD	
9,660.05	9,659.00	49.17	-2.52	TD at 9660.05	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_NBU 921-35H4BS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)
Site:	NBU 921-35H PAD	North Reference:	True
Well:	P_NBU 921-35H4BS	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_NBU 921-35H4BS		
Design:	PLAN #1 11-8-10 RHS		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,800.00	0.00	0.00	8,798.95	49.17	-2.52	49.23	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,898.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,998.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,098.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,198.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,298.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,398.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,498.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,598.95	49.17	-2.52	49.23	0.00	0.00	0.00	
9,660.05	0.00	0.00	9,659.00	49.17	-2.52	49.23	0.00	0.00	0.00	
PBHL_NBU 921-35H4BS										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_NBU 921-35H4B: - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,659.00	49.17	-2.52	14,527,377.43	2,057,592.34	39° 59' 38.720 N	109° 30' 37.998 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,589.90	2,589.00	8 5/8"	8.625	11.000		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,434.00	1,434.00	GREEN RIVER				
4,730.05	4,729.00	WASATCH				
7,493.05	7,492.00	MESAVEREDE				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,600.00	1,600.00	0.00	0.00	Start Build 2.00	
1,727.78	1,727.73	2.85	-0.15	Start 967.25 hold at 1727.78 MD	
2,695.02	2,694.02	45.92	-2.35	Start Drop -1.75	
2,841.05	2,840.00	49.17	-2.52	Start 6819.00 hold at 2841.05 MD	
9,660.05	9,659.00	49.17	-2.52	TD at 9660.05	

NBU 921-35H1BS

Surface: 2,143' FNL 486' FEL (SE/4NE/4)
BHL: 1,411' FNL 494' FEL (SE/4NE/4)

NBU 921-35H1CS

Surface: 2,133' FNL 490' FEL (SE/4NE/4)
BHL: 1,743' FNL 495' FEL (SE/4NE/4)

NBU 921-35H4BS

Surface: 2,124' FNL 493' FEL (SE/4NE/4)
BHL: 2,075' FNL 495' FEL (SE/4NE/4)

NBU 921-35H4CS

Surface: 2,152' FNL 483' FEL (SE/4NE/4)
BHL: 2,407' FNL 495' FEL (SE/4NE/4)

Pad: NBU 921-35H
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.

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 pad will expand the existing pad for the CIGE 239. This well location is a producing vertical well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

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:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,610'$ and the individual segments are broken up as follows:

$\pm 490'$ (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.

$\pm 1,120'$ (0.2 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-35G pad intersection.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,610'$ and the individual segments are broken up as follows:

- $\pm 490'$ (0.1 miles) –New 6” buried liquid pipeline from the separator to the edge of the pad.
- $\pm 1,120'$ (0.2 miles) –New 6” buried liquid pipeline from the edge of pad to the NBU 921-35G pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

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.

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).

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 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:

None

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

November 19, 2010
Date



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
DENVER, CO 80217-3779

October 27, 2010

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

Re: Directional Drilling R649-3-11
NBU 921-35H4BS
T9S-R21E
Section 35: SWNE (Surf), SWNE (Bottom)
Surface: 2124' FNL, 493' FEL
Bottom Hole: 2075' FNL, 495' FEL
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 921-35H4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

Sincerely,

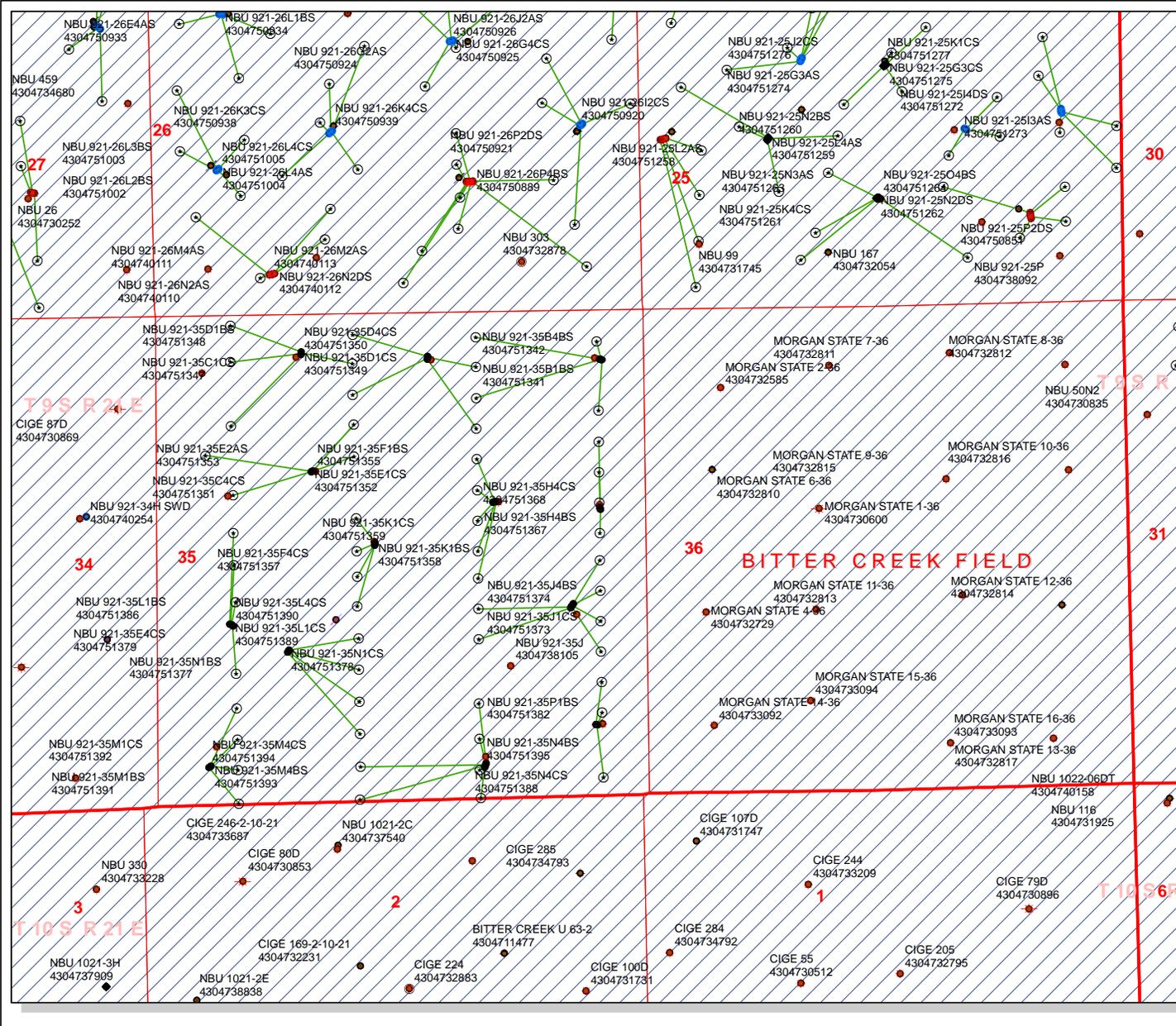
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

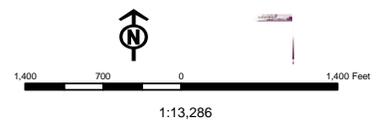
Joe Matney
Sr. Staff Landman

API Number: 4304751367
Well Name: NBU 921-35H4BS
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**
- 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**
- <call other values>
- Status
- APD - Approved Permit
 - DRL - Spudded (Drilling Commenced)
 - GF - 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
 - WW - Water Injection Well
 - WSW - Water Supply Well



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 1, 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 wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

NBU 921-35F2 Pad

43-047-51355	NBU 921-35F1BS	Sec 35 T09S R21E 1684 FNL 1709 FWL
	BHL	Sec 35 T09S R21E 1531 FNL 2146 FWL

NBU 921-35F4 PAD

43-047-51356	NBU 921-35F4BS	Sec 35 T09S R21E 2473 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2210 FNL 2158 FWL

43-047-51357	NBU 921-35F4CS	Sec 35 T09S R21E 2483 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2567 FNL 2159 FWL

43-047-51358	NBU 921-35K1BS	Sec 35 T09S R21E 2493 FNL 2358 FWL
	BHL	Sec 35 T09S R21E 2484 FSL 2161 FWL

43-047-51359	NBU 921-35K1CS	Sec 35 T09S R21E 2503 FNL 2357 FWL
	BHL	Sec 35 T09S R21E 2163 FSL 2155 FWL

NBU 921-35G Pad

43-047-51360	NBU 921-35G1BS	Sec 35 T09S R21E 2053 FNL 1633 FEL
	BHL	Sec 35 T09S R21E 1583 FNL 1819 FEL

43-047-51361	NBU 921-35G1CS	Sec 35 T09S R21E 2053 FNL 1653 FEL
	BHL	Sec 35 T09S R21E 1916 FNL 1820 FEL

43-047-51362	NBU 921-35G4BS	Sec 35 T09S R21E 2053 FNL 1643 FEL
	BHL	Sec 35 T09S R21E 2250 FNL 1822 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51363	NBU 921-35G4CS	Sec 35 T09S R21E 2053 FNL 1623 FEL
	BHL	Sec 35 T09S R21E 2583 FNL 1823 FEL
43-047-51364	NBU 921-35J1BS	Sec 35 T09S R21E 2053 FNL 1613 FEL
	BHL	Sec 35 T09S R21E 2419 FSL 1824 FEL
NBU 921-35H PAD		
43-047-51365	NBU 921-35H1BS	Sec 35 T09S R21E 2143 FNL 0486 FEL
	BHL	Sec 35 T09S R21E 1411 FNL 0494 FEL
43-047-51366	NBU 921-35H1CS	Sec 35 T09S R21E 2133 FNL 0490 FEL
	BHL	Sec 35 T09S R21E 1743 FNL 0495 FEL
43-047-51367	NBU 921-35H4BS	Sec 35 T09S R21E 2124 FNL 0493 FEL
	BHL	Sec 35 T09S R21E 2075 FNL 0495 FEL
43-047-51368	NBU 921-35H4CS	Sec 35 T09S R21E 2152 FNL 0483 FEL
	BHL	Sec 35 T09S R21E 2407 FNL 0495 FEL
NBU 921-35I PAD		
43-047-51369	NBU 921-35I1BS	Sec 35 T09S R21E 2106 FSL 0794 FEL
	BHL	Sec 35 T09S R21E 2572 FSL 0496 FEL
43-047-51370	NBU 921-35I1CS	Sec 35 T09S R21E 2098 FSL 0800 FEL
	BHL	Sec 35 T09S R21E 2240 FSL 0496 FEL
43-047-51371	NBU 921-35I4BS	Sec 35 T09S R21E 2090 FSL 0806 FEL
	BHL	Sec 35 T09S R21E 1908 FSL 0496 FEL
43-047-51372	NBU 921-35I4CS	Sec 35 T09S R21E 2082 FSL 0811 FEL
	BHL	Sec 35 T09S R21E 1577 FSL 0497 FEL
43-047-51373	NBU 921-35J1CS	Sec 35 T09S R21E 2074 FSL 0817 FEL
	BHL	Sec 35 T09S R21E 2086 FSL 1825 FEL
43-047-51374	NBU 921-35J4BS	Sec 35 T09S R21E 2066 FSL 0823 FEL
	BHL	Sec 35 T09S R21E 1752 FSL 1826 FEL
NBU 921-35K PAD		
43-047-51375	NBU 921-35K4BS	Sec 35 T09S R21E 1710 FSL 1409 FWL
	BHL	Sec 35 T09S R21E 1814 FSL 2165 FWL
43-047-51376	NBU 921-35K4CS	Sec 35 T09S R21E 1702 FSL 1403 FWL
	BHL	Sec 35 T09S R21E 1469 FSL 2163 FWL
43-047-51377	NBU 921-35N1BS	Sec 35 T09S R21E 1694 FSL 1397 FWL
	BHL	Sec 35 T09S R21E 1124 FSL 2161 FWL
43-047-51378	NBU 921-35N1CS	Sec 35 T09S R21E 1686 FSL 1392 FWL
	BHL	Sec 35 T09S R21E 0771 FSL 2162 FWL

API #	WELL NAME	LOCATION									
NBU 921-35L PAD											
43-047-51379	NBU 921-35E4CS	Sec	35	T09S	R21E	2016	FSL	0768	FWL		
	BHL	Sec	35	T09S	R21E	2343	FNL	0823	FWL		
43-047-51386	NBU 921-35L1BS	Sec	35	T09S	R21E	2013	FSL	0778	FWL		
	BHL	Sec	35	T09S	R21E	2658	FSL	0826	FWL		
43-047-51389	NBU 921-35L1CS	Sec	35	T09S	R21E	2009	FSL	0787	FWL		
	BHL	Sec	35	T09S	R21E	2255	FSL	0835	FWL		
43-047-51390	NBU 921-35L4CS	Sec	35	T09S	R21E	2005	FSL	0796	FWL		
	BHL	Sec	35	T09S	R21E	1470	FSL	0832	FWL		
NBU 921-35P PAD											
43-047-51380	NBU 921-35P4CS	Sec	35	T09S	R21E	0781	FSL	0557	FEL		
	BHL	Sec	35	T09S	R21E	0208	FSL	0489	FEL		
43-047-51381	NBU 921-35P1CS	Sec	35	T09S	R21E	0778	FSL	0547	FEL		
	BHL	Sec	35	T09S	R21E	0913	FSL	0497	FEL		
43-047-51382	NBU 921-35P1BS	Sec	35	T09S	R21E	0785	FSL	0566	FEL		
	BHL	Sec	35	T09S	R21E	1245	FSL	0497	FEL		
NBU 921-35O PAD											
43-047-51383	NBU 921-35O4CS	Sec	35	T09S	R21E	0360	FSL	1780	FEL		
	BHL	Sec	35	T09S	R21E	0026	FSL	1826	FEL		
43-047-51384	NBU 921-35O4BS	Sec	35	T09S	R21E	0370	FSL	1777	FEL		
	BHL	Sec	35	T09S	R21E	0336	FSL	1833	FEL		
43-047-51385	NBU 921-35O1CS	Sec	35	T09S	R21E	0398	FSL	1766	FEL		
	BHL	Sec	35	T09S	R21E	0674	FSL	1828	FEL		
43-047-51387	NBU 921-35O1BS	Sec	35	T09S	R21E	0407	FSL	1763	FEL		
	BHL	Sec	35	T09S	R21E	1059	FSL	1833	FEL		
43-047-51388	NBU 921-35N4CS	Sec	35	T09S	R21E	0379	FSL	1773	FEL		
	BHL	Sec	35	T09S	R21E	0051	FSL	2153	FWL		
43-047-51395	NBU 921-35N4BS	Sec	35	T09S	R21E	0388	FSL	1770	FEL		
	BHL	Sec	35	T09S	R21E	0410	FSL	2164	FWL		
NBU 921-35M PAD											
43-047-51391	NBU 921-35M1BS	Sec	35	T09S	R21E	0469	FSL	0526	FWL		
	BHL	Sec	35	T09S	R21E	1096	FSL	0830	FWL		
43-047-51392	NBU 921-35M1CS	Sec	35	T09S	R21E	0474	FSL	0534	FWL		
	BHL	Sec	35	T09S	R21E	0760	FSL	0830	FWL		

API #	WELL NAME	LOCATION
43-047-51393	NBU 921-35M4BS	Sec 35 T09S R21E 0478 FSL 0543 FWL BHL Sec 35 T09S R21E 0423 FSL 0831 FWL
43-047-51394	NBU 921-35M4CS	Sec 35 T09S R21E 0464 FSL 0517 FWL BHL Sec 35 T09S R21E 0055 FSL 0834 FWL

This office has no objection to permitting the wells 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: 2010.12.01 10:03:00 -07'00'

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

MCoulthard:mc:12-1-10

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35H4BS 4304751367			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2589	9659		
Previous Shoe Setting Depth (TVD)	40	2589		
Max Mud Weight (ppg)	8.3	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5917	11.8		

Calculations	Surf String	8.625	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	1121	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	810	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	551	NO <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	560	NO <input type="text" value="Reasonable depth in area"/>
Required Casing/BOPE Test Pressure=		2373	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

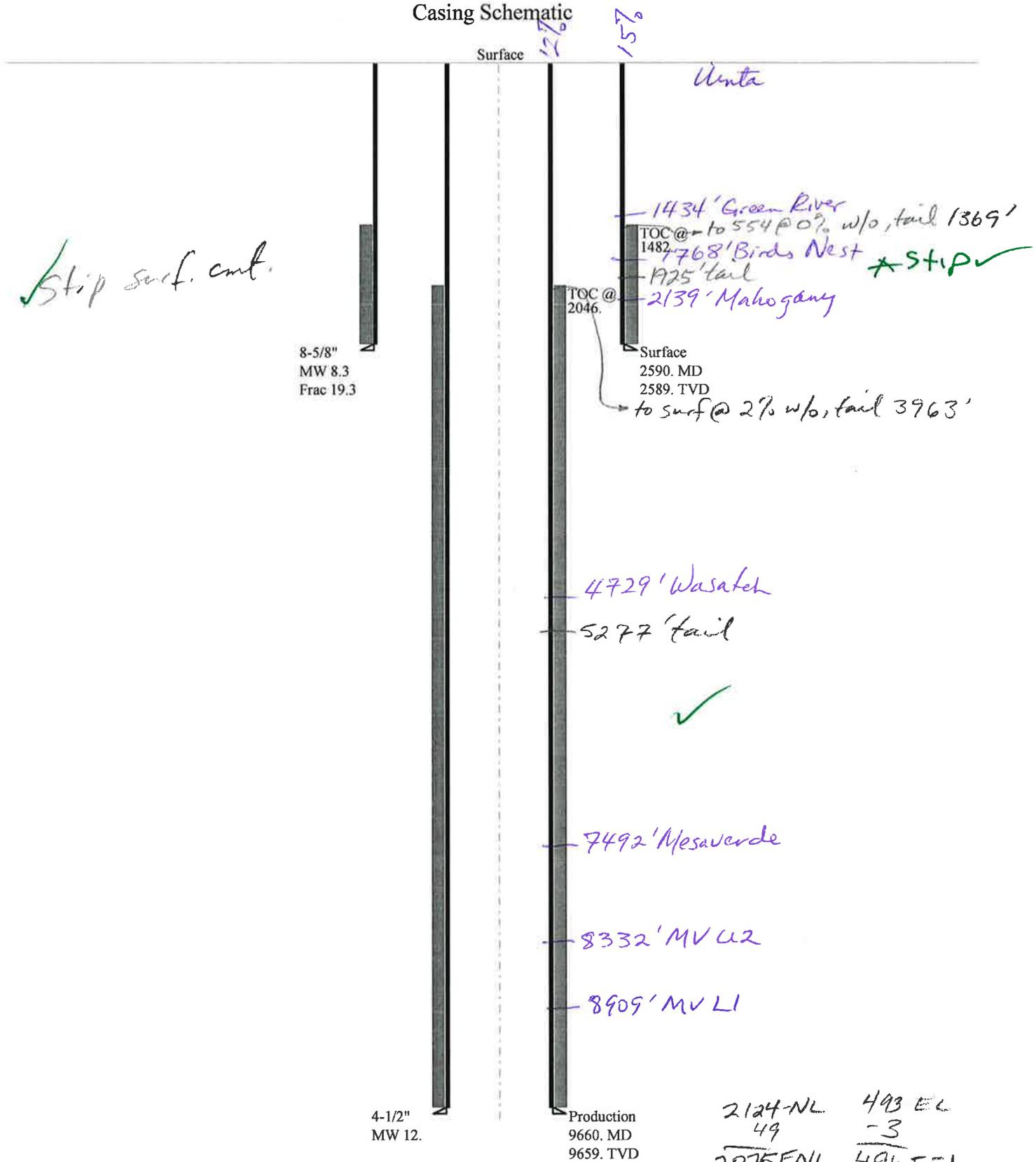
Calculations	Prod String	4.500	"
Max BHP (psi)	$.052 * \text{Setting Depth} * \text{MW} =$	6027	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	4868	YES <input type="text"/>
MASP (Gas/Mud) (psi)	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	3902	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4472	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2589	psi *Assumes 1psi/ft frac gradient

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

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

43047513670000 NBU 921-35H4BS

Casing Schematic



2124-NL	493 EL
49	-3
<u>2075FNL</u>	<u>496 FEL</u>
SENE SEC 35-9S-21E	

Well name:	43047513670000 NBU 921-35H4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-51367
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 8.330 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 110 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 1,482 ft

Burst

Max anticipated surface pressure: 2,279 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,590 psi

No backup mud specified.

Tension:

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

Tension is based on air weight.
 Neutral point: 2,272 ft

Directional Info - Build & Drop

Kick-off point 1600 ft
 Departure at shoe: 41 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 2.55 °

Re subsequent strings:

Next setting depth: 9,659 ft
 Next mud weight: 12.000 ppg
 Next setting BHP: 6,021 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,590 ft
 Injection pressure: 2,590 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	2590	8.625	28.00	I-55	LT&C	2589	2590	7.892	102564
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	1120	1880	1.678	2590	3390	1.31	72.5	348	4.80 J

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

Phone: 801 538-5357
 FAX: 801-359-3940

Date: December 13, 2010
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2589 ft, a mud weight of 8.33 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

Well name:	43047513670000 NBU 921-35H4BS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-51367
Location:	UINTAH COUNTY		

Design parameters:

Collapse

Mud weight: 12.000 ppg
 Internal fluid density: 1.000 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 209 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: 2,046 ft

Burst

Max anticipated surface pressure: 3,896 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 6,021 psi

No backup mud specified.

Tension:

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

Directional Info - Build & Drop

Kick-off point 1600 ft
 Departure at shoe: 49 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Tension is based on air weight.

Neutral point: 7,927 ft

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	9660	4.5	11.60	I-80	LT&C	9659	9660	3.875	127512
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	5519	6360	1.152	6021	7780	1.29	112	212	1.89 J

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

Phone: 801 538-5357
 FAX: 801-359-3940

Date: December 13, 2010
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9659 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to 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

From: Jim Davis
To: Bonner, Ed; Hill, Brad; Mason, Diana
CC: Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...
Date: 12/22/2010 5:49 AM
Subject: Kerr McGee APD approvals in 9S 21E Sec 35
Attachments: KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".

The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.

-Jim Davis

Well Name	API	Paleo Stipulations	Arch Stipulations
Kerr-McGee's NBU 921-35A1BS (U-07-MQ-1437b,i,p,s)		API #4304751339	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35A4CS (U-07-MQ-1437b,i,p,s)		API #4304751340	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B1BS (U-07-MQ-1437b,i,p,s)		API #4304751341	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B4BS (U-07-MQ-1437b,i,p,s)		API #4304751342	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B1CS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)		API #4304751343	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35B4CS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)		API #4304751344	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C1BS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)		API #4304751345	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C4BS (U-07-MQ-1437b,i,p,s; eligible site 42Un6461, just south of proposed pipeline needs to be avoided)		API #4304751346	IPC 10-98 Spot Paleo Monitoring
Kerr-McGee's NBU 921-35C1CS (U-07-MQ-1437b,i,p,s)		API #4304751347	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D1BS (U-07-MQ-1437b,i,p,s)		API #4304751348	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D1CS (U-07-MQ-1437b,i,p,s)		API #4304751349	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35D4CS (U-07-MQ-1437b,i,p,s)		API #4304751350	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35C4CS (U-07-MQ-1437b,i,p,s)		API #4304751351	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E1CS (U-07-MQ-1437b,i,p,s)		API #4304751352	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E2AS (U-07-MQ-1437b,i,p,s)		API #4304751353	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F1BS (U-07-MQ-1437b,i,p,s)		API #4304751355	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F4BS (U-07-MQ-1437b,i,p,s)		API #4304751356	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35F4CS (U-07-MQ-1437b,i,p,s)		API #4304751357	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K1BS		API #4304751358	IPC 10-97 Full Paleo Monitoring (U-07-MQ-1437b,i,p,s)

MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35K1CS	API #4304751359	IPC 10-97 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35G1BS	API #4304751360	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G1CS	API #4304751361	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4BS	API #4304751362	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35G4CS	API #4304751363	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35J1S	API #4304751364	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un2395, adjacent to the road)
Kerr-McGee's NBU 921-35H1BS	API #4304751365	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H1CS	API #4304751366	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4BS	API #4304751367	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35H4CS	API #4304751368	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1BS	API #4304751369	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I1CS	API #4304751370	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4BS	API #4304751371	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35I4CS	API #4304751372	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J1CS	API #4304751373	IPC 10-98 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35J4BS	API #4304751374	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4BS	API #4304751375	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35K4CS	API #4304751376	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1BS	API #4304751377	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35N1CS	API #4304751378	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35E4CS	API #4304751379	IPC 10-99 Spot Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P4CS	API #4304751380	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1CS	API #4304751381	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35P1BS	API #4304751382	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s)
Kerr-McGee's NBU 921-35O4CS	API #4304751383	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O4BS	API #4304751384	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35O1CS	API #4304751385	IPC 10-100 Full Paleo Monitoring	(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)
Kerr-McGee's NBU 921-35L1BS	API #4304751386	IPC 10-99 Spot Paleo Monitoring	

(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35O1BS	API #4304751387	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		
Kerr-McGee's NBU 921-35N4CS	API #4304751388	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		
Kerr-McGee's NBU 921-35L1CS	API #4304751389	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35L4CS	API #4304751390	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1BS	API #4304751391	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1CS	API #4304751392	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4BS	API #4304751393	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4CS	API #4304751394	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35N4BS	API #4304751395	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant site, 42Un1836, adjacent to pipeline)		

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name NBU 921-35H4BS
API Number 43047513670000 **APD No** 3200 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SENE **Sec** 35 **Tw** 9.0S **Rng** 21.0E 2124 FNL 493 FEL
GPS Coord (UTM) 627148 4427929 **Surface Owner**

Participants

See other comments:

Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35H pad will be created by significantly enlarging the existing pad of the CIGE 239 gas well. It will be enlarged in all directions. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS and MBU 921-35H4CS. The site is on the west slope of a hill in moderately gentle terrain. A swale exists to the northeast of the location. A drainage to the northwest is spilling a minor amount of sediment onto the location but a diversion is not warranted. A major tributary of Sand Wash is about 3/10 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

- Grazing
- Wildlife Habitat
- Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 352 Length 455	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation is a poor desert shrub type, which includes rabbit brush, Indian ricegrass, black sage, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

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

Soil Type and Characteristics

Surface soils are a shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors

Site Ranking

Distance to Groundwater (feet)	100 to 200	5
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
	Final Score	40

1 Sensitivity Level

Characteristics / Requirements

The proposed reserve pit is 120' x 260' x 12' deep located in a cut on the southwest corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

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

Other Observations / Comments

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett
Evaluator

11/30/2010
Date / Time

Application for Permit to Drill

Statement of Basis

12/27/2010

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3200	43047513670000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 921-35H4BS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	SENE 35 9S 21E S 2124 FNL 493 FEL		GPS Coord (UTM)	627161E 4427933N	

Geologic Statement of Basis

Kerr McGee proposes to set 2,590' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,400'. 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
APD Evaluator

12/20/2010
Date / Time

Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35H pad will be created by significantly enlarging the existing pad of the CIGE 239 gas well. It will be enlarged in all directions. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS and MBU 921-35H4CS. The site is on the west slope of a hill in moderately gentle terrain. A swale exists to the northeast of the location. A drainage to the northwest is spilling a minor amount of sediment onto the location but a diversion is not warranted. A major tributary of Sand Wash is about 3/10 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett
Onsite Evaluator

11/30/2010
Date / Time

Application for Permit to Drill Statement of Basis

12/27/2010

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 11/23/2010

API NO. ASSIGNED: 43047513670000

WELL NAME: NBU 921-35H4BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SENE 35 090S 210E

Permit Tech Review:

SURFACE: 2124 FNL 0493 FEL

Engineering Review:

BOTTOM: 2075 FNL 0495 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99390

LONGITUDE: -109.51049

UTM SURF EASTINGS: 627161.00

NORTHINGS: 4427933.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22582

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

Commingling Approved

LOCATION AND SITING:

- R649-2-3.
Unit: NATURAL BUTTES
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
Board Cause No: Cause 173-14
Effective Date: 12/2/1999
Siting: Suspends General Siting
- R649-3-11. Directional Drill

Comments: Presite Completed

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



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 921-35H4BS
API Well Number: 43047513670000
Lease Number: ML 22582
Surface Owner: STATE
Approval Date: 12/27/2010

Issued to:

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

Authority:

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

Duration:

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

Commingling:

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

General:

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

Conditions of Approval:

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

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

Surface casing shall be cemented to the surface.

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

Additional Approvals:

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

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

Notification Requirements:

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

- Within 24 hours following the spudding of the well – contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://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		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047513670000	
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: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE 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	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 8/18/2011 <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>		
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 CONDUCTOR PIPE. CMT W/ 28 SX READY MIX. SPUD WELL LOCATION ON AUGUST 18, 2011 AT 08:00 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 8/18/2011	

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 NBU 921-35H4BS
 Qtr/Qtr SENE Section 35 Township 9S Range 21E
 Lease Serial Number ML-22582
 API Number 43047513657

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

Date/Time 08/17/2011 1400 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

RECEIVED

AUG 16 2011

DIV. OF OIL, GAS & MINING

Date/Time 09/10/2011 0800 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
LOVEL YOUNG AT 435.781.7051 FOR MORE

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: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751367	NBU 921-35H4BS		SENE	35	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	8/18/2011			<u>8/29/11</u>	
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 8/18/2011 AT 08:00 HRS. <u>BAL = SENE</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

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)

ANDY LYTLE

Name (Please Print)

Signature 

REGULATORY ANALYST

Title

8/22/2011

Date

RECEIVED

AUG 22 2011

(5/2000)

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
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11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 8/30/2011	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input checked="" type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 50px;" type="text"/>

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

The operator requests authorization to deepen this well to the Blackhawk Formation which resides in the Mesaverde Formation. Attached is the proposed drilling program. All other information remains the same as documented in the originally approved Application for Permit to Drill. Thank you.

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

Date: 08/31/2011
By: *Derek Duff*

NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 8/29/2011	

Well name:	43047513670000 NBU 921-35H4BS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-51367
Location:	UINTAH COUNTY	

Design parameters:

Collapse

Mud weight: 13.000 ppg
Internal fluid density: 1.000 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 224 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top:

858 ft w/128w0
Surf. shoe @ 2590' ✓

Burst

Max anticipated surface pressure: **4,887 psi**
Internal gradient: 0.220 psi/ft
Calculated BHP 7,248 psi

→ 5 in BOPE prepared ✓

No backup mud specified.

Tension:

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

Non-directional string.

Tension is based on air weight.
Neutral point: 8,646 ft

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	10732	4.5	11.60	HCP-110	LT&C	10732	10732	3.875	51707
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	6690	8650	1.293 ✓	7248	10690	1.47 ✓	124.5	279	2.24 J ✓

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

Phone: 801 538-5357
FAX: 801-359-3940

Date: August 31, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10732 ft, a mud weight of 13 ppg. An internal gradient of .052 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

RECEIVED Aug. 29, 2011

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 921-35H4BS**

Surface: 2124 FNL / 493 FEL SENE
 BHL: 2075 FNL / 495 FEL SENE

Section 35 T9S R21E

Unitah County, Utah
 Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1434	
Birds Nest	1768	Water
Mahogany	2139	Water
Wasatch	4729	Gas
Mesaverde	7492	Gas
MVU2	8332	Gas
MVL1	8909	Gas
Sego	9659	Gas
Castlegate	9724	Gas
MN5	10131	Gas
TVD	10731	
TD	10732	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 10731' TVD, approximately equals
7,131 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,771 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press. (MASP) = (Pore Pressure at next csg point -
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

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

9. Variances:

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

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

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

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

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

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

Background

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

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

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

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

Conclusion

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

10. **Other Information:**

Please refer to the attached Drilling Program.





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	BTC
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,590	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
PRODUCTION	4-1/2"	0 to 10,732	11.60	HCP-110	LTC or BTC	10,690	8,650	279,000	367,000
						1.19	1.19	2.80	3.68

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,090'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,222'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	20%	11.00	3.38
	TAIL	6,510'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,540	35%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Danny Showers

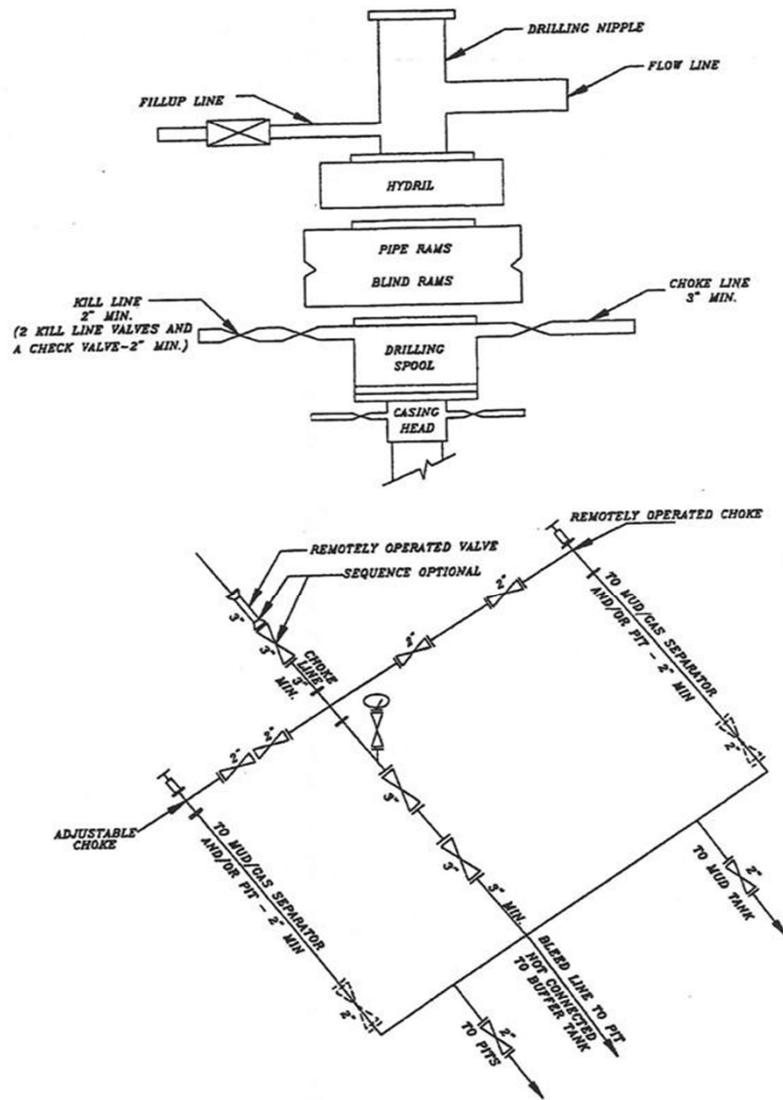
DATE: _____

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE: _____

EXHIBIT A
NBU 921-35H4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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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:
1. TYPE OF WELL Gas Well		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		8. WELL NAME and NUMBER: NBU 921-35H4BS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		9. API NUMBER: 43047513670000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
		COUNTY: UINTAH
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/6/2011		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU AIR RIG ON SEPT. 4, 2011. DRILLED SURFACE HOLE TO 2639'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
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		9/7/2011

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		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 921-35H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047513670000
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: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE 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	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 11/7/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>The operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT waiver, closed loop drilling option, and a production casing change. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see attachments. Thank you.</p>		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 11/7/2011

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 921-35H4BS**

Surface: 2124 FNL / 493 FEL SENE
 BHL: 2075 FNL / 495 FEL SENE

Section 35 T9S R21E

Unitah County, Utah
 Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,434'	
Birds Nest	1,768'	Water
Mahogany	2,139'	Water
Wasatch	4,729'	Gas
Mesaverde	7,492'	Gas
MVU2	8,332'	Gas
MVL1	8,909'	Gas
Sego	9,659'	Gas
Castlegate	9,724'	Gas
MN5	10,131'	Gas
TVD	10,731'	
TD	10,732'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 10731' TVD, approximately equals
7,082 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,771 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point -
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

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

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

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

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

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

Background

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

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

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

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

Variance for BOPE Requirements

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

Variance for Mud Material Requirements

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

Variance for Special Drilling Operation (surface equipment placement) Requirements

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

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

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

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

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

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

10. **Other Information:**

Please refer to the attached Drilling Program.

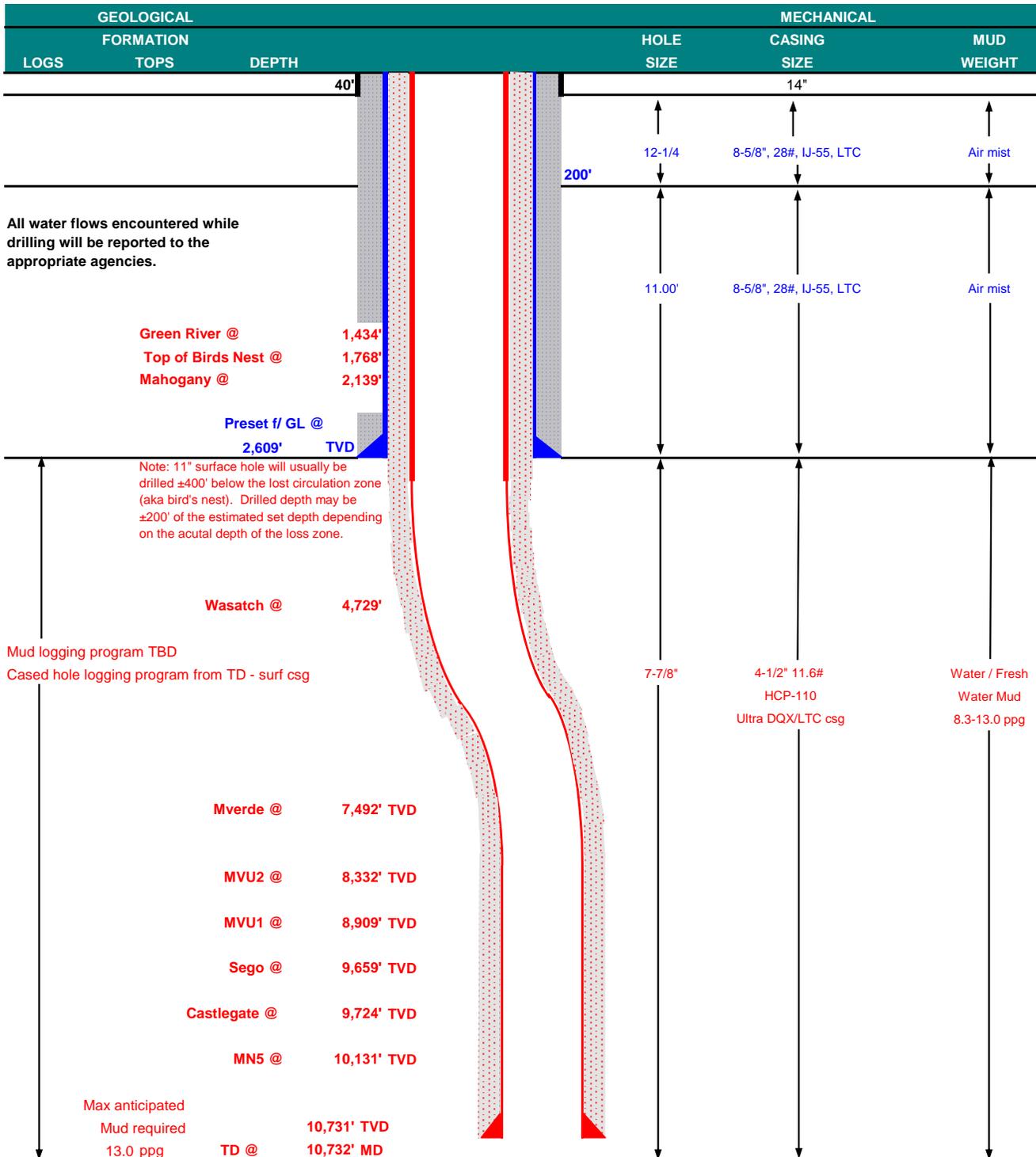
NBU 921-35H4CS

Drilling Program
5 of 7



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	November 7, 2011	
WELL NAME	NBU 921-35H4BS		TD	10,731'	TVD 10,732' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SENE	2124 FNL	493 FEL	Sec 35 T 9S R 21E	FINISHED ELEVATION 5,098'
	Latitude: 39.993954		Longitude: -109.510546		NAD 27
BTM HOLE LOCATION	SENE	2075 FNL	495 FEL	Sec 35 T 9S R 21E	
	Latitude: 39.994089		Longitude: -109.510555		NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,609	28.00	IJ-55	LTC	2.06	1.54	5.44	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.19		3.68
	4-1/2"	5,000 to 10,732'	11.60	HCP-110	LTC	1.19	1.19	5.24	

Surface casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe
Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,109'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00	3.82
Option 2							
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,222'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	20%	11.00	3.38
	TAIL	6,510'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,540	35%	14.30	1.31

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

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

FLOAT EQUIPMENT & CENTRALIZERS

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

ADDITIONAL INFORMATION

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

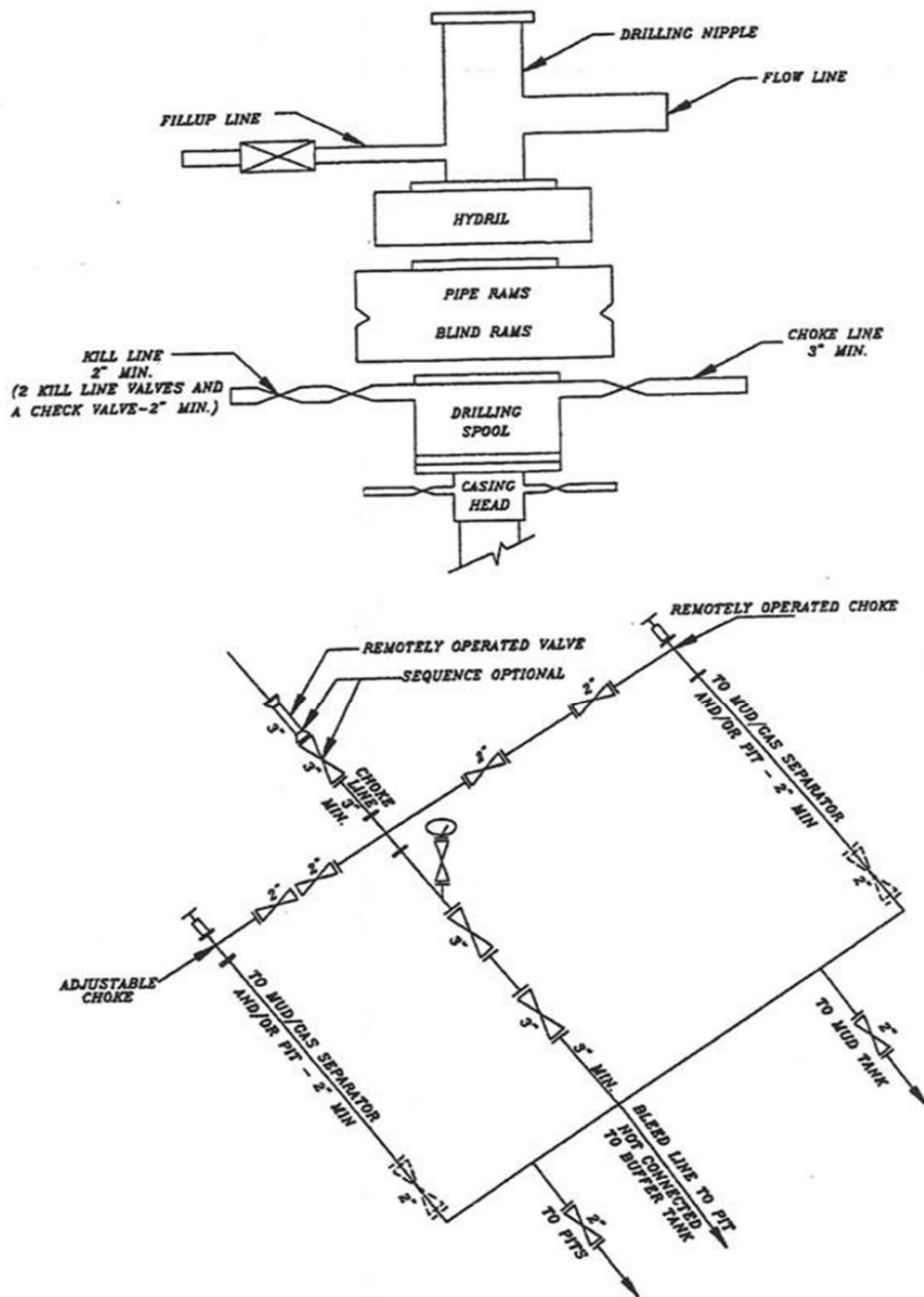
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 921-35H4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
PHONE NUMBER: 720 929-6511	8. WELL NAME and NUMBER: NBU 921-35H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S	9. API NUMBER: 43047513670000
	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: Uintah
	STATE: UTAH

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

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<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text" value="RIG REL - ACTS PIT"/>
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/30/2012			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input type="checkbox"/> DRILLING REPORT Report Date:			

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

MIRU ROTARY RIG. FINISHED DRILLING FROM 2639' TO 10,770' ON JAN. 27, 2012. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P RIG 298 ON JAN. 30, 2012 @ 12:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 January 31, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 1/31/2012	

Carol Daniels - NBU 921-35H4BS PROD CSG

TOGS R21E S-35 43-047-51367

From: "Anadarko - H&P 298" <hp298@gesmail.net>
To: <caroldaniels@utah.gov>
Date: 1/26/2012 10:08 AM
Subject: NBU 921-35H4BS PROD CSG

CAROL,
SHOULD TD TONITE THURSDAY 1/26/12 @ 10,770 , ON NBU 921-35H4BS,H&P 298,WE WILL BE RUNNING 41/2
PROD CSG & CEMENTING,ON SAT - 1/28/12,THEN MOVE RIG TO NBU 921-21A PAD ON MON 1/30/2012
Have a nice day

JIM MURRAY
H&P 298
435 828 0957

RECEIVED

JAN 26 2012

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
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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/13/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 03/13/2012 AT 1400 HRS. 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
 March 16, 2012

NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/14/2012	

RECEIVED

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

MAR 12 2013

DIV. OF OIL, GAS & MINING

AMENDED REPORT [X] FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL [] GAS WELL [X] DRY [] OTHER []
b. TYPE OF WORK: NEW WELL [X] 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: SENE 2124 FNL 493 FEL S35,T9S,R21E AT TOP PRODUCING INTERVAL REPORTED BELOW: SENE 2116 FNL 541 FEL S35,T9S,R21E AT TOTAL DEPTH: SENE 2084 FNL, 566 FEL S35,T9S,R21E
5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT or CA AGREEMENT NAME: UTU63047A
8. WELL NAME and NUMBER: NBU 921-35H4BS
9. API NUMBER: 4304751367
10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 35 9S 21E S
12. COUNTY: UINTAH 13. STATE: UTAH

14. DATE SPUDDED: 8/18/2011 15. DATE T.D. REACHED: 1/27/2012 16. DATE COMPLETED: 3/13/2012 ABANDONED [] READY TO PRODUCE [X]
17. ELEVATIONS (DF, RKB, RT, GL): 5098 GL
18. TOTAL DEPTH: MD 10,770 TVD 10,761 19. PLUG BACK T.D.: MD 10,715 TVD 10,706 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) BHV-SD/DSN/ACTR-CBL/GR/COLLARS
23. WAS WELL CORED? NO [X] YES [] (Submit analysis) WAS DST RUN? NO [X] YES [] (Submit report) DIRECTIONAL SURVEY? NO [] YES [X] (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)
Table with columns: HOLE SIZE, SIZE/GRADE, WEIGHT (#/L), TOP (MD), BOTTOM (MD), STAGE CEMENTER DEPTH, CEMENT TYPE & NO. OF SACKS, SLURRY VOLUME (BBL), CEMENT TOP **, AMOUNT PULLED.
Rows: 20" 14" STL 36.7# 0 40 28; 11" 8 5/8" IJ-55 28# 0 2,631 700; 7 7/8" 4 1/2" P-110 11.6# 0 10,759 1,888

25. TUBING RECORD
Table with columns: SIZE, DEPTH SET (MD), PACKER SET (MD), SIZE, DEPTH SET (MD), PACKER SET (MD), SIZE, DEPTH SET (MD), PACKER SET (MD).
Row: 2 3/8" 10,326

26. PRODUCING INTERVALS 27. PERFORATION RECORD
Table with columns: FORMATION NAME, TOP (MD), BOTTOM (MD), TOP (TVD), BOTTOM (TVD), INTERVAL (Top/Bot - MD), SIZE, NO. HOLES, PERFORATION STATUS.
Row (A) MESAVERDE 10,214 10,599 10,214 10,599 0.36 72 Open [X] Squeezed []

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.
Table with columns: DEPTH INTERVAL, AMOUNT AND TYPE OF MATERIAL.
Row: 10,214-10,599 PUMP 7,680 BBLs SLICK H2O & 175,125 LBS 30/50 OTTAWA SAND 3 STAGES

29. ENCLOSED ATTACHMENTS: [] ELECTRICAL/MECHANICAL LOGS [] GEOLOGIC REPORT [] DST REPORT [X] DIRECTIONAL SURVEY [] SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION [] CORE ANALYSIS [] OTHER:
30. WELL STATUS: PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 3/13/2012		TEST DATE: 3/17/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,275	WATER – BBL: 352	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,481	CSG. PRESS. 2,655	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,275	WATER – BBL: 352	INTERVAL STATUS: PROD

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	1,461
				BIRD'S NEST	1,732
				MAHOGANY	2,296
				WASATCH	4,757
				MESAVERDE	7,478

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 4111'; LTC csg was run from 4111' to 10,759'. A DV tool was placed in the well from 4410 feet – 4413 feet. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) LINDSEY FRAZIER TITLE REGULATORY ANALYST
 SIGNATURE *Lindsey Frazier* DATE 3-8-13

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
1. TYPE OF WELL Gas Well	5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
PHONE NUMBER: 720 929-6111	8. WELL NAME and NUMBER: NBU 921-35H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S	9. API NUMBER: 43047513670000
	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/24/2014	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

The operator wishes to recomplete the referenced well in a different formation. Please see the attached procedure. Thank you.

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

Date: May 01, 2014

By: 

NAME (PLEASE PRINT) Matthew P Wold	PHONE NUMBER 720 929-6993	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 4/24/2014	



Greater Natural Buttes Unit

**NBU 921-35H4BS
RE-COMPLETIONS PROCEDURE
NBU 921-35H PAD
FIELD ID: GREEN WELL**

**DATE: 4/15/2014
AFE#:
API#: 4304751367
USER ID: SNT239 (Frac Invoices Only)**

**COMPLETIONS ENGINEER: Jamie Berghorn, Denver, CO
(720) 929-6230 (Office)
(303) 909-3417 (Cell)**

REMEMBER SAFETY FIRST!

Name: NBU 921-35H4BS
Location: NW SE SE NE Sec 35 T9S R21E
LAT: 39.993919 **LONG:** -109.511233 **COORDINATE:** NAD83 (*Surface Location*)
Uintah County, UT

ELEVATIONS: 5,098' GL 5,124' KB *Frac Registry TVD: 10,762'*

TOTAL DEPTH: 10,770' **PBTD:** 10,713'
SURFACE CASING: 8 5/8", 28# J-55 LTC @ 2,631'
PRODUCTION CASING: 4 1/2", 11.6#, P-110 DQX @ 4,413'
 4 1/2", 11.6#, P-110 LTC @ 10,758'
 Marker Joint **4,368-4,389 & 7,443-7,457 & 10,124-10,141'**

TUBULAR PROPERTIES:

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 1/2" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 1/2" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 1/2" Annulus				0.0101	0.4227

TOPS:

1,546' Green River Top
 1,732' Bird's Nest Top
 2,296' Mahogany Top
 4,752' Wasatch Top
 7,345' Mesaverde Top
 *Based on latest geological interpretation

BOTTOMS:

7,345' Wasatch Bottom
 10,770' Mesaverde Bottom (TD)

T.O.C. @ 140'

**Based on latest interpretation of CBL

GENERAL NOTES:

- **Please note that:**
 - **All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.**
 - **CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.**
- A minimum of **42** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Schlumberger's GRlog dated **2/17/2012**.
- **10** fracturing stages required for coverage.
- Hydraulic isolation estimated at **300'** based upon Schlumberger's CBL dated 2/17/2012.
- Procedure calls for **11** CBP's (**8000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- **Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.**

- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, **Slickwater frac.**
- Maximum surface pressure **6200 psi.**
- **If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes (specific details on remediation should be documented in OpenWells).**
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densimeters. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg; Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing – design will over flush stage by 5 bbls (from top perf)
- **TIGHT SPACING ON STAGE 1, 3**
- **If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work**

Existing Perforations:

<u>PERFORATIONS</u>					
<u>Formation</u>	<u>Zone</u>	<u>Top</u>	<u>Btm</u>	<u>spf</u>	<u>Shots</u>
MESAVERDE	BLACKHAWK	10214	10216	4	8
MESAVERDE	BLACKHAWK	10232	10236	4	16
MESAVERDE	BLACKHAWK	10261	10262	3	3
MESAVERDE	BLACKHAWK	10270	10272	3	6
MESAVERDE	BLACKHAWK	10280	10281	3	3
MESAVERDE	BLACKHAWK	10297	10298	3	3
MESAVERDE	BLACKHAWK	10307	10309	3	6
MESAVERDE	BLACKHAWK	10327	10328	3	3
MESAVERDE	BLACKHAWK	10379	10381	4	8
MESAVERDE	BLACKHAWK	10394	10396	4	8
MESAVERDE	BLACKHAWK	10597	10599	4	8

Relevant History:

03/05/2012: Originally completed in Blackhawk formation (3 stages) with ~ 322,518 gallons of Slickwater, 175,125 lbs of 30/50 TLC sand.

10/08/2013: Last slickline report:

Traveled to location rigged up ran jdc found heavy fluid @ 1400 drift down to 10318 jarred on it for a while nothing beat down jarred out came out with a stainless steal spring ran td set down @ 10677 came out ran scratcher out the tubing came out ran 1.9 broach set down @ 10318 came out tubing was clean spring looks good left stainless steal spring out well was logged off and selling of the back side rigged down traveled to the next location

03/13/2012: Tubing Currently Landed @~10326'

H2S History:

Monthly Production Data												
Location Name	WNS No. (wel...)	Production Date	Gas (avg mcf.)	Water (avg bb.)	Oil (avg bbl/day)	Avg. BOE/day	LGR (bbl/Mmcf)	Max H2S Sep.	Separator H2.	Tank H2S (lbs)	Production Year	
NBU 921-35H4...	E3157	3/31/2012	577.00	0.00	0.00	96.17	0.00				2012	
NBU 921-35H4...	E3157	4/30/2012	600.80	0.00	0.00	100.13	0.00	0.00	0.00	0.00	2012	
NBU 921-35H4...	E3157	5/31/2012	453.81	0.00	0.00	75.63	0.00	2.00	0.08	0.00	2012	
NBU 921-35H4...	E3157	6/30/2012	383.23	0.00	0.00	63.87	0.00				2012	
NBU 921-35H4...	E3157	7/31/2012	253.55	0.00	0.00	42.26	0.00				2012	
NBU 921-35H4...	E3157	8/31/2012	248.68	0.00	0.00	41.45	0.00				2012	
NBU 921-35H4...	E3157	9/30/2012	236.27	0.00	0.00	39.38	0.00				2012	
NBU 921-35H4...	E3157	10/31/2012	225.74	0.00	0.00	37.62	0.00				2012	
NBU 921-35H4...	E3157	11/30/2012	206.50	0.00	0.00	34.42	0.00				2012	
NBU 921-35H4...	E3157	12/31/2012	72.39	0.00	0.00	12.06	0.00				2012	
NBU 921-35H4...	E3157	1/31/2013	26.71	0.00	0.00	4.45	0.00				2013	
NBU 921-35H4...	E3157	2/28/2013	10.21	0.00	0.00	1.70	0.00				2013	
NBU 921-35H4...	E3157	3/31/2013	3.13	0.00	0.00	0.52	0.00				2013	
NBU 921-35H4...	E3157	4/30/2013	1.77	0.00	0.00	0.29	0.00				2013	
NBU 921-35H4...	E3157	5/31/2013	3.13	0.00	0.00	0.52	0.00	0.00	0.00	0.00	2013	
NBU 921-35H4...	E3157	6/30/2013	3.13	0.00	0.00	0.52	0.00				2013	
NBU 921-35H4...	E3157	7/31/2013	0.23	0.00	0.00	0.04	0.00				2013	
NBU 921-35H4...	E3157	8/31/2013	0.00	0.00	0.00	0.00	0.00				2013	
NBU 921-35H4...	E3157	9/30/2013	1.67	0.00	0.00	0.28	0.00				2013	
NBU 921-35H4...	E3157	10/31/2013	1.10	0.00	0.00	0.18	0.00				2013	
NBU 921-35H4...	E3157	11/30/2013	3.87	0.00	0.00	0.64	0.00				2013	
NBU 921-35H4...	E3157	12/31/2013	0.97	0.00	0.00	0.16	0.00				2013	
NBU 921-35H4...	E3157	1/31/2014	0.00	0.00	0.00	0.00	0.00				2014	
NBU 921-35H4...	E3157	2/28/2014	2.04	0.00	0.00	0.34	0.00				2014	
NBU 921-35H4...	E3157	3/31/2014	5.19	0.00	0.00	0.87	0.00				2014	

PROCEDURE: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
2. The tubing is below the proposed CBP depth. TOOH with 2-3/8", 4.7#, L-80 tubing. Visually inspect for scale and consider replacing if needed.
3. If tbg looks ok consider running a gauge ring to 9576' (50' below proposed CBP). Otherwise P/U a mill and C/O to 9576' (50' below proposed CBP).
4. Set 8000 psi CBP at ~ 9526'. ND BOPs and NU frac valves Test frac valves and casing to to **6200 psi** for 15 minutes; if pressure test fails contact Denver engineer and see notes above. **Lock OPEN the Braden head valve.** Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
6. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	9269	9270	3	3
MESAVERDE	9363	9364	3	3
MESAVERDE	9377	9378	3	3
MESAVERDE	9393	9394	3	3
MESAVERDE	9401	9402	3	3
MESAVERDE	9423	9424	3	3
MESAVERDE	9442	9443	3	3
MESAVERDE	9495	9496	3	3

7. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~9269' and trickle 250gal 15%HCL w/ scale inhibitor in flush .
NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BLS

8. Set 8000 psi CBP at ~9258'. Perf the following 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	9064	9065	3	3
MESAVERDE	9104	9105	3	3
MESAVERDE	9131	9132	3	3
MESAVERDE	9137	9138	3	3
MESAVERDE	9165	9166	3	3
MESAVERDE	9186	9187	3	3
MESAVERDE	9204	9205	3	3
MESAVERDE	9237	9238	3	3

9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~9064' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

10. Set 8000 psi CBP at ~9014'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	8865	8866	3	3
MESAVERDE	8886	8887	3	3
MESAVERDE	8909	8910	3	3
MESAVERDE	8929	8930	3	3
MESAVERDE	8953	8954	3	3
MESAVERDE	8961	8962	3	3
MESAVERDE	8991	8992	3	3
MESAVERDE	9000	9001	3	3

11. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~8865' and trickle 250gal 15%HCL w/ scale inhibitor in flush.
NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BLS

12. Set 8000 psi CBP at ~8855'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	8630	8631	3	3
MESAVERDE	8648	8649	3	3
MESAVERDE	8702	8703	3	3
MESAVERDE	8721	8722	3	3
MESAVERDE	8739	8740	3	3

MESAVERDE	8765	8766	3	3
MESAVERDE	8809	8810	3	3
MESAVERDE	8826	8827	3	3

13. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~8630' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

14. Set 8000 psi CBP at ~8580'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	8419	8420	3	3
MESAVERDE	8474	8475	3	3
MESAVERDE	8486	8487	3	3
MESAVERDE	8508	8509	3	3
MESAVERDE	8552	8554	3	6
MESAVERDE	8560	8562	3	6

15. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~8419' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

16. Set 8000 psi CBP at ~8369'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	8127	8128	3	3
MESAVERDE	8133	8134	3	3
MESAVERDE	8157	8158	3	3
MESAVERDE	8272	8273	3	3
MESAVERDE	8299	8300	3	3
MESAVERDE	8325	8326	3	3
MESAVERDE	8339	8340	3	3
MESAVERDE	8350	8351	3	3

17. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~8127' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

18. Set 8000 psi CBP at ~7816'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	7721	7723	3	6
MESAVERDE	7732	7734	3	6
MESAVERDE	7772	7774	3	6
MESAVERDE	7784	7786	3	6

19. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 7 on attached listing. Under-displace to ~7721' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

20. Set 8000 psi CBP at ~7038'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6846	6848	4	8
WASATCH	6882	6884	4	8
WASATCH	7006	7008	4	8

21. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 8 on attached listing. Under-displace to ~6846' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

22. Set 8000 psi CBP at ~6690'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6413	6414	3	3
WASATCH	6471	6472	3	3
WASATCH	6491	6492	3	3
WASATCH	6505	6506	3	3
WASATCH	6637	6639	3	6
WASATCH	6658	6660	3	6

23. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 9 on attached listing. Under-displace to ~6413' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

24. Set 8000 psi CBP at ~6363'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6153	6154	3	3
WASATCH	6162	6163	3	3
WASATCH	6171	6172	3	3
WASATCH	6196	6197	3	3
WASATCH	6204	6205	3	3
WASATCH	6235	6236	3	3
WASATCH	6334	6335	3	3
WASATCH	6338	6339	3	3

25. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 10 on attached listing. Under-displace to ~6153' and flush only with recycled water.

26. Set 8000 psi CBP at ~6103'.

27. ND Frac Valves, NU and Test BOPs.

28. TIH with 3 7/8" bit, pump open sub, SN and tubing.

29. Drill 10 plugs and clean out to a depth of 9516' (~ 20' below bottom perfs). This well WILL NOT be commingled at this time.

30. Shift pump open bit sub and land tubing at 9034'. Flow back completion load. RDMO.

31. MIRU, POOH tbg and POBS. TIH with POBS.

32. Drill last plug @ 9526' clean out to PBTD at 10713'. Shear off bit and land tubing at ±10713'. This well WILL be commingled at this time. **NOTE: If the CBP between the initial completion and the recompleted sands has been in the well for more than 30 calendar days from the beginning of flowback for the recompletion, a sundry will need to be filed with the state. Contact the Regulatory group to file the sundry prior to commencing work.**

33. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.

34. **Leave surface casing valve open.** Monitor and report any flow from surface casing. RDMO

Completion Engineer

Jamie Berghorn: 303/909-3417, 720/929-6230

Production Engineer

Mickey Doherty: 406/491-7294, 435/781-9740

Ronald Trigo: 352/213-6630, 435/781-7037

Brad Laney: 435/781-7031, 435/828-5469

Boone Bajgier: 435/781/7096, 713/416/4816

Heath Pottmeyer: 740/525-3445, 435/781-9789

Anqi Yang: 435/828-6505, 435/781-7015

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046

Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Service Company Supplied Chemicals - Job Totals

Friction Reducer	232	gals @	0.3	GPT
Surfactant	773	gals @	1.0	GPT
Clay Stabilizer	0	gals @	0.0	GPT
15% Hcl	2500	gals @	250	gal/stg
Iron Control for acid	13	gals @	5.0	GPT of acid
Surfactant for acid	5	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	15	gals @	6.0	GPT of acid

Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	387	gals pumped	0.5	GPT (see schedule)
Biocide	232	gals @	0.3	GPT

Acid Pickling and H2S Procedures (If Required)

****PROCEDURE FOR PUMPING ACID DOWN TBG**

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBL 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

1. PUMP 5-10 BBL 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

**** PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID**

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
2. PUMP 25 BBL MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
3. IF WELL HAS PRESSURE AFTER 2 HOURS – RETEST CASING AND TUBING FOR H2S.
4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

Fracturing Schedules
NBU 921-35H4BS
Slick-water Frac

Copy to new book

Casing Size	4.5
Recompleter?	Y
Pad?	Y
ACTS?	N
Days on Pad?	3
Wells on Pad?	4

Swabbing Days	3
Production Log	0
DFT	0
GR only	Y
Low Scale	Y
Clay Stab.	N

Enter Number of swabbing days here for recompletes
 Enter 1 if running a Production Log
 Enter Number of DFTs
 Enter Y if only Gamma Ray log was run
 Enter Y if a LOW concentration of Scale Inhibitor will be pumped
 Enter N if there will be NO Clay stabilizer

Stage	Zone	Top, ft.	Bot., ft.	SPF	Holes	Rate BPM	Fluid Type	Initial ppg	Final ppg	Fluid	Volume gals	Cum Vol gals	Volume BBLs	Cum Vol BBLs	Cum Vol	% of frac	Fluid	Sand % of frac	Sand lbs	Cum. Sand lbs	Footage from CBP to Flush	Scale Inhib., gal.
1	MESAVERDE	9289	9270	3	3	Varied	Pre-Pad & Pump-in test			Slickwater	6,051	6,051	144	144	144							3
	MESAVERDE	9363	9364	3	3	0	ISIP and 5 min ISIP	0.25	0.625	Slickwater	6,840	12,891	163	307	307	0.0%	15.0%	0	0			3
	MESAVERDE	9377	9378	3	3	50	Slickwater Pad	0	0	Slickwater	12,920	25,811	308	615	615	21.9%	28.3%	5,653	5,653	0	6	
	MESAVERDE	9393	9394	3	3	50	Slickwater Ramp	0.63	0.75	Slickwater	12,920	38,731	308	922	922	34.4%	28.3%	8,883	14,535	0	6	
	MESAVERDE	9401	9402	3	3	50	SW Sweep	0	0	Slickwater	38,731	38,731	0	922	922	0.0%	0.0%	0	14,535	0	6	
	MESAVERDE	9423	9424	3	3	50	Slickwater Ramp	0.25	0.75	Slickwater	38,731	38,731	0	922	922	0.0%	0.0%	0	14,535	0	6	
	MESAVERDE	9442	9443	3	3	50	SW Sweep	0.75	1	Slickwater	12,920	51,651	308	1,230	1,230	28.3%	28.3%	11,305	25,840	0	6	
	MESAVERDE	9495	9496	3	3	50	Slickwater Ramp			Slickwater	6,051	57,702	144	1,374	1,374	43.8%		25,840	25,840	0	6	
	MESAVERDE					50	Flush (4-1/2)			Slickwater	57,702	57,702	144	1,374	1,374			11,305	25,840	0	6	
	MESAVERDE					50	ISDP and 5 min ISDP			Slickwater	57,702	57,702	144	1,374	1,374			25,840	25,840	0	3	
	MESAVERDE									Sand laden Volume	45,600	45,600						600	340	340	29	
	MESAVERDE					24	# of Perfs/Stage											gal/ft	CBP depth	11		
2	MESAVERDE	9064	9065	3	3	27.5	<<< Above pump time (min)			Slickwater	0	0	0	0	0							3
	MESAVERDE	9104	9105	3	3	Varied	Pump-in test	0.25	0.625	Slickwater	6,975	6,975	166	166	166	0.0%	15.0%	0	0		3	
	MESAVERDE	9131	9132	3	3	0	ISIP and 5 min ISIP	0	0	Slickwater	13,175	20,150	314	480	480	21.9%	28.3%	5,764	5,764	0	7	
	MESAVERDE	9137	9138	3	3	50	Slickwater Pad	0.63	0.75	Slickwater	13,175	33,325	314	793	793	34.4%	28.3%	9,058	14,822	0	7	
	MESAVERDE	9165	9166	3	3	50	Slickwater Ramp	0	0	Slickwater	13,175	33,325	314	793	793	0.0%	0.0%	0	14,822	0	7	
	MESAVERDE	9186	9187	3	3	50	SW Sweep	0.25	0.75	Slickwater	33,325	33,325	0	793	793	0.0%	0.0%	0	14,822	0	7	
	MESAVERDE	9204	9205	3	3	50	Slickwater Ramp	0.75	1	Slickwater	13,175	46,500	314	1,107	1,107	43.8%	28.3%	11,528	26,350	0	7	
	MESAVERDE	9237	9238	3	3	50	Flush (4-1/2)			Slickwater	5,917	52,417	141	1,248	1,248			26,350	26,350	0	7	
	MESAVERDE									Sand laden Volume	46,500	46,500						600	340	340	26	
	MESAVERDE					24	# of Perfs/Stage											gal/ft	CBP depth	50		
3	MESAVERDE	8865	8866	3	3	25.0	<<< Above pump time (min)			Slickwater	0	0	0	0	0							5
	MESAVERDE	8886	8887	3	3	Varied	Pump-in test	0.25	0.625	Slickwater	10,530	10,530	251	251	251	0.0%	15.0%	0	0		10	
	MESAVERDE	8909	8910	3	3	0	ISIP and 5 min ISIP	0.63	0.75	Slickwater	19,890	30,420	474	724	724	21.9%	28.3%	8,702	8,702	0	10	
	MESAVERDE	8929	8930	3	3	50	Slickwater Ramp	0	0	Slickwater	30,420	30,420	0	724	724	0.0%	0.0%	0	8,702	0	10	
	MESAVERDE	8954	8954	3	3	50	SW Sweep	0.25	0.75	Slickwater	19,890	50,310	474	1,198	1,198	34.4%	28.3%	13,674	22,376	0	10	
	MESAVERDE	8961	8962	3	3	50	Slickwater Ramp	0.25	0.75	Slickwater	50,310	50,310	0	1,198	1,198	0.0%	0.0%	0	22,376	0	0	
	MESAVERDE	8981	8982	3	3	50	SW Sweep	0.75	1	Slickwater	19,890	50,310	0	1,198	1,198	0.0%	0.0%	0	22,376	0	0	
	MESAVERDE	9000	9001	3	3	50	Slickwater Ramp			Slickwater	19,890	70,200	474	1,671	1,671	43.8%	28.3%	17,404	39,780	0	10	
	MESAVERDE					50	Flush (4-1/2)			Slickwater	5,787	75,987	138	1,809	1,809			39,780	39,780	0	3	
	MESAVERDE									Sand laden Volume	70,200	70,200						600	340	340	38	
	MESAVERDE					24	# of Perfs/Stage											gal/ft	CBP depth	10		

Stage	Zone	Perfs		SPF	Holes	Rate BPM	Fluid Type	Initial ppg	Final ppg	Fluid	Volume gals	Cum Vol gals	Volume BBLs	Cum Vol BBLs	Cum Vol	Fluid % of frac	Sand % of frac	Sand lbs	Cum. Sand lbs	Footage from CBP to Flush	Scale Inhib., gal.			
		Top, ft.	Bot., ft.																					
4	MESAVERDE	8630		3	24	Varied	Pump-in test			Slickwater	0	0	0	0	0									
	MESAVERDE	8648		3			0 ISIP and 5 min ISIP	0.25	0.625	Slickwater	12,960	12,960	309	309	0	309	15.0%	0.0%	0	0	0	6		
	MESAVERDE	8702		3			50 Slickwater Pad	0	0	Slickwater	37,440	24,480	583	891	0	891	28.3%	21.9%	10,710	10,710	0	12		
	MESAVERDE	8721		3			50 Slickwater Ramp	0	0	Slickwater	37,440	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8739		3			50 SW Sweep	0.63	0.75	Slickwater	24,480	0	583	583	0	583	28.3%	34.4%	16,830	27,540	0	12		
	MESAVERDE	8765		3			50 Slickwater Ramp	0	0	Slickwater	61,920	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8809		3			50 SW Sweep	0.25	0.75	Slickwater	61,920	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8826		3			50 Slickwater Ramp	0.75	1	Slickwater	24,480	0	583	583	0	583	28.3%	43.8%	21,420	27,540	0	12		
	MESAVERDE			3			50 Slickwater Ramp	0.75	1	Slickwater	86,400	5,634	134	134	0	134	28.3%	43.8%	21,420	48,960	0	3		
	MESAVERDE			3			Flush (4-1/2) ISDP and 5 min ISDP			Slickwater	92,034	0	0	0	0	0	0			0	0	0	46	
	MESAVERDE			3						Sand laden Volume	86,400									600 gal/ft	340 lbs sand/ft	50		
	5	MESAVERDE	8419				3	24	43.8	<< Above pump time (min)			Slickwater	0	0	0	0	0						
		MESAVERDE	8420				3			Pump-in test	0.25	0.625	Slickwater	8,325	8,325	198	198	0	198	15.0%	0.0%	0	0	0
MESAVERDE		8474		3	0 ISIP and 5 min ISIP	0	0			Slickwater	15,725	0	374	374	0	374	28.3%	21.9%	6,880	6,880	0	8		
MESAVERDE		8508		3	50 Slickwater Ramp	0	0			Slickwater	24,050	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
MESAVERDE		8554		3	50 SW Sweep	0.63	0.75			Slickwater	39,775	0	374	374	0	374	28.3%	34.4%	10,811	6,880	0	8		
MESAVERDE		8562		3	50 Slickwater Ramp	0	0			Slickwater	39,775	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
MESAVERDE				3	50 SW Sweep	0.25	0.75			Slickwater	39,775	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
MESAVERDE				3	50 Slickwater Ramp	0.75	1			Slickwater	55,500	15,725	374	374	0	374	28.3%	43.8%	13,759	31,450	0	8		
MESAVERDE				3	Flush (4-1/2) ISDP and 5 min ISDP					Slickwater	60,996	5,496	131	131	0	131	28.3%	43.8%	13,759	31,450	0	3		
MESAVERDE				3						Sand laden Volume	55,500									600 gal/ft	340 lbs sand/ft	50		
6		MESAVERDE	8128		3	24	29.0			<< Above pump time (min)			Slickwater	0	0	0	0	0						
	MESAVERDE	8133		3	Pump-in test			0.25	0.625	Slickwater	8,370	8,370	199	199	0	199	15.0%	0.0%	0	0	0	4		
	MESAVERDE	8157		3	0 ISIP and 5 min ISIP			0	0	Slickwater	24,180	15,810	376	576	0	576	28.3%	21.9%	6,917	6,917	0	8		
	MESAVERDE	8272		3	50 Slickwater Ramp			0	0	Slickwater	24,180	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8299		3	50 SW Sweep			0.63	0.75	Slickwater	39,990	0	376	376	0	376	28.3%	34.4%	10,869	17,786	0	8		
	MESAVERDE	8325		3	50 Slickwater Ramp			0	0	Slickwater	39,990	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8339		3	50 SW Sweep			0.25	0.75	Slickwater	39,990	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	
	MESAVERDE	8340		3	50 Slickwater Ramp			0.75	1	Slickwater	55,800	15,810	376	376	0	376	28.3%	43.8%	13,834	31,620	0	8		
	MESAVERDE	8351		3	50 Slickwater Ramp			0.75	1	Slickwater	61,105	5,305	126	126	0	126	28.3%	43.8%	13,834	31,620	0	8		
	MESAVERDE			3	Flush (4-1/2) ISDP and 5 min ISDP					Slickwater	61,105	0	0	0	0	0	0			0	0	0	3	
	MESAVERDE			3						Sand laden Volume	55,800									600 gal/ft	340 lbs sand/ft	311		
	MESAVERDE			3																				
	MESAVERDE			3																				
	MESAVERDE			3																				

NBU 921-35H4BS
Perforation and CBP Summary

Stage	Zones	Perforations		SPF	Holes	Fracture Coverage		
		Top, ft	Bottom, ft					
1	MESAVERDE	9269	9270	3	3	9267.5	to	9502
	MESAVERDE	9363	9364	3	3			
	MESAVERDE	9377	9378	3	3			
	MESAVERDE	9393	9394	3	3			
	MESAVERDE	9401	9402	3	3			
	MESAVERDE	9423	9424	3	3			
	MESAVERDE	9442	9443	3	3			
	MESAVERDE	9495	9496	3	3			
		# of Perfs/stage				24	CBP DEPTH	9,258
2	MESAVERDE	9064	9065	3	3	9059	to	9243
	MESAVERDE	9104	9105	3	3			
	MESAVERDE	9131	9132	3	3			
	MESAVERDE	9137	9138	3	3			
	MESAVERDE	9165	9166	3	3			
	MESAVERDE	9186	9187	3	3			
	MESAVERDE	9204	9205	3	3			
	MESAVERDE	9237	9238	3	3			
		# of Perfs/stage				24	CBP DEPTH	9,014
3	MESAVERDE	8865	8866	3	3	8858	to	9011
	MESAVERDE	8886	8887	3	3			
	MESAVERDE	8909	8910	3	3			
	MESAVERDE	8929	8930	3	3			
	MESAVERDE	8953	8954	3	3			
	MESAVERDE	8961	8962	3	3			
	MESAVERDE	8991	8992	3	3			
	MESAVERDE	9000	9001	3	3			
		# of Perfs/stage				24	CBP DEPTH	8,855
4	MESAVERDE	8630	8631	3	3	8621	to	8835
	MESAVERDE	8648	8649	3	3			
	MESAVERDE	8702	8703	3	3			
	MESAVERDE	8721	8722	3	3			
	MESAVERDE	8739	8740	3	3			
	MESAVERDE	8765	8766	3	3			
	MESAVERDE	8809	8810	3	3			
	MESAVERDE	8826	8827	3	3			
		# of Perfs/stage				24	CBP DEPTH	8,580
5	MESAVERDE	8419	8420	3	3	8409	to	8568
	MESAVERDE	8474	8475	3	3			
	MESAVERDE	8486	8487	3	3			
	MESAVERDE	8508	8509	3	3			
	MESAVERDE	8552	8554	3	6			
	MESAVERDE	8560	8562	3	6			
	MESAVERDE							
		# of Perfs/stage				24	CBP DEPTH	8,369

Stage	Zones	Perforations		SPF	Holes	Fracture Coverage		
		Top, ft	Bottom, ft					
6	MESAVERDE	8127	8128	3	3	8127	to	8358
	MESAVERDE	8133	8134	3	3			
	MESAVERDE	8157	8158	3	3			
	MESAVERDE	8272	8273	3	3			
	MESAVERDE	8299	8300	3	3			
	MESAVERDE	8325	8326	3	3			
	MESAVERDE	8339	8340	3	3			
	MESAVERDE	8350	8351	3	3			
	# of Perfs/stage				24	CBP DEPTH	7,816	
7	MESAVERDE	7721	7723	3	6	7720	to	7795
	MESAVERDE	7732	7734	3	6			
	MESAVERDE	7772	7774	3	6			
	MESAVERDE	7784	7786	3	6			
	MESAVERDE							
	MESAVERDE							
	MESAVERDE							
	MESAVERDE							
	# of Perfs/stage				24	CBP DEPTH	7,038	
8	WASATCH	6846	6848	4	8	6546	to	7017
	WASATCH	6882	6884	4	8			
	WASATCH	7006	7008	4	8			
	WASATCH							
	WASATCH							
	WASATCH							
	WASATCH							
	WASATCH							
	# of Perfs/stage				24	CBP DEPTH	6,690	
9	WASATCH	6413	6414	3	3	6413	to	6673
	WASATCH	6471	6472	3	3			
	WASATCH	6491	6492	3	3			
	WASATCH	6505	6506	3	3			
	WASATCH	6637	6639	3	6			
	WASATCH	6658	6660	3	6			
	WASATCH							
	WASATCH							
	# of Perfs/stage				24	CBP DEPTH	6,363	
10	WASATCH	6153	6154	3	3	6150	to	6350
	WASATCH	6162	6163	3	3			
	WASATCH	6171	6172	3	3			
	WASATCH	6196	6197	3	3			
	WASATCH	6204	6205	3	3			
	WASATCH	6235	6236	3	3			
	WASATCH	6334	6335	3	3			
	WASATCH	6338	6339	3	3			
	# of Perfs/stage				24	CBP DEPTH	6,103	
	Totals				240	Total Pay		1059.0

MD (ft)	TVD (ft)	E/W (ft)	N/S (ft)	Inc (°)	Azi (°)	MD (ft)	TVD (ft)	E/W (ft)	N/S (ft)	Inc (°)	Azi (°)
21.99	21.99	0	0	0	0	5400	5395.68	-10.86	67.43	0.51	168.86
200.99	200.99	-0.14	-1.08	0.7	187.18	5494	5489.68	-10.67	66.58	0.56	166.68
284.99	284.98	-0.45	-1.22	0.62	326.32	5589	5584.68	-10.3	65.67	0.63	149.68
368.99	368.96	-0.93	0.56	1.93	350.66	5683	5678.67	-9.84	64.6	0.81	161.93
458.99	458.89	-0.6	4.04	2.64	16.33	5778	5773.66	-9.33	63.29	0.88	155.8
548.99	548.76	1.07	8.62	3.57	22.71	5872	5867.64	-8.56	61.91	1.06	146.68
638.99	638.53	3.22	14.7	4.66	17.03	5967	5962.64	-8.22	61.45	0.38	331.43
728.99	728.18	4.77	22.44	5.45	6.39	6061	6056.64	-8.6	62.19	0.63	334.05
818.99	817.67	6.01	31.87	6.68	8.42	6156	6151.63	-8.86	62.97	0.38	354.93
908.99	907.03	6.72	42.55	7.03	359.45	6251	6246.62	-9.49	64	1.13	319.43
998.99	996.34	6.53	53.71	7.21	358.57	6345	6340.61	-10.72	65.3	1.06	313.8
1088.99	1085.81	6.32	63.35	5.1	359.1	6440	6435.6	-11.77	66.23	0.63	307.55
1178.99	1175.54	5.87	70.29	3.78	352.51	6534	6529.59	-12.56	66.71	0.5	293.18
1268.99	1265.42	5.07	74.77	2.02	344.77	6629	6624.59	-13.19	66.92	0.31	282.05
1358.99	1355.4	4.38	76.31	0.35	273.23	6723	6718.59	-13.61	66.79	0.31	221.8
1478.99	1475.39	3.66	74.81	1.49	193.07	6818	6813.59	-13.83	66.23	0.44	188.55
1568.99	1565.36	3.21	72.8	1.14	192.28	6912	6907.58	-13.84	65.36	0.63	174.8
1628.99	1625.36	2.99	72.05	0.35	208.81	7007	7002.57	-13.63	64.13	0.88	167.05
1718.99	1715.36	2.75	72.29	0.62	347.5	7101	7096.57	-14.24	63.48	0.94	274.05
1808.99	1805.35	2.34	73.22	0.7	325.35	7196	7191.55	-15.86	63.77	1.06	285.05
1898.99	1895.35	1.74	73.98	0.53	317.53	7290	7285.54	-17.29	64.19	0.75	288.68
1988.99	1985.34	1.59	74.33	0.18	71.7	7385	7380.53	-18.63	64.2	0.94	256.3
2078.99	2075.34	1.81	74.49	0.18	35.05	7479	7474.52	-19.78	64.55	0.81	322.68
2168.99	2165.34	1.9	74.26	0.44	178.84	7574	7569.51	-20.08	65.75	0.81	9.3
2258.99	2255.34	2	73.51	0.53	166.88	7668	7663.5	-19.27	66.7	0.94	66.92
2348.99	2345.33	2.3	72.59	0.7	158.18	7763	7758.49	-18.19	67.52	0.75	35.55
2438.99	2435.33	2.71	71.5	0.79	160.29	7857	7852.48	-17.36	68.56	0.88	40.93
2528.99	2525.32	3.28	70.32	0.88	148.51	7952	7947.47	-16.14	69.59	1.06	57.05
2618.99	2615.31	3.79	68.99	0.97	168.9	8046	8041.46	-14.69	70.32	0.94	70.43
2660	2656.31	3.96	68.33	0.93	162.45	8141	8136.44	-12.97	70.6	1.19	89.05
2754	2750.3	4.29	66.72	1.08	173.31	8235	8230.41	-10.66	70.48	1.63	95.68
2849	2845.29	3.83	66.33	0.91	311.57	8330	8325.37	-8.38	69.24	1.75	139.8
2943	2939.25	2.21	68.58	2.5	328.93	8424	8419.33	-6.85	66.84	1.75	155.18
3038	3034.16	0	71.83	2.25	322.05	8519	8514.28	-5.67	64.07	1.88	158.55
3132	3128.1	-2.22	74.58	2.06	320.18	8614	8609.23	-4.52	61.12	1.94	158.93
3226	3222.04	-4.49	77.08	2.06	315.3	8708	8703.18	-3.23	58.22	1.94	152.93
3321	3316.98	-6.85	79.41	1.94	314.05	8803	8798.12	-1.44	55.45	2.06	141.8
3415	3410.93	-9.15	81.53	1.88	310.93	8897	8892.06	0.43	52.53	2.19	152.68
3510	3505.89	-11.41	82.67	1.31	276.18	8992	8986.98	2.13	49.08	2.44	154.68
3604	3599.87	-13.3	82.73	1	266.05	9086	9080.89	4.22	45.58	2.56	143.8
3699	3694.86	-14.93	82.46	1	255.55	9181	9175.8	6.48	42.06	2.5	151.05
3793	3788.85	-16.27	81.88	0.81	235.18	9275	9269.7	8.79	38.37	2.81	145.18
3888	3883.84	-17.38	81.02	0.88	229.68	9369	9363.59	11.32	34.77	2.56	144.68
3982	3977.83	-17.8	80.65	0.19	54.05	9464	9458.49	13.86	31.23	2.69	143.93
4076	4071.83	-17.36	80.78	0.38	82.43	9558	9552.36	17.09	27.4	3.44	136.8
4171	4166.83	-16.71	80.68	0.44	112.43	9653	9647.18	21.02	23.05	3.63	138.8
4266	4261.83	-15.92	80.2	0.69	127.18	9747	9740.96	25.07	18.09	4.19	142.55
4360	4355.82	-15.11	79.36	0.75	143.8	9842	9835.71	29.21	12.66	4.06	142.8
4455	4450.81	-14.22	78.21	1	141.55	9936	9929.47	33.57	7.43	4.25	137.68
4549	4544.79	-13.12	76.67	1.31	146.55	10030	10023.2	38.24	2.2	4.31	138.8
4644	4639.76	-11.93	74.78	1.38	148.8	10125	10117.94	42.99	-3.07	4.25	137.05
4738	4733.73	-10.93	72.76	1.38	158.55	10220	10212.68	47.77	-8.23	4.25	137.3
4832	4827.7	-10.19	70.47	1.56	165.18	10314	10306.4	52.52	-13.61	4.5	139.8
4927	4922.69	-10.05	69.13	0.25	244.05	10410	10402.11	57.31	-19.42	4.5	141.18
5021	5016.69	-10.48	69.02	0.31	264.68	10505	10496.82	61.87	-25.18	4.38	142.05
5116	5111.69	-10.89	68.94	0.19	248.43	10599	10590.57	66.04	-30.71	4.06	144.05
5210	5205.69	-11.05	68.67	0.25	184.93	10694	10685.34	69.92	-36.06	3.92	144.01
5305	5300.69	-11	68.16	0.38	168.8	10770	10761.16	72.97	-40.26	3.92	144.01

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582	
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:	
1. TYPE OF WELL Gas Well		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		8. WELL NAME and NUMBER: NBU 921-35H4BS	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		9. API NUMBER: 43047513670000	
PHONE NUMBER: 720 929-6100		9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE 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		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 11/12/2014 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Plug Reset"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>Kerr-McGee Oil & Gas Onshore, LP set a 4-1/2 10K CBP plug at 9,526' on 6/27/2014 on the NBU 921-35H4BS well . As we were removing the frac valves on this well, it was discovered that the CBP was not holding. Therefore, on 11/12/2014 a new 10K CBP was successfully set at 9,510'. Please see the operations summary report for details. Thank you.</p>			
<p>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 17, 2014</p>			
NAME (PLEASE PRINT) Kristina Geno	PHONE NUMBER 720 929-6824	TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 12/15/2014	

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-35H4BS GREEN		Spud Conductor: 8/18/2011		Spud date: 9/4/2011				
Project: UTAH-UINTAH			Site: NBU 921-35H PAD			Rig name no.:		
Event: RECOMPL/RESEREVEADD			Start date: 6/20/2014			End date:		
Active datum: RKB @5,124.00usft (above Mean Sea Level)				UWI: SE/NE/0/9/S/21/E/35/0/0/26/PM/N/2124/E/0/493/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/26/2014	10:30 - 12:30	2.00	SUBSPR	30	A	P		4 OF 4,RIGGED UP, FTP & FCP 70 PSI, ND WH NU BOPS,RU FLOOR, UNLAND TBG HANGER GUALED ON 1ST JT L/D SAME.
	12:30 - 17:30	5.00	SUBSPR	45	A	P		RU SCANTECH SCAN OUT W/ 324 JTS 265 YELLOW, 54 BLUE, 5 RED. RD SCANTECH SWI SDFN
6/27/2014	7:00 - 7:30	0.50	SUBSPR	48		P		HSM, WORKING W/ WIRE LINE.
	7:30 - 8:30	1.00	SUBSPR	34	I	P		4 OF 4, SICP 100 PSI, BLEW DWN WELL, RU CUTTERS RIH W/ 4 1/2 GR TO 9576' POOH RIH SET 4 1/2 10K CBP @ 9526' POOH RD WL.
	8:30 - 15:00	6.50	SUBSPR	30	C	P		RIGGED DOWN RIG, CLEAN LOCATION, RU CAMERON TEST FV & CSG TO 6200 PSI FOR 15 MINS LOST 46 PSI.MOVE RIG & EQUIP TO NBU 1022 4L1T & RIGGED UP SDFWE.
11/10/2014	12:00 - 13:00	1.00	SUBSPR	47	C	P		50 PSI ON WELL, HOOKED UP TO FLOW BACK TANK, WELL BLED DOWN, NO FLOW, WHILE ND FRAC VALVES WELL STARTED FLOWING TIGHTENED UP NUTS ON FRAC STACK SWIFN
11/12/2014	7:00 - 8:30	1.50	SUBSPR	34	I	P		WELL HAD 50 PSI ON WELL, RU CASED HOLE SOLUTIONS, SET 10 K CBP @ 9,510' POOH BLED WELL DOWN RD WL SWIN

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
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 921-35H4BS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S	9. API NUMBER: 43047513670000
PHONE NUMBER: 720 929-6100	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: Uintah	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 3/25/2015	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input checked="" type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

An NOI was approved on 5/01/2014 to recomplete the Meseverde formation on the NBU 921-35H4BS well, but due to poor economics Kerr-McGee Oil & Gas Onshore LP respectfully requests to isolate and plugback the Blackhawk formation with a CIBP, cap the CIBP with cement, perform an MIT and leave the well shut-in for a future recomplete. Please see the attached procedure for further details. Thank you.

Approved by the
 March 31, 2015
 Oil, Gas and Mining

Date: _____

By: *D. K. Duff*

NAME (PLEASE PRINT) Kristina Geno	PHONE NUMBER 720 929-6824	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/24/2015	

NBU 921-35H4BS (NBU 921-35H Pad)**W.O.#****Plug back Blackhawk perms, MIT, then Shut-in for Future Recomplete****NW SE SE NE Sec 35 T9S R21E****LAT:** 39.993919 **LONG:** -109.511233 **COORDINATE:** NAD83 (*Surface Location*)**Uintah County, UT****ELEVATIONS:** 5,098' GL 5,124' KB *Frac Registry TVD: 10,735'***TOTAL DEPTH:** 10,770'**PBTD:** 10,713'**SURFACE CASING:**

8 5/8", 28# J-55 LTC @ 2,631'

PRODUCTION CASING:

4 1/2", 11.6#, P-110 DQX @ 4,413'

4 1/2", 11.6#, P-110 LTC @ 10,758'

Marker Joint **4,368-4,389 & 7,443-7,457 & 10,124-10,141'****PRODUCTION TUBING:**

There is no tubing in the hole

TUBULAR PROPERTIES:

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 1/2" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 1/2" Annulus				0.0101	0.4227

TOPS:

1,546' Green River Top

1,732' Bird's Nest Top

2,296' Mahogany Top

4,752' Wasatch Top

7,345' Mesaverde Top

*Based on latest geological interpretation

BOTTOMS:

7,345' Wasatch Bottom

10,770' Mesaverde Bottom (TD)

T.O.C. @ 140'

**Based on latest interpretation of CBL

Existing Perforations:

<u>PERFORATIONS</u>					
<u>Formation</u>	<u>Zone</u>	<u>Top</u>	<u>Btm</u>	<u>spf</u>	<u>Shots</u>
MESAVERDE	BLACKHAWK	10214	10216	4	8
MESAVERDE	BLACKHAWK	10232	10236	4	16
MESAVERDE	BLACKHAWK	10261	10262	3	3
MESAVERDE	BLACKHAWK	10270	10272	3	6
MESAVERDE	BLACKHAWK	10280	10281	3	3
MESAVERDE	BLACKHAWK	10297	10298	3	3
MESAVERDE	BLACKHAWK	10307	10309	3	6
MESAVERDE	BLACKHAWK	10327	10328	3	3
MESAVERDE	BLACKHAWK	10379	10381	4	8
MESAVERDE	BLACKHAWK	10394	10396	4	8
MESAVERDE	BLACKHAWK	10597	10599	4	8

CONTACT INFORMATION:

IOC		435-781-9751
FOREMAN	Jason Hackford	435-790-6793
MECHANICAL LEAD	Jim Houghton	435-790-6903
OPERATOR	Derrick Wiseman	435-828-7529
OPERATOR	Rhett Whitmire	435-823-4482
ENGINEER	Robert Miller	435-828-6510

Relevant History:

03/13/2012: Originally completed in Blackhawk formation (3 stages) with ~ 322,518 gallons of Slickwater, 175,125 lbs of 30/50 TLC sand. C/O to 10,713' & landed tubing @ 10,236'.

06/27/2014: Scanned tubing out of hole and laid down. Ran a gauge ring and then a CBP to 9526'. Tested casing to 6200psi for 15 minutes, lost 46 psi during test. Left well T&A for recomplete.

Nov 2014: Tried to remove frac valve, but had pressure on well. RIH with CBP and set @ 9510'.

PROCEDURE: (note: there is no tubing in the well, so you will have to get a work string to cap CBP with cement).

1. MIRU. RIH w/ gauge ring to $\pm 10,214'$. RIH w/ a CIBP and set @ 10,175'. ND WH, NU BOP's and test.

2. Pick up 2 3/8" workstring and tag CIBP just run. Perform a MIT on the casing to 1000 psi (have charted to send information to the agencies and bring results to Robert Miller). Cap CIBP with 105' of class "G" cement (8 sxs/9.2 ft3/1.6 bbls). POOH with tubing and lay down.
3. Well to remain shut in until a future recomple.
4. NDBOPE and NUWH.
5. Notify CDC, foreman, & operators of RDMOL

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22582	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
8. WELL NAME and NUMBER: NBU 921-35H4BS	
9. API NUMBER: 43047513670000	
9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL Gas Well	11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6100
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S	

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/25/2015	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input checked="" type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, LP concluded temporary abandonment operations on the NBU 921-35H4BS well on 6/25/2015. Please see the attached operations summary report for details. Thank you.

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

FOR RECORD ONLY

June 30, 2015

NAME (PLEASE PRINT) Jennifer Thomas	PHONE NUMBER 720 929-6808	TITLE Regulatory Specialist
SIGNATURE N/A	DATE 6/29/2015	

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-35H4BS GREEN		Spud Conductor: 8/18/2011		Spud date: 9/4/2011				
Project: UTAH-UINTAH			Site: NBU 921-35H PAD			Rig name no.: GWS 1/1		
Event: ABANDONMENT			Start date: 6/23/2015			End date: 6/25/2015		
Active datum: RKB @5,124.00usft (above Mean Sea Level)				UWI: SE/NE/0/9/S/21/E/35/0/0/26/PM/N/2124/E/0/493/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/23/2015	6:45 - 7:00	0.25	ABANDT	48		P		HSM.
	7:00 - 8:30	1.50	ABANDT	30	A	P		RU RIG. SPOT TBG TRAILER.
	8:30 - 16:30	8.00	ABANDT	31	I	P		OPEN WELL 0 PSI. ND WH, NU BOP. RU RIG FLOOR & TBG EQUIP. PU 33/4 BIT & BIT SUB. RIH W/ 23/8 P-110 TBG. TAG CBP @ 9510' W/ 300 JTS TBG. LD 2 JTS. RU DRL EQUIP. SWIFN.
6/24/2015	6:45 - 7:00	0.25	ABANDT	48		P		HSM.
	7:00 - 9:00	2.00	ABANDT	44	C	P		OPEN WELL 0 PSI. BRK CONV CIRC. DRL OUT CBP @ 9510' & 9525'. WELL WENT ON VACUUM. RD DRL EQUIP. CONT RIH PUSH CBP'S T/ PERFS.
	9:00 - 11:00	2.00	ABANDT	31	I	P		XOVER TBG EQUIP. POOH, LD 2 JTS. STD BCK 322 JTS. LD 33/4 BIT & BIT SUB.
	11:00 - 12:00	1.00	ABANDT	34	I	P		MIRU CUTTERS WL. PU 41/2 CIBP. RIH SET CIBP @ 10,175'. POOH RDMO CUTTERS.
	12:00 - 15:00	3.00	ABANDT	31	I	P		PU 23/8 NC. RIH W/ 321 JTS F/ DERRIK. TAG CIBP @ 10,175'. LD 1 JTS.
	15:00 - 16:30	1.50	ABANDT	33	C	P		MIRU CAMERON PSI TEST TRUCK. PSI TEST (MIT) CSG T/ 1030 PSI. HELD FOR 30 MIN. ENDING PSI = 1026 PSI. LOST 4 PSI. GOOD TEST. BLEED OFF PSI. RDMO CAMERON TEST TRUCK. SWIFN.
6/25/2015	6:45 - 7:00	0.25	ABANDT	48		P		HSM
	7:00 - 9:00	2.00	ABANDT	51	D	P		OPEN WELL 0 PSI. MIRU PRO PETRO. BRK CONV CIRC. PUMP 2 BBLS FRESH, 8 SX CLASS G CMT, DISP W/ 38 BBLS FRESH. POOH LD 6 JTS. REV OUT CMT & ROLL HOLE W/ PKR FLD. RDMO PRO PETRO.
	9:00 - 16:30	7.50	ABANDT	31	I	P		POOH LD 314 JTS 23/8 P-110 TBG & N/C. RD TBG EQUIP & RIG FLOOR. ND BOP, NU WH. SWI. RD RIG & RACK OUT RIG EQUIP. SDFN.



GARY R. HERBERT
Governor

SPENCER J. COX
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

February 2, 2016

CERTIFIED MAIL NO. 7014 2870 0001 4232 4887

43 047 51367
NBU 921-35H4BS
35 9S 21E

Mr. Joel Malefyte
Kerr-McGee Oil and Gas Onshore
PO Box 173779
Denver, CO 80217-3779

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases

Dear Mr. Malefyte:

As of January 2016, Emery Kerr-McGee Oil and Gas Onshore has three (3) State Lease Wells (see attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Please note that the Divisions preferred method for showing well integrity is by MIT.



Page 2
Kerr-McGee Oil and Gas Onshore
February 2, 2016

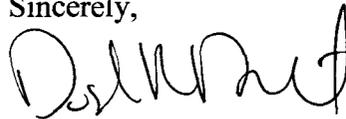
Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

All Submittals should be sent via ePermit

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet
Petroleum Engineer

DKD/DD/js

cc: LaVonne Garrison, SITLA
Compliance File
Well File

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA

ATTACHMENT A

	Well Name	API	LEASE	Years Inactive
1	NBU 921-35H1CS	43-047-51366	ML 22582	1 year 7 months
2	NBU 921-35H4BS	43-047-51367	ML 22582	1 year 7 months
3	Maverick 921-26B-HZ	43-047-52050	UT ST ML22934	1 year 7 months

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 Gas Well	8. WELL NAME and NUMBER: NBU 921-35H4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047513670000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6456 9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 0493 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE 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		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/6/2016	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input checked="" type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:100px;" type="text"/>

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

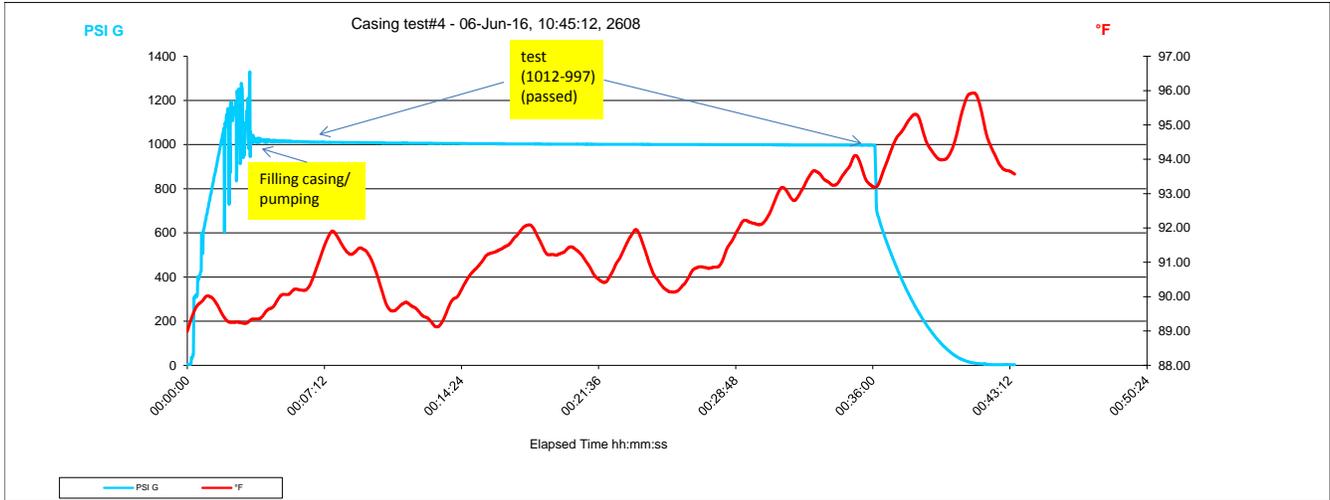
Kerr-McGee Oil & Gas Onshore, LP requests to keep the NBU 921-35H4BS well temporarily abandoned. The well was temporarily abandoned on 6/25/2015 to be recompleted. We are deferring recompletion activity for this well and therefore request a TA extension of one-year from the date of the MIT. Please see the attached MIT conducted on this well on 6/6/2016 showing wellbore integrity. Thank you.

Approved by the
June 15, 2016
Oil, Gas and Mining

Date: _____
By: *D. K. Quist*

NAME (PLEASE PRINT) Candice Barber	PHONE NUMBER 435 781-9749	TITLE HSE Representative
SIGNATURE N/A	DATE 6/8/2016	

Kerr McGee			
9-21-35h4bs Cameron by Austin Ortega			
	Chassis	Left Scale	Right Scale
Serial Number	259925	258749	478035
Datatype		Lower	Upper
Units		PSI G	°F



	Chassis	Lower Module	Upper Module	BARO Module	Left Scale	Right Scale
Serial Number	259925	258749	478035		258749	478035
Model	NV	15KPSI	RTD100			
Message Store						
Userspan		1.00000	1.00000			
Offset						
Datatype					Lower	Upper
Units		PSI G	°F		PSI G	°F
Tare						
Average						
User Factor						
User Offset						
User Resolution						
Firmware Version	R080015	R090008	R100006			
Calibration Due		7-Nov-14	8-Dec-15			
Run Index	3					
Run Start Time			6-Jun-16/10:45:12			
Run Duration			43 minutes 27 seconds			
Run Tag			Casing test#4			
Logging Interval	1.0					

Data Points				
Point #	Time	Left - PSI G	Right - °F	
1	00:00:00.0	5	88.99	
2	00:00:01.0	5	89.02	
3	00:00:02.0	5	89.05	
4	00:00:03.0	5	89.08	
5	00:00:04.0	5	89.11	
6	00:00:05.0	5	89.14	
7	00:00:06.0	5	89.17	
8	00:00:07.0	5	89.20	
9	00:00:08.0	5	89.23	

10	00:00:09.0	5	89.26
11	00:00:10.0	5	89.29
12	00:00:11.0	5	89.31
13	00:00:12.0	9	89.34
14	00:00:13.0	36	89.37
15	00:00:14.0	32	89.39
16	00:00:15.0	33	89.42
17	00:00:16.0	35	89.44
18	00:00:17.0	41	89.47
19	00:00:18.0	49	89.49
20	00:00:19.0	48	89.52
21	00:00:20.0	142	89.54
22	00:00:21.0	306	89.56
23	00:00:22.0	300	89.58
24	00:00:23.0	310	89.60
25	00:00:24.0	311	89.62
26	00:00:25.0	312	89.64
27	00:00:26.0	318	89.66
28	00:00:27.0	312	89.68
29	00:00:28.0	316	89.69
30	00:00:29.0	312	89.71
31	00:00:30.0	311	89.72
32	00:00:31.0	322	89.73
33	00:00:32.0	323	89.75
34	00:00:33.0	402	89.76
35	00:00:34.0	384	89.77
36	00:00:35.0	394	89.78
37	00:00:36.0	396	89.79
38	00:00:37.0	394	89.80
39	00:00:38.0	402	89.80
40	00:00:39.0	407	89.81
41	00:00:40.0	411	89.82
42	00:00:41.0	417	89.82
43	00:00:42.0	424	89.83
44	00:00:43.0	426	89.84
45	00:00:44.0	428	89.84
46	00:00:45.0	599	89.85

47	00:00:46.0	574	89.86
48	00:00:47.0	589	89.87
49	00:00:48.0	592	89.88
50	00:00:49.0	507	89.89
51	00:00:50.0	605	89.90
52	00:00:51.0	613	89.92
53	00:00:52.0	616	89.93
54	00:00:53.0	623	89.94
55	00:00:54.0	630	89.96
56	00:00:55.0	641	89.97
57	00:00:56.0	646	89.98
58	00:00:57.0	654	89.99
59	00:00:58.0	657	90.00
60	00:00:59.0	668	90.01
61	00:01:00.0	678	90.01
62	00:01:01.0	683	90.02
63	00:01:02.0	685	90.02
64	00:01:03.0	697	90.02
65	00:01:04.0	706	90.02
66	00:01:05.0	709	90.02
67	00:01:06.0	716	90.02
68	00:01:07.0	727	90.02
69	00:01:08.0	735	90.01
70	00:01:09.0	739	90.01
71	00:01:10.0	747	90.00
72	00:01:11.0	751	90.00
73	00:01:12.0	764	90.00
74	00:01:13.0	769	89.99
75	00:01:14.0	777	89.99
76	00:01:15.0	778	89.99
77	00:01:16.0	787	89.98
78	00:01:17.0	797	89.98
79	00:01:18.0	806	89.97
80	00:01:19.0	809	89.96
81	00:01:20.0	819	89.95
82	00:01:21.0	828	89.94
83	00:01:22.0	831	89.93

84	00:01:23.0	838	89.92
85	00:01:24.0	849	89.91
86	00:01:25.0	857	89.90
87	00:01:26.0	862	89.88
88	00:01:27.0	869	89.87
89	00:01:28.0	871	89.86
90	00:01:29.0	881	89.84
91	00:01:30.0	889	89.83
92	00:01:31.0	897	89.81
93	00:01:32.0	901	89.80
94	00:01:33.0	910	89.78
95	00:01:34.0	919	89.77
96	00:01:35.0	927	89.76
97	00:01:36.0	931	89.74
98	00:01:37.0	943	89.72
99	00:01:38.0	950	89.70
100	00:01:39.0	953	89.69
101	00:01:40.0	960	89.67
102	00:01:41.0	971	89.65
103	00:01:42.0	977	89.63
104	00:01:43.0	982	89.61
105	00:01:44.0	992	89.59
106	00:01:45.0	998	89.58
107	00:01:46.0	1005	89.56
108	00:01:47.0	1013	89.54
109	00:01:48.0	1022	89.52
110	00:01:49.0	1026	89.51
111	00:01:50.0	1035	89.49
112	00:01:51.0	1045	89.47
113	00:01:52.0	1050	89.46
114	00:01:53.0	1054	89.44
115	00:01:54.0	1065	89.43
116	00:01:55.0	1074	89.42
117	00:01:56.0	1072	89.40
118	00:01:57.0	603	89.39
119	00:01:58.0	806	89.38
120	00:01:59.0	1094	89.36

121	00:02:00.0	1100	89.35
122	00:02:01.0	1078	89.34
123	00:02:02.0	1087	89.33
124	00:02:03.0	1123	89.32
125	00:02:04.0	1135	89.31
126	00:02:05.0	1118	89.30
127	00:02:06.0	1117	89.29
128	00:02:07.0	1152	89.28
129	00:02:08.0	1164	89.28
130	00:02:09.0	1159	89.27
131	00:02:10.0	984	89.27
132	00:02:11.0	742	89.26
133	00:02:12.0	729	89.26
134	00:02:13.0	744	89.26
135	00:02:14.0	1006	89.25
136	00:02:15.0	870	89.25
137	00:02:16.0	1182	89.25
138	00:02:17.0	1189	89.25
139	00:02:18.0	1193	89.25
140	00:02:19.0	1173	89.25
141	00:02:20.0	1195	89.25
142	00:02:21.0	1115	89.25
143	00:02:22.0	1119	89.25
144	00:02:23.0	1108	89.25
145	00:02:24.0	1134	89.25
146	00:02:25.0	1143	89.25
147	00:02:26.0	1140	89.25
148	00:02:27.0	1135	89.25
149	00:02:28.0	1158	89.25
150	00:02:29.0	1168	89.25
151	00:02:30.0	1168	89.25
152	00:02:31.0	1173	89.26
153	00:02:32.0	1177	89.26
154	00:02:33.0	1195	89.26
155	00:02:34.0	1196	89.26
156	00:02:35.0	835	89.26
157	00:02:36.0	885	89.26

158	00:02:37.0	1243	89.26
159	00:02:38.0	1223	89.26
160	00:02:39.0	1219	89.26
161	00:02:40.0	1198	89.26
162	00:02:41.0	1233	89.26
163	00:02:42.0	1252	89.26
164	00:02:43.0	1249	89.25
165	00:02:44.0	1228	89.25
166	00:02:45.0	1252	89.25
167	00:02:46.0	996	89.25
168	00:02:47.0	913	89.24
169	00:02:48.0	928	89.24
170	00:02:49.0	1065	89.24
171	00:02:50.0	1278	89.24
172	00:02:51.0	1266	89.24
173	00:02:52.0	1255	89.24
174	00:02:53.0	1256	89.23
175	00:02:54.0	1181	89.23
176	00:02:55.0	985	89.23
177	00:02:56.0	940	89.23
178	00:02:57.0	947	89.23
179	00:02:58.0	1011	89.23
180	00:02:59.0	949	89.23
181	00:03:00.0	1020	89.22
182	00:03:01.0	1021	89.22
183	00:03:02.0	1099	89.22
184	00:03:03.0	1078	89.22
185	00:03:04.0	1086	89.23
186	00:03:05.0	1071	89.23
187	00:03:06.0	1108	89.23
188	00:03:07.0	1150	89.23
189	00:03:08.0	1154	89.24
190	00:03:09.0	1140	89.24
191	00:03:10.0	1177	89.25
192	00:03:11.0	1209	89.25
193	00:03:12.0	1016	89.26
194	00:03:13.0	982	89.27

195	00:03:14.0	1017	89.28
196	00:03:15.0	1030	89.29
197	00:03:16.0	1306	89.29
198	00:03:17.0	1330	89.30
199	00:03:18.0	945	89.31
200	00:03:19.0	1057	89.32
201	00:03:20.0	1030	89.33
202	00:03:21.0	1022	89.33
203	00:03:22.0	1015	89.34
204	00:03:23.0	1031	89.34
205	00:03:24.0	1017	89.35
206	00:03:25.0	1031	89.35
207	00:03:26.0	1007	89.35
208	00:03:27.0	1043	89.35
209	00:03:28.0	1016	89.35
210	00:03:29.0	1029	89.35
211	00:03:30.0	1013	89.35
212	00:03:31.0	1028	89.35
213	00:03:32.0	1019	89.35
214	00:03:33.0	1028	89.35
215	00:03:34.0	1021	89.35
216	00:03:35.0	1010	89.35
217	00:03:36.0	1020	89.35
218	00:03:37.0	1026	89.35
219	00:03:38.0	1022	89.35
220	00:03:39.0	1010	89.35
221	00:03:40.0	1028	89.35
222	00:03:41.0	1023	89.35
223	00:03:42.0	1023	89.35
224	00:03:43.0	1007	89.35
225	00:03:44.0	1029	89.35
226	00:03:45.0	1022	89.35
227	00:03:46.0	1025	89.35
228	00:03:47.0	1011	89.36
229	00:03:48.0	1029	89.36
230	00:03:49.0	1022	89.36
231	00:03:50.0	1024	89.37

232	00:03:51.0	1014	89.38
233	00:03:52.0	1022	89.38
234	00:03:53.0	1020	89.39
235	00:03:54.0	1024	89.40
236	00:03:55.0	1015	89.41
237	00:03:56.0	1019	89.42
238	00:03:57.0	1020	89.43
239	00:03:58.0	1022	89.44
240	00:03:59.0	1021	89.45
241	00:04:00.0	1016	89.47
242	00:04:01.0	1020	89.48
243	00:04:02.0	1021	89.49
244	00:04:03.0	1022	89.51
245	00:04:04.0	1010	89.52
246	00:04:05.0	1021	89.53
247	00:04:06.0	1020	89.55
248	00:04:07.0	1022	89.56
249	00:04:08.0	1010	89.57
250	00:04:09.0	1022	89.58
251	00:04:10.0	1020	89.59
252	00:04:11.0	1022	89.60
253	00:04:12.0	1011	89.61
254	00:04:13.0	1022	89.62
255	00:04:14.0	1020	89.63
256	00:04:15.0	1021	89.63
257	00:04:16.0	1016	89.64
258	00:04:17.0	1020	89.64
259	00:04:18.0	1019	89.64
260	00:04:19.0	1020	89.65
261	00:04:20.0	1017	89.65
262	00:04:21.0	1014	89.65
263	00:04:22.0	1018	89.66
264	00:04:23.0	1019	89.66
265	00:04:24.0	1018	89.66
266	00:04:25.0	1013	89.67
267	00:04:26.0	1018	89.67
268	00:04:27.0	1018	89.68

269	00:04:28.0	1018	89.68
270	00:04:29.0	1012	89.69
271	00:04:30.0	1018	89.70
272	00:04:31.0	1018	89.71
273	00:04:32.0	1020	89.72
274	00:04:33.0	1012	89.73
275	00:04:34.0	1018	89.74
276	00:04:35.0	1017	89.76
277	00:04:36.0	1019	89.77
278	00:04:37.0	1013	89.79
279	00:04:38.0	1017	89.80
280	00:04:39.0	1017	89.82
281	00:04:40.0	1019	89.84
282	00:04:41.0	1013	89.85
283	00:04:42.0	1016	89.87
284	00:04:43.0	1017	89.88
285	00:04:44.0	1017	89.90
286	00:04:45.0	1014	89.91
287	00:04:46.0	1015	89.93
288	00:04:47.0	1017	89.94
289	00:04:48.0	1017	89.96
290	00:04:49.0	1017	89.97
291	00:04:50.0	1012	89.98
292	00:04:51.0	1016	89.99
293	00:04:52.0	1016	90.01
294	00:04:53.0	1017	90.02
295	00:04:54.0	1012	90.03
296	00:04:55.0	1016	90.03
297	00:04:56.0	1016	90.04
298	00:04:57.0	1018	90.05
299	00:04:58.0	1012	90.05
300	00:04:59.0	1015	90.06
301	00:05:00.0	1016	90.06
302	00:05:01.0	1017	90.06
303	00:05:02.0	1014	90.07
304	00:05:03.0	1015	90.07
305	00:05:04.0	1016	90.07

306	00:05:05.0	1017	90.07
307	00:05:06.0	1014	90.07
308	00:05:07.0	1013	90.07
309	00:05:08.0	1015	90.07
310	00:05:09.0	1016	90.06
311	00:05:10.0	1016	90.06
312	00:05:11.0	1013	90.06
313	00:05:12.0	1015	90.06
314	00:05:13.0	1015	90.06
315	00:05:14.0	1015	90.06
316	00:05:15.0	1013	90.06
317	00:05:16.0	1014	90.06
318	00:05:17.0	1015	90.06
319	00:05:18.0	1016	90.06
320	00:05:19.0	1012	90.06
321	00:05:20.0	1014	90.07
322	00:05:21.0	1014	90.07
323	00:05:22.0	1016	90.08
324	00:05:23.0	1012	90.09
325	00:05:24.0	1013	90.10
326	00:05:25.0	1014	90.11
327	00:05:26.0	1016	90.12
328	00:05:27.0	1012	90.13
329	00:05:28.0	1013	90.14
330	00:05:29.0	1014	90.15
331	00:05:30.0	1015	90.16
332	00:05:31.0	1013	90.17
333	00:05:32.0	1013	90.18
334	00:05:33.0	1014	90.19
335	00:05:34.0	1014	90.20
336	00:05:35.0	1014	90.20
337	00:05:36.0	1012	90.21
338	00:05:37.0	1013	90.21
339	00:05:38.0	1014	90.22
340	00:05:39.0	1014	90.22
341	00:05:40.0	1012	90.22
342	00:05:41.0	1013	90.22

343	00:05:42.0	1013	90.22
344	00:05:43.0	1015	90.22
345	00:05:44.0	1012	90.22
346	00:05:45.0	1013	90.22
347	00:05:46.0	1013	90.22
348	00:05:47.0	1014	90.21
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350	00:05:49.0	1013	90.21
351	00:05:50.0	1013	90.21
352	00:05:51.0	1014	90.20
353	00:05:52.0	1012	90.20
354	00:05:53.0	1012	90.20
355	00:05:54.0	1013	90.20
356	00:05:55.0	1014	90.20
357	00:05:56.0	1013	90.19
358	00:05:57.0	1012	90.19
359	00:05:58.0	1013	90.19
360	00:05:59.0	1013	90.19
361	00:06:00.0	1013	90.19
362	00:06:01.0	1012	90.19
363	00:06:02.0	1012	90.19
364	00:06:03.0	1013	90.19
365	00:06:04.0	1013	90.19
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367	00:06:06.0	1012	90.18
368	00:06:07.0	1012	90.18
369	00:06:08.0	1013	90.18
370	00:06:09.0	1012	90.18
371	00:06:10.0	1012	90.18
372	00:06:11.0	1012	90.19
373	00:06:12.0	1013	90.19
374	00:06:13.0	1012	90.19
375	00:06:14.0	1012	90.20
376	00:06:15.0	1012	90.20
377	00:06:16.0	1013	90.21
378	00:06:17.0	1012	90.22
379	00:06:18.0	1012	90.23

380	00:06:19.0	1012	90.24
381	00:06:20.0	1012	90.25
382	00:06:21.0	1012	90.26
383	00:06:22.0	1011	90.27
384	00:06:23.0	1012	90.29
385	00:06:24.0	1012	90.30
386	00:06:25.0	1012	90.32
387	00:06:26.0	1011	90.33
388	00:06:27.0	1011	90.35
389	00:06:28.0	1011	90.37
390	00:06:29.0	1012	90.39
391	00:06:30.0	1011	90.41
392	00:06:31.0	1011	90.44
393	00:06:32.0	1012	90.46
394	00:06:33.0	1012	90.48
395	00:06:34.0	1011	90.50
396	00:06:35.0	1011	90.52
397	00:06:36.0	1011	90.55
398	00:06:37.0	1012	90.57
399	00:06:38.0	1011	90.60
400	00:06:39.0	1011	90.62
401	00:06:40.0	1011	90.65
402	00:06:41.0	1012	90.68
403	00:06:42.0	1012	90.70
404	00:06:43.0	1011	90.73
405	00:06:44.0	1011	90.76
406	00:06:45.0	1011	90.78
407	00:06:46.0	1011	90.81
408	00:06:47.0	1011	90.84
409	00:06:48.0	1011	90.86
410	00:06:49.0	1011	90.89
411	00:06:50.0	1012	90.91
412	00:06:51.0	1011	90.94
413	00:06:52.0	1011	90.96
414	00:06:53.0	1011	90.99
415	00:06:54.0	1012	91.01
416	00:06:55.0	1011	91.04

417	00:06:56.0	1011	91.06
418	00:06:57.0	1011	91.09
419	00:06:58.0	1012	91.11
420	00:06:59.0	1011	91.14
421	00:07:00.0	1011	91.17
422	00:07:01.0	1011	91.20
423	00:07:02.0	1011	91.22
424	00:07:03.0	1011	91.25
425	00:07:04.0	1010	91.28
426	00:07:05.0	1011	91.30
427	00:07:06.0	1011	91.33
428	00:07:07.0	1011	91.36
429	00:07:08.0	1010	91.38
430	00:07:09.0	1011	91.41
431	00:07:10.0	1011	91.43
432	00:07:11.0	1011	91.46
433	00:07:12.0	1010	91.48
434	00:07:13.0	1010	91.51
435	00:07:14.0	1011	91.53
436	00:07:15.0	1011	91.55
437	00:07:16.0	1010	91.58
438	00:07:17.0	1010	91.60
439	00:07:18.0	1010	91.62
440	00:07:19.0	1011	91.64
441	00:07:20.0	1010	91.66
442	00:07:21.0	1010	91.68
443	00:07:22.0	1010	91.70
444	00:07:23.0	1010	91.72
445	00:07:24.0	1010	91.74
446	00:07:25.0	1010	91.76
447	00:07:26.0	1010	91.78
448	00:07:27.0	1010	91.79
449	00:07:28.0	1011	91.81
450	00:07:29.0	1010	91.83
451	00:07:30.0	1010	91.85
452	00:07:31.0	1010	91.86
453	00:07:32.0	1011	91.87

454	00:07:33.0	1010	91.88
455	00:07:34.0	1010	91.89
456	00:07:35.0	1010	91.90
457	00:07:36.0	1010	91.90
458	00:07:37.0	1010	91.91
459	00:07:38.0	1010	91.91
460	00:07:39.0	1010	91.90
461	00:07:40.0	1010	91.90
462	00:07:41.0	1010	91.89
463	00:07:42.0	1010	91.89
464	00:07:43.0	1010	91.88
465	00:07:44.0	1010	91.87
466	00:07:45.0	1010	91.85
467	00:07:46.0	1010	91.84
468	00:07:47.0	1010	91.83
469	00:07:48.0	1010	91.82
470	00:07:49.0	1010	91.80
471	00:07:50.0	1010	91.79
472	00:07:51.0	1010	91.77
473	00:07:52.0	1010	91.76
474	00:07:53.0	1010	91.75
475	00:07:54.0	1010	91.73
476	00:07:55.0	1010	91.71
477	00:07:56.0	1010	91.70
478	00:07:57.0	1010	91.68
479	00:07:58.0	1010	91.67
480	00:07:59.0	1010	91.65
481	00:08:00.0	1010	91.63
482	00:08:01.0	1010	91.62
483	00:08:02.0	1010	91.60
484	00:08:03.0	1009	91.58
485	00:08:04.0	1009	91.56
486	00:08:05.0	1010	91.55
487	00:08:06.0	1010	91.53
488	00:08:07.0	1009	91.52
489	00:08:08.0	1009	91.50
490	00:08:09.0	1009	91.49

491	00:08:10.0	1010	91.47
492	00:08:11.0	1009	91.45
493	00:08:12.0	1009	91.44
494	00:08:13.0	1010	91.43
495	00:08:14.0	1009	91.41
496	00:08:15.0	1009	91.40
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498	00:08:17.0	1009	91.37
499	00:08:18.0	1009	91.36
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502	00:08:21.0	1009	91.32
503	00:08:22.0	1009	91.31
504	00:08:23.0	1009	91.30
505	00:08:24.0	1009	91.29
506	00:08:25.0	1009	91.29
507	00:08:26.0	1009	91.28
508	00:08:27.0	1009	91.27
509	00:08:28.0	1009	91.26
510	00:08:29.0	1009	91.25
511	00:08:30.0	1009	91.25
512	00:08:31.0	1009	91.24
513	00:08:32.0	1009	91.24
514	00:08:33.0	1009	91.24
515	00:08:34.0	1009	91.23
516	00:08:35.0	1009	91.23
517	00:08:36.0	1009	91.23
518	00:08:37.0	1009	91.23
519	00:08:38.0	1009	91.23
520	00:08:39.0	1009	91.24
521	00:08:40.0	1009	91.24
522	00:08:41.0	1009	91.24
523	00:08:42.0	1009	91.25
524	00:08:43.0	1009	91.26
525	00:08:44.0	1009	91.26
526	00:08:45.0	1009	91.27
527	00:08:46.0	1009	91.28

528	00:08:47.0	1009	91.29
529	00:08:48.0	1009	91.29
530	00:08:49.0	1009	91.30
531	00:08:50.0	1009	91.32
532	00:08:51.0	1009	91.32
533	00:08:52.0	1009	91.33
534	00:08:53.0	1009	91.34
535	00:08:54.0	1009	91.35
536	00:08:55.0	1009	91.36
537	00:08:56.0	1009	91.37
538	00:08:57.0	1009	91.38
539	00:08:58.0	1009	91.39
540	00:08:59.0	1008	91.40
541	00:09:00.0	1009	91.41
542	00:09:01.0	1009	91.41
543	00:09:02.0	1008	91.42
544	00:09:03.0	1008	91.42
545	00:09:04.0	1009	91.42
546	00:09:05.0	1009	91.42
547	00:09:06.0	1008	91.42
548	00:09:07.0	1008	91.42
549	00:09:08.0	1008	91.42
550	00:09:09.0	1008	91.41
551	00:09:10.0	1008	91.41
552	00:09:11.0	1008	91.40
553	00:09:12.0	1008	91.39
554	00:09:13.0	1009	91.39
555	00:09:14.0	1008	91.38
556	00:09:15.0	1008	91.38
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558	00:09:17.0	1008	91.37
559	00:09:18.0	1008	91.36
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561	00:09:20.0	1008	91.35
562	00:09:21.0	1008	91.35
563	00:09:22.0	1008	91.34
564	00:09:23.0	1008	91.33

565	00:09:24.0	1008	91.32
566	00:09:25.0	1008	91.31
567	00:09:26.0	1008	91.30
568	00:09:27.0	1008	91.28
569	00:09:28.0	1008	91.27
570	00:09:29.0	1008	91.25
571	00:09:30.0	1008	91.24
572	00:09:31.0	1008	91.22
573	00:09:32.0	1008	91.21
574	00:09:33.0	1008	91.20
575	00:09:34.0	1008	91.18
576	00:09:35.0	1008	91.17
577	00:09:36.0	1008	91.15
578	00:09:37.0	1008	91.13
579	00:09:38.0	1008	91.11
580	00:09:39.0	1008	91.10
581	00:09:40.0	1008	91.08
582	00:09:41.0	1008	91.06
583	00:09:42.0	1008	91.03
584	00:09:43.0	1008	91.01
585	00:09:44.0	1008	90.99
586	00:09:45.0	1008	90.97
587	00:09:46.0	1008	90.94
588	00:09:47.0	1008	90.92
589	00:09:48.0	1008	90.89
590	00:09:49.0	1008	90.87
591	00:09:50.0	1008	90.84
592	00:09:51.0	1008	90.82
593	00:09:52.0	1008	90.79
594	00:09:53.0	1008	90.77
595	00:09:54.0	1008	90.74
596	00:09:55.0	1008	90.72
597	00:09:56.0	1008	90.69
598	00:09:57.0	1008	90.66
599	00:09:58.0	1007	90.63
600	00:09:59.0	1008	90.61
601	00:10:00.0	1008	90.58

602	00:10:01.0	1008	90.55
603	00:10:02.0	1008	90.52
604	00:10:03.0	1008	90.48
605	00:10:04.0	1008	90.45
606	00:10:05.0	1008	90.42
607	00:10:06.0	1008	90.39
608	00:10:07.0	1007	90.36
609	00:10:08.0	1008	90.33
610	00:10:09.0	1008	90.30
611	00:10:10.0	1008	90.27
612	00:10:11.0	1008	90.24
613	00:10:12.0	1008	90.21
614	00:10:13.0	1007	90.18
615	00:10:14.0	1007	90.15
616	00:10:15.0	1007	90.12
617	00:10:16.0	1007	90.09
618	00:10:17.0	1007	90.06
619	00:10:18.0	1007	90.03
620	00:10:19.0	1008	89.99
621	00:10:20.0	1007	89.96
622	00:10:21.0	1007	89.94
623	00:10:22.0	1007	89.91
624	00:10:23.0	1007	89.88
625	00:10:24.0	1007	89.85
626	00:10:25.0	1007	89.83
627	00:10:26.0	1007	89.80
628	00:10:27.0	1007	89.78
629	00:10:28.0	1007	89.76
630	00:10:29.0	1007	89.74
631	00:10:30.0	1007	89.72
632	00:10:31.0	1007	89.71
633	00:10:32.0	1007	89.69
634	00:10:33.0	1007	89.68
635	00:10:34.0	1007	89.66
636	00:10:35.0	1007	89.65
637	00:10:36.0	1007	89.64
638	00:10:37.0	1007	89.63

639	00:10:38.0	1007	89.62
640	00:10:39.0	1007	89.61
641	00:10:40.0	1007	89.60
642	00:10:41.0	1007	89.60
643	00:10:42.0	1007	89.59
644	00:10:43.0	1007	89.59
645	00:10:44.0	1007	89.58
646	00:10:45.0	1007	89.58
647	00:10:46.0	1007	89.58
648	00:10:47.0	1007	89.58
649	00:10:48.0	1007	89.58
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661	00:11:00.0	1007	89.64
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663	00:11:02.0	1007	89.65
664	00:11:03.0	1007	89.66
665	00:11:04.0	1007	89.67
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667	00:11:06.0	1007	89.69
668	00:11:07.0	1007	89.70
669	00:11:08.0	1007	89.71
670	00:11:09.0	1007	89.72
671	00:11:10.0	1007	89.73
672	00:11:11.0	1007	89.74
673	00:11:12.0	1007	89.75
674	00:11:13.0	1007	89.76
675	00:11:14.0	1007	89.76

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685	00:11:24.0	1007	89.82
686	00:11:25.0	1007	89.83
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688	00:11:27.0	1007	89.84
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695	00:11:34.0	1007	89.82
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703	00:11:42.0	1006	89.76
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706	00:11:45.0	1007	89.74
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785	00:13:04.0	1005	89.12
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905	00:15:04.0	1004	90.77
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958	00:15:57.0	1004	91.27
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961	00:16:00.0	1004	91.27
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977	00:16:16.0	1003	91.33
978	00:16:17.0	1003	91.33
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981	00:16:20.0	1004	91.35
982	00:16:21.0	1004	91.35
983	00:16:22.0	1004	91.36
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985	00:16:24.0	1003	91.37
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987	00:16:26.0	1003	91.37
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991	00:16:30.0	1004	91.39
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998	00:16:37.0	1003	91.43
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1004	00:16:43.0	1003	91.46
1005	00:16:44.0	1003	91.47
1006	00:16:45.0	1003	91.47
1007	00:16:46.0	1003	91.48
1008	00:16:47.0	1003	91.48

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1010	00:16:49.0	1003	91.49
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1012	00:16:51.0	1003	91.50
1013	00:16:52.0	1003	91.51
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1015	00:16:54.0	1003	91.52
1016	00:16:55.0	1003	91.53
1017	00:16:56.0	1003	91.54
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1019	00:16:58.0	1003	91.56
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1021	00:17:00.0	1003	91.59
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1074	00:17:53.0	1003	92.09
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1077	00:17:56.0	1003	92.09
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1079	00:17:58.0	1003	92.09
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1094	00:18:13.0	1003	91.95
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1096	00:18:15.0	1002	91.92
1097	00:18:16.0	1003	91.90
1098	00:18:17.0	1002	91.89
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1100	00:18:19.0	1003	91.85
1101	00:18:20.0	1003	91.83
1102	00:18:21.0	1003	91.81
1103	00:18:22.0	1003	91.79
1104	00:18:23.0	1003	91.77
1105	00:18:24.0	1003	91.75
1106	00:18:25.0	1002	91.73
1107	00:18:26.0	1003	91.71
1108	00:18:27.0	1003	91.70
1109	00:18:28.0	1003	91.68
1110	00:18:29.0	1002	91.66
1111	00:18:30.0	1003	91.64
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1114	00:18:33.0	1003	91.59
1115	00:18:34.0	1002	91.57
1116	00:18:35.0	1002	91.55
1117	00:18:36.0	1002	91.53
1118	00:18:37.0	1003	91.51
1119	00:18:38.0	1003	91.49

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1145	00:19:04.0	1002	91.22
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1263	00:21:02.0	1002	90.95
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1564	00:26:03.0	1000	90.34
1565	00:26:04.0	1000	90.35
1566	00:26:05.0	1000	90.36
1567	00:26:06.0	1000	90.37
1568	00:26:07.0	1000	90.38
1569	00:26:08.0	1000	90.39
1570	00:26:09.0	1000	90.40
1571	00:26:10.0	1000	90.42
1572	00:26:11.0	1000	90.43
1573	00:26:12.0	1000	90.45
1574	00:26:13.0	1000	90.46
1575	00:26:14.0	1000	90.48
1576	00:26:15.0	1000	90.49
1577	00:26:16.0	1000	90.51
1578	00:26:17.0	1000	90.52
1579	00:26:18.0	1000	90.53
1580	00:26:19.0	1000	90.55
1581	00:26:20.0	1000	90.57
1582	00:26:21.0	1000	90.59
1583	00:26:22.0	1000	90.60
1584	00:26:23.0	1000	90.62
1585	00:26:24.0	1000	90.64
1586	00:26:25.0	1000	90.66
1587	00:26:26.0	1000	90.68
1588	00:26:27.0	1000	90.69
1589	00:26:28.0	1000	90.71
1590	00:26:29.0	1000	90.73
1591	00:26:30.0	1000	90.74
1592	00:26:31.0	1000	90.75
1593	00:26:32.0	1000	90.77
1594	00:26:33.0	1000	90.78
1595	00:26:34.0	1000	90.79
1596	00:26:35.0	1000	90.79
1597	00:26:36.0	1000	90.80
1598	00:26:37.0	1000	90.81
1599	00:26:38.0	1000	90.81
1600	00:26:39.0	1000	90.82

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1602	00:26:41.0	1000	90.83
1603	00:26:42.0	1000	90.83
1604	00:26:43.0	1000	90.83
1605	00:26:44.0	1000	90.84
1606	00:26:45.0	1000	90.84
1607	00:26:46.0	1000	90.85
1608	00:26:47.0	1000	90.85
1609	00:26:48.0	1000	90.85
1610	00:26:49.0	1000	90.86
1611	00:26:50.0	1000	90.86
1612	00:26:51.0	1000	90.86
1613	00:26:52.0	1000	90.87
1614	00:26:53.0	999	90.87
1615	00:26:54.0	1000	90.87
1616	00:26:55.0	999	90.87
1617	00:26:56.0	1000	90.87
1618	00:26:57.0	1000	90.87
1619	00:26:58.0	1000	90.87
1620	00:26:59.0	1000	90.87
1621	00:27:00.0	999	90.87
1622	00:27:01.0	1000	90.87
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1635	00:27:14.0	1000	90.85
1636	00:27:15.0	1000	90.85
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1642	00:27:21.0	1000	90.83
1643	00:27:22.0	1000	90.83
1644	00:27:23.0	1000	90.82
1645	00:27:24.0	1000	90.83
1646	00:27:25.0	999	90.83
1647	00:27:26.0	1000	90.83
1648	00:27:27.0	999	90.83
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1650	00:27:29.0	1000	90.84
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1669	00:27:48.0	999	90.86
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1673	00:27:52.0	999	90.87
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1677	00:27:56.0	999	90.89
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1693	00:28:12.0	999	91.19
1694	00:28:13.0	999	91.22
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1700	00:28:19.0	999	91.37
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1707	00:28:26.0	999	91.49
1708	00:28:27.0	999	91.50
1709	00:28:28.0	999	91.52
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1722	00:28:41.0	999	91.71
1723	00:28:42.0	999	91.72
1724	00:28:43.0	999	91.74
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1733	00:28:52.0	999	91.91
1734	00:28:53.0	999	91.92
1735	00:28:54.0	999	91.94
1736	00:28:55.0	999	91.95
1737	00:28:56.0	999	91.97
1738	00:28:57.0	999	91.99
1739	00:28:58.0	999	92.00
1740	00:28:59.0	999	92.02
1741	00:29:00.0	999	92.04
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1800	00:29:59.0	999	92.10
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1803	00:30:02.0	999	92.09
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1817	00:30:16.0	999	92.16
1818	00:30:17.0	999	92.17
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1820	00:30:19.0	999	92.19
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1822	00:30:21.0	999	92.21

1823	00:30:22.0	999	92.23
1824	00:30:23.0	999	92.24
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1841	00:30:40.0	999	92.53
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1846	00:30:45.0	998	92.65
1847	00:30:46.0	999	92.67
1848	00:30:47.0	999	92.70
1849	00:30:48.0	998	92.72
1850	00:30:49.0	999	92.74
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1852	00:30:51.0	999	92.79
1853	00:30:52.0	999	92.81
1854	00:30:53.0	999	92.83
1855	00:30:54.0	999	92.86
1856	00:30:55.0	998	92.88
1857	00:30:56.0	999	92.90
1858	00:30:57.0	998	92.93
1859	00:30:58.0	999	92.95

1860	00:30:59.0	999	92.97
1861	00:31:00.0	999	92.99
1862	00:31:01.0	998	93.01
1863	00:31:02.0	999	93.03
1864	00:31:03.0	999	93.05
1865	00:31:04.0	999	93.07
1866	00:31:05.0	998	93.08
1867	00:31:06.0	999	93.10
1868	00:31:07.0	999	93.12
1869	00:31:08.0	998	93.13
1870	00:31:09.0	998	93.14
1871	00:31:10.0	998	93.16
1872	00:31:11.0	999	93.17
1873	00:31:12.0	998	93.17
1874	00:31:13.0	999	93.18
1875	00:31:14.0	999	93.18
1876	00:31:15.0	999	93.18
1877	00:31:16.0	998	93.18
1878	00:31:17.0	999	93.18
1879	00:31:18.0	999	93.18
1880	00:31:19.0	998	93.17
1881	00:31:20.0	998	93.17
1882	00:31:21.0	999	93.16
1883	00:31:22.0	999	93.15
1884	00:31:23.0	998	93.14
1885	00:31:24.0	999	93.13
1886	00:31:25.0	998	93.12
1887	00:31:26.0	999	93.11
1888	00:31:27.0	999	93.10
1889	00:31:28.0	999	93.08
1890	00:31:29.0	998	93.07
1891	00:31:30.0	999	93.06
1892	00:31:31.0	999	93.04
1893	00:31:32.0	998	93.03
1894	00:31:33.0	998	93.01
1895	00:31:34.0	998	93.00
1896	00:31:35.0	998	92.98

1897	00:31:36.0	999	92.97
1898	00:31:37.0	998	92.95
1899	00:31:38.0	998	92.93
1900	00:31:39.0	998	92.92
1901	00:31:40.0	998	92.90
1902	00:31:41.0	998	92.89
1903	00:31:42.0	998	92.87
1904	00:31:43.0	998	92.86
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1906	00:31:45.0	998	92.84
1907	00:31:46.0	998	92.83
1908	00:31:47.0	998	92.82
1909	00:31:48.0	998	92.81
1910	00:31:49.0	998	92.81
1911	00:31:50.0	998	92.80
1912	00:31:51.0	998	92.80
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1914	00:31:53.0	998	92.80
1915	00:31:54.0	998	92.81
1916	00:31:55.0	998	92.81
1917	00:31:56.0	998	92.82
1918	00:31:57.0	998	92.82
1919	00:31:58.0	998	92.83
1920	00:31:59.0	998	92.84
1921	00:32:00.0	998	92.85
1922	00:32:01.0	998	92.87
1923	00:32:02.0	998	92.88
1924	00:32:03.0	998	92.89
1925	00:32:04.0	998	92.90
1926	00:32:05.0	998	92.92
1927	00:32:06.0	998	92.94
1928	00:32:07.0	998	92.95
1929	00:32:08.0	998	92.97
1930	00:32:09.0	998	92.98
1931	00:32:10.0	998	93.00
1932	00:32:11.0	998	93.02
1933	00:32:12.0	998	93.03

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1935	00:32:14.0	998	93.07
1936	00:32:15.0	998	93.08
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1939	00:32:18.0	998	93.13
1940	00:32:19.0	998	93.14
1941	00:32:20.0	998	93.16
1942	00:32:21.0	998	93.17
1943	00:32:22.0	998	93.19
1944	00:32:23.0	998	93.21
1945	00:32:24.0	998	93.23
1946	00:32:25.0	998	93.24
1947	00:32:26.0	998	93.26
1948	00:32:27.0	998	93.29
1949	00:32:28.0	998	93.31
1950	00:32:29.0	998	93.33
1951	00:32:30.0	998	93.34
1952	00:32:31.0	998	93.36
1953	00:32:32.0	998	93.38
1954	00:32:33.0	998	93.40
1955	00:32:34.0	998	93.42
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1957	00:32:36.0	998	93.45
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1959	00:32:38.0	998	93.48
1960	00:32:39.0	998	93.49
1961	00:32:40.0	998	93.51
1962	00:32:41.0	998	93.52
1963	00:32:42.0	998	93.54
1964	00:32:43.0	998	93.55
1965	00:32:44.0	998	93.56
1966	00:32:45.0	998	93.58
1967	00:32:46.0	998	93.59
1968	00:32:47.0	998	93.61
1969	00:32:48.0	998	93.62
1970	00:32:49.0	998	93.63

1971	00:32:50.0	998	93.64
1972	00:32:51.0	998	93.65
1973	00:32:52.0	998	93.66
1974	00:32:53.0	998	93.67
1975	00:32:54.0	998	93.67
1976	00:32:55.0	998	93.67
1977	00:32:56.0	998	93.67
1978	00:32:57.0	998	93.67
1979	00:32:58.0	998	93.67
1980	00:32:59.0	998	93.66
1981	00:33:00.0	998	93.66
1982	00:33:01.0	998	93.65
1983	00:33:02.0	998	93.65
1984	00:33:03.0	998	93.64
1985	00:33:04.0	998	93.63
1986	00:33:05.0	998	93.63
1987	00:33:06.0	998	93.62
1988	00:33:07.0	998	93.62
1989	00:33:08.0	998	93.61
1990	00:33:09.0	998	93.61
1991	00:33:10.0	998	93.60
1992	00:33:11.0	998	93.59
1993	00:33:12.0	998	93.58
1994	00:33:13.0	998	93.58
1995	00:33:14.0	998	93.57
1996	00:33:15.0	998	93.56
1997	00:33:16.0	998	93.54
1998	00:33:17.0	998	93.53
1999	00:33:18.0	998	93.52
2000	00:33:19.0	998	93.50
2001	00:33:20.0	998	93.49
2002	00:33:21.0	998	93.48
2003	00:33:22.0	998	93.47
2004	00:33:23.0	998	93.45
2005	00:33:24.0	998	93.44
2006	00:33:25.0	998	93.43
2007	00:33:26.0	998	93.42

2008	00:33:27.0	998	93.41
2009	00:33:28.0	998	93.40
2010	00:33:29.0	998	93.40
2011	00:33:30.0	998	93.39
2012	00:33:31.0	998	93.38
2013	00:33:32.0	998	93.38
2014	00:33:33.0	998	93.38
2015	00:33:34.0	998	93.37
2016	00:33:35.0	998	93.37
2017	00:33:36.0	998	93.36
2018	00:33:37.0	998	93.35
2019	00:33:38.0	998	93.35
2020	00:33:39.0	998	93.34
2021	00:33:40.0	998	93.34
2022	00:33:41.0	998	93.33
2023	00:33:42.0	998	93.32
2024	00:33:43.0	998	93.32
2025	00:33:44.0	998	93.31
2026	00:33:45.0	998	93.30
2027	00:33:46.0	998	93.29
2028	00:33:47.0	998	93.28
2029	00:33:48.0	998	93.27
2030	00:33:49.0	998	93.27
2031	00:33:50.0	998	93.26
2032	00:33:51.0	998	93.25
2033	00:33:52.0	998	93.25
2034	00:33:53.0	998	93.24
2035	00:33:54.0	998	93.24
2036	00:33:55.0	998	93.24
2037	00:33:56.0	998	93.24
2038	00:33:57.0	998	93.24
2039	00:33:58.0	998	93.24
2040	00:33:59.0	998	93.24
2041	00:34:00.0	998	93.24
2042	00:34:01.0	998	93.25
2043	00:34:02.0	998	93.25
2044	00:34:03.0	998	93.25

2045	00:34:04.0	998	93.26
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2050	00:34:09.0	998	93.30
2051	00:34:10.0	998	93.31
2052	00:34:11.0	998	93.32
2053	00:34:12.0	998	93.33
2054	00:34:13.0	998	93.35
2055	00:34:14.0	998	93.36
2056	00:34:15.0	998	93.38
2057	00:34:16.0	998	93.39
2058	00:34:17.0	998	93.41
2059	00:34:18.0	998	93.42
2060	00:34:19.0	998	93.44
2061	00:34:20.0	998	93.46
2062	00:34:21.0	998	93.47
2063	00:34:22.0	998	93.49
2064	00:34:23.0	998	93.50
2065	00:34:24.0	998	93.51
2066	00:34:25.0	998	93.53
2067	00:34:26.0	998	93.54
2068	00:34:27.0	998	93.55
2069	00:34:28.0	998	93.56
2070	00:34:29.0	998	93.58
2071	00:34:30.0	998	93.59
2072	00:34:31.0	998	93.60
2073	00:34:32.0	998	93.62
2074	00:34:33.0	998	93.63
2075	00:34:34.0	998	93.64
2076	00:34:35.0	998	93.65
2077	00:34:36.0	998	93.67
2078	00:34:37.0	998	93.68
2079	00:34:38.0	998	93.69
2080	00:34:39.0	998	93.70
2081	00:34:40.0	998	93.71

2082	00:34:41.0	998	93.72
2083	00:34:42.0	998	93.73
2084	00:34:43.0	998	93.74
2085	00:34:44.0	998	93.75
2086	00:34:45.0	998	93.77
2087	00:34:46.0	998	93.78
2088	00:34:47.0	998	93.80
2089	00:34:48.0	998	93.81
2090	00:34:49.0	998	93.83
2091	00:34:50.0	998	93.85
2092	00:34:51.0	998	93.88
2093	00:34:52.0	998	93.90
2094	00:34:53.0	998	93.92
2095	00:34:54.0	998	93.95
2096	00:34:55.0	998	93.97
2097	00:34:56.0	998	94.00
2098	00:34:57.0	998	94.02
2099	00:34:58.0	998	94.04
2100	00:34:59.0	998	94.06
2101	00:35:00.0	998	94.07
2102	00:35:01.0	998	94.09
2103	00:35:02.0	998	94.10
2104	00:35:03.0	998	94.11
2105	00:35:04.0	997	94.11
2106	00:35:05.0	998	94.11
2107	00:35:06.0	998	94.11
2108	00:35:07.0	998	94.11
2109	00:35:08.0	998	94.11
2110	00:35:09.0	997	94.10
2111	00:35:10.0	998	94.09
2112	00:35:11.0	998	94.08
2113	00:35:12.0	998	94.06
2114	00:35:13.0	998	94.05
2115	00:35:14.0	998	94.03
2116	00:35:15.0	998	94.01
2117	00:35:16.0	998	93.99
2118	00:35:17.0	998	93.97

2119	00:35:18.0	998	93.95
2120	00:35:19.0	998	93.92
2121	00:35:20.0	998	93.90
2122	00:35:21.0	997	93.87
2123	00:35:22.0	998	93.84
2124	00:35:23.0	998	93.82
2125	00:35:24.0	997	93.79
2126	00:35:25.0	997	93.76
2127	00:35:26.0	998	93.73
2128	00:35:27.0	997	93.70
2129	00:35:28.0	997	93.67
2130	00:35:29.0	997	93.64
2131	00:35:30.0	997	93.61
2132	00:35:31.0	998	93.58
2133	00:35:32.0	998	93.55
2134	00:35:33.0	998	93.53
2135	00:35:34.0	998	93.50
2136	00:35:35.0	998	93.48
2137	00:35:36.0	998	93.45
2138	00:35:37.0	998	93.43
2139	00:35:38.0	998	93.41
2140	00:35:39.0	997	93.39
2141	00:35:40.0	997	93.38
2142	00:35:41.0	998	93.36
2143	00:35:42.0	998	93.35
2144	00:35:43.0	998	93.34
2145	00:35:44.0	997	93.33
2146	00:35:45.0	997	93.32
2147	00:35:46.0	998	93.31
2148	00:35:47.0	998	93.30
2149	00:35:48.0	997	93.29
2150	00:35:49.0	997	93.28
2151	00:35:50.0	998	93.28
2152	00:35:51.0	997	93.27
2153	00:35:52.0	998	93.26
2154	00:35:53.0	998	93.25
2155	00:35:54.0	998	93.25

2156	00:35:55.0	998	93.24
2157	00:35:56.0	998	93.23
2158	00:35:57.0	998	93.22
2159	00:35:58.0	997	93.22
2160	00:35:59.0	997	93.21
2161	00:36:00.0	997	93.21
2162	00:36:01.0	997	93.20
2163	00:36:02.0	997	93.20
2164	00:36:03.0	997	93.19
2165	00:36:04.0	997	93.19
2166	00:36:05.0	997	93.18
2167	00:36:06.0	997	93.18
2168	00:36:07.0	993	93.18
2169	00:36:08.0	930	93.18
2170	00:36:09.0	859	93.18
2171	00:36:10.0	817	93.19
2172	00:36:11.0	740	93.19
2173	00:36:12.0	706	93.20
2174	00:36:13.0	692	93.21
2175	00:36:14.0	690	93.22
2176	00:36:15.0	684	93.23
2177	00:36:16.0	677	93.25
2178	00:36:17.0	674	93.26
2179	00:36:18.0	671	93.28
2180	00:36:19.0	668	93.30
2181	00:36:20.0	661	93.32
2182	00:36:21.0	654	93.34
2183	00:36:22.0	650	93.37
2184	00:36:23.0	646	93.39
2185	00:36:24.0	641	93.42
2186	00:36:25.0	635	93.44
2187	00:36:26.0	631	93.47
2188	00:36:27.0	628	93.50
2189	00:36:28.0	624	93.52
2190	00:36:29.0	618	93.55
2191	00:36:30.0	613	93.58
2192	00:36:31.0	611	93.60

2193	00:36:32.0	607	93.63
2194	00:36:33.0	600	93.66
2195	00:36:34.0	597	93.68
2196	00:36:35.0	594	93.71
2197	00:36:36.0	590	93.73
2198	00:36:37.0	585	93.75
2199	00:36:38.0	579	93.78
2200	00:36:39.0	577	93.80
2201	00:36:40.0	574	93.82
2202	00:36:41.0	569	93.85
2203	00:36:42.0	564	93.87
2204	00:36:43.0	561	93.89
2205	00:36:44.0	558	93.92
2206	00:36:45.0	552	93.94
2207	00:36:46.0	549	93.97
2208	00:36:47.0	545	93.99
2209	00:36:48.0	542	94.02
2210	00:36:49.0	539	94.04
2211	00:36:50.0	533	94.07
2212	00:36:51.0	529	94.10
2213	00:36:52.0	526	94.12
2214	00:36:53.0	523	94.15
2215	00:36:54.0	518	94.17
2216	00:36:55.0	514	94.20
2217	00:36:56.0	511	94.22
2218	00:36:57.0	508	94.25
2219	00:36:58.0	503	94.27
2220	00:36:59.0	499	94.29
2221	00:37:00.0	497	94.32
2222	00:37:01.0	493	94.34
2223	00:37:02.0	488	94.37
2224	00:37:03.0	484	94.39
2225	00:37:04.0	482	94.42
2226	00:37:05.0	479	94.44
2227	00:37:06.0	475	94.46
2228	00:37:07.0	470	94.48
2229	00:37:08.0	467	94.50

2230	00:37:09.0	464	94.52
2231	00:37:10.0	461	94.54
2232	00:37:11.0	457	94.56
2233	00:37:12.0	453	94.58
2234	00:37:13.0	450	94.59
2235	00:37:14.0	447	94.61
2236	00:37:15.0	443	94.63
2237	00:37:16.0	439	94.64
2238	00:37:17.0	437	94.66
2239	00:37:18.0	433	94.67
2240	00:37:19.0	428	94.68
2241	00:37:20.0	425	94.69
2242	00:37:21.0	422	94.70
2243	00:37:22.0	420	94.71
2244	00:37:23.0	416	94.72
2245	00:37:24.0	412	94.73
2246	00:37:25.0	409	94.74
2247	00:37:26.0	406	94.75
2248	00:37:27.0	403	94.76
2249	00:37:28.0	399	94.77
2250	00:37:29.0	396	94.78
2251	00:37:30.0	393	94.80
2252	00:37:31.0	390	94.81
2253	00:37:32.0	386	94.82
2254	00:37:33.0	383	94.83
2255	00:37:34.0	381	94.85
2256	00:37:35.0	377	94.86
2257	00:37:36.0	374	94.87
2258	00:37:37.0	371	94.89
2259	00:37:38.0	367	94.90
2260	00:37:39.0	365	94.92
2261	00:37:40.0	362	94.93
2262	00:37:41.0	358	94.95
2263	00:37:42.0	356	94.97
2264	00:37:43.0	353	94.98
2265	00:37:44.0	349	95.00
2266	00:37:45.0	346	95.02

2267	00:37:46.0	344	95.03
2268	00:37:47.0	340	95.05
2269	00:37:48.0	337	95.06
2270	00:37:49.0	334	95.08
2271	00:37:50.0	332	95.09
2272	00:37:51.0	329	95.11
2273	00:37:52.0	326	95.12
2274	00:37:53.0	323	95.13
2275	00:37:54.0	320	95.15
2276	00:37:55.0	317	95.16
2277	00:37:56.0	315	95.17
2278	00:37:57.0	312	95.18
2279	00:37:58.0	309	95.19
2280	00:37:59.0	306	95.20
2281	00:38:00.0	303	95.21
2282	00:38:01.0	301	95.23
2283	00:38:02.0	298	95.24
2284	00:38:03.0	295	95.25
2285	00:38:04.0	292	95.26
2286	00:38:05.0	289	95.27
2287	00:38:06.0	287	95.28
2288	00:38:07.0	284	95.29
2289	00:38:08.0	282	95.29
2290	00:38:09.0	279	95.30
2291	00:38:10.0	276	95.30
2292	00:38:11.0	273	95.31
2293	00:38:12.0	271	95.31
2294	00:38:13.0	269	95.31
2295	00:38:14.0	266	95.31
2296	00:38:15.0	263	95.31
2297	00:38:16.0	261	95.31
2298	00:38:17.0	258	95.31
2299	00:38:18.0	256	95.30
2300	00:38:19.0	253	95.29
2301	00:38:20.0	251	95.29
2302	00:38:21.0	249	95.28
2303	00:38:22.0	246	95.26

2304	00:38:23.0	243	95.25
2305	00:38:24.0	241	95.23
2306	00:38:25.0	238	95.21
2307	00:38:26.0	236	95.19
2308	00:38:27.0	233	95.17
2309	00:38:28.0	231	95.14
2310	00:38:29.0	229	95.11
2311	00:38:30.0	226	95.08
2312	00:38:31.0	224	95.05
2313	00:38:32.0	222	95.02
2314	00:38:33.0	219	94.99
2315	00:38:34.0	217	94.95
2316	00:38:35.0	214	94.92
2317	00:38:36.0	212	94.88
2318	00:38:37.0	210	94.85
2319	00:38:38.0	208	94.82
2320	00:38:39.0	205	94.79
2321	00:38:40.0	203	94.75
2322	00:38:41.0	201	94.72
2323	00:38:42.0	199	94.69
2324	00:38:43.0	197	94.67
2325	00:38:44.0	194	94.64
2326	00:38:45.0	192	94.61
2327	00:38:46.0	190	94.58
2328	00:38:47.0	188	94.55
2329	00:38:48.0	186	94.53
2330	00:38:49.0	184	94.50
2331	00:38:50.0	181	94.48
2332	00:38:51.0	179	94.46
2333	00:38:52.0	177	94.44
2334	00:38:53.0	175	94.42
2335	00:38:54.0	173	94.41
2336	00:38:55.0	171	94.39
2337	00:38:56.0	169	94.38
2338	00:38:57.0	167	94.36
2339	00:38:58.0	165	94.35
2340	00:38:59.0	163	94.33

2341	00:39:00.0	161	94.32
2342	00:39:01.0	159	94.31
2343	00:39:02.0	157	94.29
2344	00:39:03.0	155	94.28
2345	00:39:04.0	153	94.27
2346	00:39:05.0	151	94.25
2347	00:39:06.0	149	94.24
2348	00:39:07.0	148	94.23
2349	00:39:08.0	145	94.21
2350	00:39:09.0	144	94.20
2351	00:39:10.0	142	94.19
2352	00:39:11.0	140	94.17
2353	00:39:12.0	138	94.16
2354	00:39:13.0	136	94.15
2355	00:39:14.0	134	94.14
2356	00:39:15.0	133	94.13
2357	00:39:16.0	131	94.11
2358	00:39:17.0	129	94.10
2359	00:39:18.0	127	94.09
2360	00:39:19.0	125	94.08
2361	00:39:20.0	124	94.07
2362	00:39:21.0	122	94.06
2363	00:39:22.0	121	94.05
2364	00:39:23.0	119	94.04
2365	00:39:24.0	117	94.03
2366	00:39:25.0	115	94.02
2367	00:39:26.0	114	94.02
2368	00:39:27.0	112	94.01
2369	00:39:28.0	111	94.00
2370	00:39:29.0	109	94.00
2371	00:39:30.0	108	93.99
2372	00:39:31.0	106	93.99
2373	00:39:32.0	104	93.99
2374	00:39:33.0	103	93.99
2375	00:39:34.0	101	93.98
2376	00:39:35.0	100	93.98
2377	00:39:36.0	97	93.98

2378	00:39:37.0	96	93.98
2379	00:39:38.0	95	93.98
2380	00:39:39.0	94	93.98
2381	00:39:40.0	92	93.98
2382	00:39:41.0	91	93.99
2383	00:39:42.0	89	93.99
2384	00:39:43.0	87	93.99
2385	00:39:44.0	86	93.99
2386	00:39:45.0	85	93.99
2387	00:39:46.0	83	93.99
2388	00:39:47.0	82	93.99
2389	00:39:48.0	81	94.00
2390	00:39:49.0	79	94.00
2391	00:39:50.0	78	94.01
2392	00:39:51.0	77	94.01
2393	00:39:52.0	75	94.02
2394	00:39:53.0	74	94.03
2395	00:39:54.0	72	94.04
2396	00:39:55.0	71	94.05
2397	00:39:56.0	70	94.06
2398	00:39:57.0	69	94.07
2399	00:39:58.0	68	94.09
2400	00:39:59.0	66	94.10
2401	00:40:00.0	65	94.12
2402	00:40:01.0	64	94.13
2403	00:40:02.0	63	94.15
2404	00:40:03.0	62	94.16
2405	00:40:04.0	60	94.18
2406	00:40:05.0	59	94.20
2407	00:40:06.0	58	94.22
2408	00:40:07.0	57	94.24
2409	00:40:08.0	56	94.26
2410	00:40:09.0	55	94.28
2411	00:40:10.0	54	94.30
2412	00:40:11.0	52	94.32
2413	00:40:12.0	51	94.35
2414	00:40:13.0	50	94.37

2415	00:40:14.0	49	94.40
2416	00:40:15.0	49	94.43
2417	00:40:16.0	47	94.45
2418	00:40:17.0	46	94.48
2419	00:40:18.0	45	94.51
2420	00:40:19.0	44	94.54
2421	00:40:20.0	44	94.58
2422	00:40:21.0	43	94.61
2423	00:40:22.0	41	94.64
2424	00:40:23.0	41	94.68
2425	00:40:24.0	40	94.71
2426	00:40:25.0	39	94.75
2427	00:40:26.0	38	94.79
2428	00:40:27.0	37	94.83
2429	00:40:28.0	36	94.87
2430	00:40:29.0	35	94.91
2431	00:40:30.0	34	94.95
2432	00:40:31.0	34	94.99
2433	00:40:32.0	33	95.03
2434	00:40:33.0	32	95.07
2435	00:40:34.0	32	95.11
2436	00:40:35.0	31	95.15
2437	00:40:36.0	30	95.19
2438	00:40:37.0	30	95.23
2439	00:40:38.0	29	95.27
2440	00:40:39.0	27	95.31
2441	00:40:40.0	28	95.34
2442	00:40:41.0	27	95.38
2443	00:40:42.0	26	95.41
2444	00:40:43.0	26	95.44
2445	00:40:44.0	25	95.47
2446	00:40:45.0	24	95.50
2447	00:40:46.0	24	95.53
2448	00:40:47.0	23	95.56
2449	00:40:48.0	23	95.59
2450	00:40:49.0	22	95.62
2451	00:40:50.0	21	95.65

2452	00:40:51.0	21	95.68
2453	00:40:52.0	20	95.71
2454	00:40:53.0	20	95.73
2455	00:40:54.0	19	95.75
2456	00:40:55.0	19	95.78
2457	00:40:56.0	18	95.80
2458	00:40:57.0	18	95.82
2459	00:40:58.0	17	95.84
2460	00:40:59.0	17	95.85
2461	00:41:00.0	16	95.86
2462	00:41:01.0	16	95.88
2463	00:41:02.0	16	95.89
2464	00:41:03.0	15	95.89
2465	00:41:04.0	15	95.90
2466	00:41:05.0	15	95.91
2467	00:41:06.0	14	95.91
2468	00:41:07.0	14	95.91
2469	00:41:08.0	14	95.92
2470	00:41:09.0	13	95.92
2471	00:41:10.0	13	95.92
2472	00:41:11.0	13	95.92
2473	00:41:12.0	12	95.92
2474	00:41:13.0	12	95.92
2475	00:41:14.0	12	95.92
2476	00:41:15.0	11	95.93
2477	00:41:16.0	11	95.93
2478	00:41:17.0	11	95.93
2479	00:41:18.0	11	95.93
2480	00:41:19.0	10	95.93
2481	00:41:20.0	10	95.93
2482	00:41:21.0	10	95.92
2483	00:41:22.0	10	95.92
2484	00:41:23.0	10	95.91
2485	00:41:24.0	9	95.91
2486	00:41:25.0	9	95.89
2487	00:41:26.0	9	95.88
2488	00:41:27.0	9	95.86

2489	00:41:28.0	9	95.85
2490	00:41:29.0	9	95.82
2491	00:41:30.0	8	95.80
2492	00:41:31.0	8	95.77
2493	00:41:32.0	8	95.75
2494	00:41:33.0	8	95.72
2495	00:41:34.0	8	95.69
2496	00:41:35.0	8	95.66
2497	00:41:36.0	8	95.63
2498	00:41:37.0	7	95.59
2499	00:41:38.0	7	95.56
2500	00:41:39.0	7	95.52
2501	00:41:40.0	7	95.48
2502	00:41:41.0	7	95.45
2503	00:41:42.0	7	95.41
2504	00:41:43.0	7	95.36
2505	00:41:44.0	7	95.32
2506	00:41:45.0	7	95.28
2507	00:41:46.0	7	95.24
2508	00:41:47.0	7	95.19
2509	00:41:48.0	7	95.15
2510	00:41:49.0	6	95.10
2511	00:41:50.0	6	95.06
2512	00:41:51.0	5	95.01
2513	00:41:52.0	6	94.97
2514	00:41:53.0	5	94.93
2515	00:41:54.0	6	94.88
2516	00:41:55.0	6	94.84
2517	00:41:56.0	6	94.80
2518	00:41:57.0	6	94.76
2519	00:41:58.0	6	94.73
2520	00:41:59.0	6	94.69
2521	00:42:00.0	5	94.66
2522	00:42:01.0	4	94.63
2523	00:42:02.0	4	94.60
2524	00:42:03.0	4	94.58
2525	00:42:04.0	4	94.55

2526	00:42:05.0	3	94.53
2527	00:42:06.0	4	94.50
2528	00:42:07.0	3	94.48
2529	00:42:08.0	4	94.46
2530	00:42:09.0	4	94.44
2531	00:42:10.0	3	94.42
2532	00:42:11.0	3	94.40
2533	00:42:12.0	3	94.37
2534	00:42:13.0	4	94.35
2535	00:42:14.0	3	94.33
2536	00:42:15.0	3	94.31
2537	00:42:16.0	3	94.29
2538	00:42:17.0	3	94.27
2539	00:42:18.0	3	94.25
2540	00:42:19.0	3	94.23
2541	00:42:20.0	3	94.21
2542	00:42:21.0	3	94.19
2543	00:42:22.0	3	94.18
2544	00:42:23.0	4	94.16
2545	00:42:24.0	3	94.14
2546	00:42:25.0	3	94.12
2547	00:42:26.0	3	94.10
2548	00:42:27.0	3	94.08
2549	00:42:28.0	3	94.06
2550	00:42:29.0	3	94.04
2551	00:42:30.0	3	94.02
2552	00:42:31.0	3	94.00
2553	00:42:32.0	3	93.98
2554	00:42:33.0	3	93.96
2555	00:42:34.0	3	93.94
2556	00:42:35.0	3	93.92
2557	00:42:36.0	3	93.90
2558	00:42:37.0	3	93.88
2559	00:42:38.0	3	93.87
2560	00:42:39.0	3	93.85
2561	00:42:40.0	3	93.84
2562	00:42:41.0	3	93.82

2563	00:42:42.0	3	93.81
2564	00:42:43.0	3	93.80
2565	00:42:44.0	3	93.79
2566	00:42:45.0	3	93.78
2567	00:42:46.0	3	93.77
2568	00:42:47.0	3	93.76
2569	00:42:48.0	3	93.74
2570	00:42:49.0	3	93.73
2571	00:42:50.0	3	93.72
2572	00:42:51.0	3	93.72
2573	00:42:52.0	3	93.71
2574	00:42:53.0	3	93.70
2575	00:42:54.0	3	93.70
2576	00:42:55.0	3	93.69
2577	00:42:56.0	4	93.69
2578	00:42:57.0	4	93.69
2579	00:42:58.0	4	93.68
2580	00:42:59.0	4	93.68
2581	00:43:00.0	4	93.68
2582	00:43:01.0	4	93.68
2583	00:43:02.0	4	93.67
2584	00:43:03.0	4	93.67
2585	00:43:04.0	4	93.67
2586	00:43:05.0	4	93.67
2587	00:43:06.0	4	93.67
2588	00:43:07.0	3	93.67
2589	00:43:08.0	3	93.67
2590	00:43:09.0	3	93.66
2591	00:43:10.0	4	93.66
2592	00:43:11.0	3	93.66
2593	00:43:12.0	3	93.66
2594	00:43:13.0	3	93.65
2595	00:43:14.0	3	93.65
2596	00:43:15.0	3	93.64
2597	00:43:16.0	3	93.63
2598	00:43:17.0	3	93.63
2599	00:43:18.0	3	93.62

2600	00:43:19.0	3	93.61
2601	00:43:20.0	3	93.61
2602	00:43:21.0	3	93.60
2603	00:43:22.0	3	93.60
2604	00:43:23.0	3	93.59
2605	00:43:24.0	3	93.59
2606	00:43:25.0	3	93.58
2607	00:43:26.0	3	93.57
2608	00:43:27.0	3	93.57