

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

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>		<b>1. WELL NAME and NUMBER</b> NBU 1022-5A4BS
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES
<b>4. TYPE OF WELL</b> Gas Well      Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. OPERATOR PHONE</b> 720 929-6515
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217		<b>9. OPERATOR E-MAIL</b> julie.jacobson@anadarko.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU-01191-A	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> 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	794 FNL 62 FEL	NENE	5	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	756 FNL 492 FEL	NENE	5	10.0 S	22.0 E	S
At Total Depth	756 FNL 492 FEL	NENE	5	10.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 756	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1363
<b>24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 491	<b>25. PROPOSED DEPTH</b> MD: 10120 TVD: 10100	
<b>26. ELEVATION - GROUND LEVEL</b> 5011	<b>27. BOND NUMBER</b> WYB000291	<b>28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8496

**Hole, Casing, and Cement Information**

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2360	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 10120	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	300	3.38	12.0
							50/50 Poz	1480	1.31	14.3

**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

<b>NAME</b> Gina Becker	<b>TITLE</b> Regulatory Analyst II	<b>PHONE</b> 720 929-6086
<b>SIGNATURE</b>	<b>DATE</b> 02/06/2013	<b>EMAIL</b> gina.becker@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047535310000	<b>APPROVAL</b>   Permit Manager	

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

	<u><b>NBU 1022-5A4BS</b></u>	
Surface:	794 FNL / 62 FEL	NENE
BHL:	756 FNL / 492 FEL	NENE

Section 5 T10S R22E

Unitah County, Utah  
Mineral Lease: UTU-01191-A

### ONSHORE ORDER NO. 1

### DRILLING PROGRAM

**1. & 2.a** 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	1,159'	
Birds Nest	1,442'	Water
Mahogany	1,908'	Water
Wasatch	4,352'	Gas
Mesaverde	6,832'	Gas
Sego	8,987'	Gas
Castlegate	9,062'	Gas
Blackhawk	9,500'	Gas
TVD =	10,100'	
TD =	10,120'	

- 2.b** Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

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

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

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

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**5. Drilling Fluids Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**6. Evaluation Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

**7. Abnormal Conditions:****7.a Blackhawk (Part of Mesaverde Group)**

Maximum anticipated bottom hole pressure calculated at 10100' TVD, approximately equals  
6,464 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,228 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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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))

**7.b Wasach Formation/Mesaverde Group**

Maximum anticipated bottom hole pressure calculated at 8987' TVD, approximately equals  
5,482 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,529 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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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 Standard Operating Practices on file with the BLM Vernal Field Office.

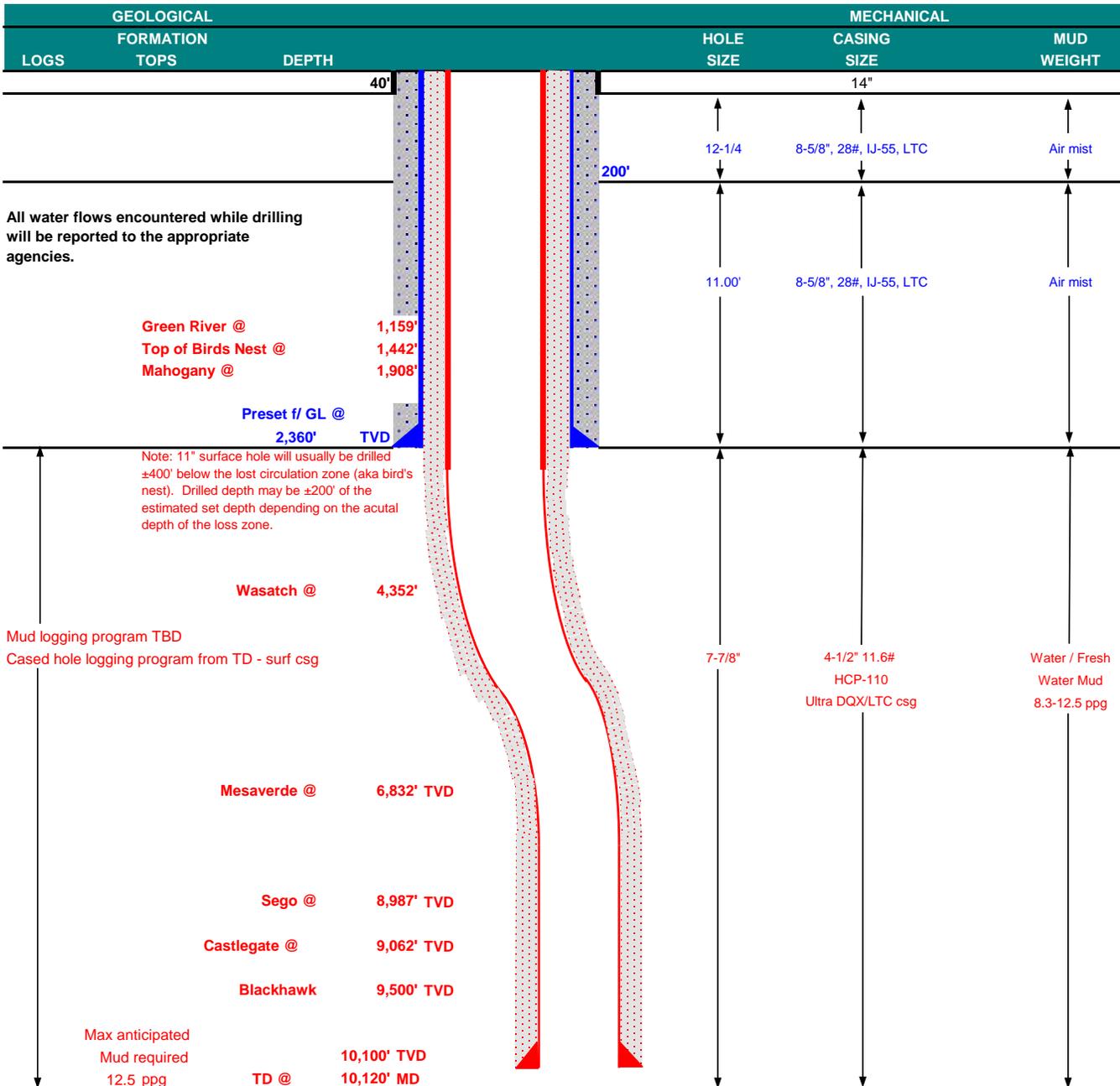
**10. Other Information:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



**KERR-McGEE OIL & GAS ONSHORE LP**  
**Blackhawk Drilling Program**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	January 2, 2013	
WELL NAME	<b>NBU 1022-5A4BS</b>		TD	10,100'	10,120' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NENE	794 FNL	62 FEL	Sec 5 T 10S	R 22E
	Latitude:	39.983081	Longitude:	-109.454577	NAD 83
BTM HOLE LOCATION	NENE	756 FNL	492 FEL	Sec 5 T 10S	R 22E
	Latitude:	39.983184	Longitude:	-109.456113	NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.				





**KERR-McGEE OIL & GAS ONSHORE LP**  
**Blackhawk Drilling Program**

**CASING PROGRAM**

						DESIGN FACTORS			
	SIZE	INTERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,360	28.00	IJ-55	LTC	2.28	1.70	6.01	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	1.32		3.87
	4-1/2"	5,000 to 10,120'	11.60	HCP-110	LTC	1.19	1.32	5.81	

**Surface Casing:**

(Burst Assumptions: TD = 12.5 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) 0.64 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	180	60%	15.80	1.15
	Option 1		+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE	LEAD	1,860'	Premium cmt + 16% Gel + 10 pps gilsonite	230	35%	12.00	2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,850'	Premium Lite II +0.25 pps celloflake + .4% FL-52	300	35%	12.00	3.38
			+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +				
			1.2% Sodium Metasilicate + .05 lbs/sk Static Free				
	TAIL	6,270'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,480	35%	14.30	1.31
			+ 1.2% Sodium Metasilicate + .5 % EC-1				
			+ .002 gps FP-6L + 2% Bentonite II				

\*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. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**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.

If extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

**DRILLING ENGINEER:**

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

**DATE:**

**DRILLING SUPERINTENDENT:**

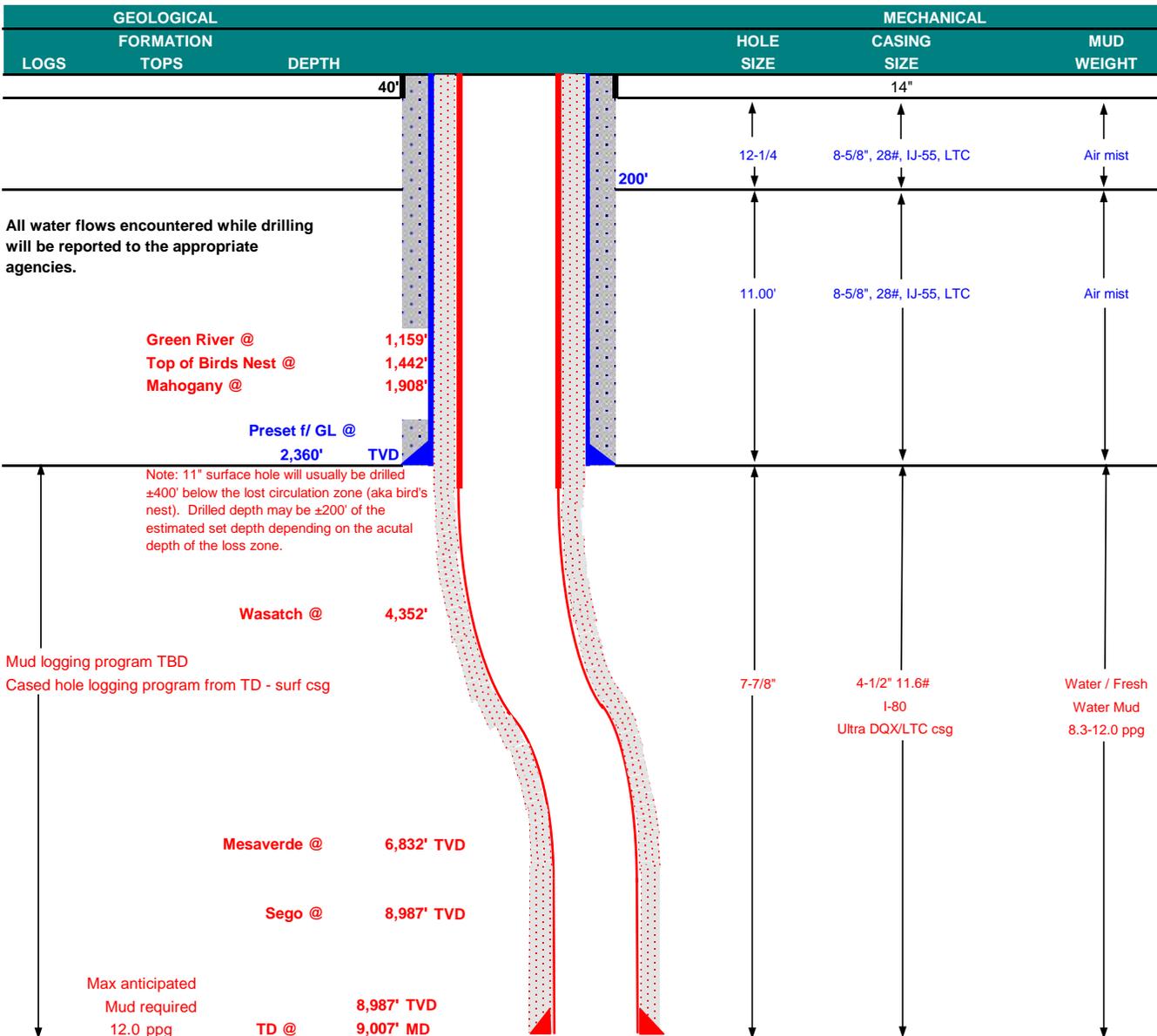
Kenny Gathings / Lovel Young

**DATE:**



**KERR-McGEE OIL & GAS ONSHORE LP**  
**Wasatch/Mesaverde Drilling Program**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	January 2, 2013		
WELL NAME	<b>NBU 1022-5A4BS</b>			TD	8,987'	9,007' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	5,011'
SURFACE LOCATION	NENE	794 FNL	62 FEL	Sec 5	T 10S	R 22E	
	Latitude:	39.983081	Longitude:	-109.454577			NAD 83
BTM HOLE LOCATION	NENE	756 FNL	492 FEL	Sec 5	T 10S	R 22E	
	Latitude:	39.983184	Longitude:	-109.456113			NAD 83
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.						





**KERR-McGEE OIL & GAS ONSHORE LP**  
**Wasatch/Mesaverde Drilling Program**

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,360	28.00	IJ-55	LTC	3.390	1,880	348,000	N/A
						7,780	6,350	6.01	N/A
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.13		267,035
						7,780	6,350	223,000	3.13
	4-1/2"	5,000 to 9,007'	11.60	I-80	LTC	1.11	1.13	5.87	

**Surface Casing:**

(Burst Assumptions: TD = 12.0 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 @ 7000 psi) 0.61 psi/ft = bottomhole gradient  
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**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	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
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE Option 2	LEAD	1,860'	Premium cmt + 16% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	230	35%	12.00	2.86
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps Flocele + 3% salt BWOC + GR 3 pps	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,847'	Premium Lite II +0.25 pps celloflake + .4% FL-52 + .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II + 1.2% Sodium Metasilicate + .05 lbs/sk Static Free	300	35%	12.00	3.38
	TAIL	5,160'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free + 1.2% Sodium Metasilicate + .5 % EC-1 +.002 gps FP-6L + 2% Bentonite II	1,220	35%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained  
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**FLOAT EQUIPMENT & CENTRALIZERS**

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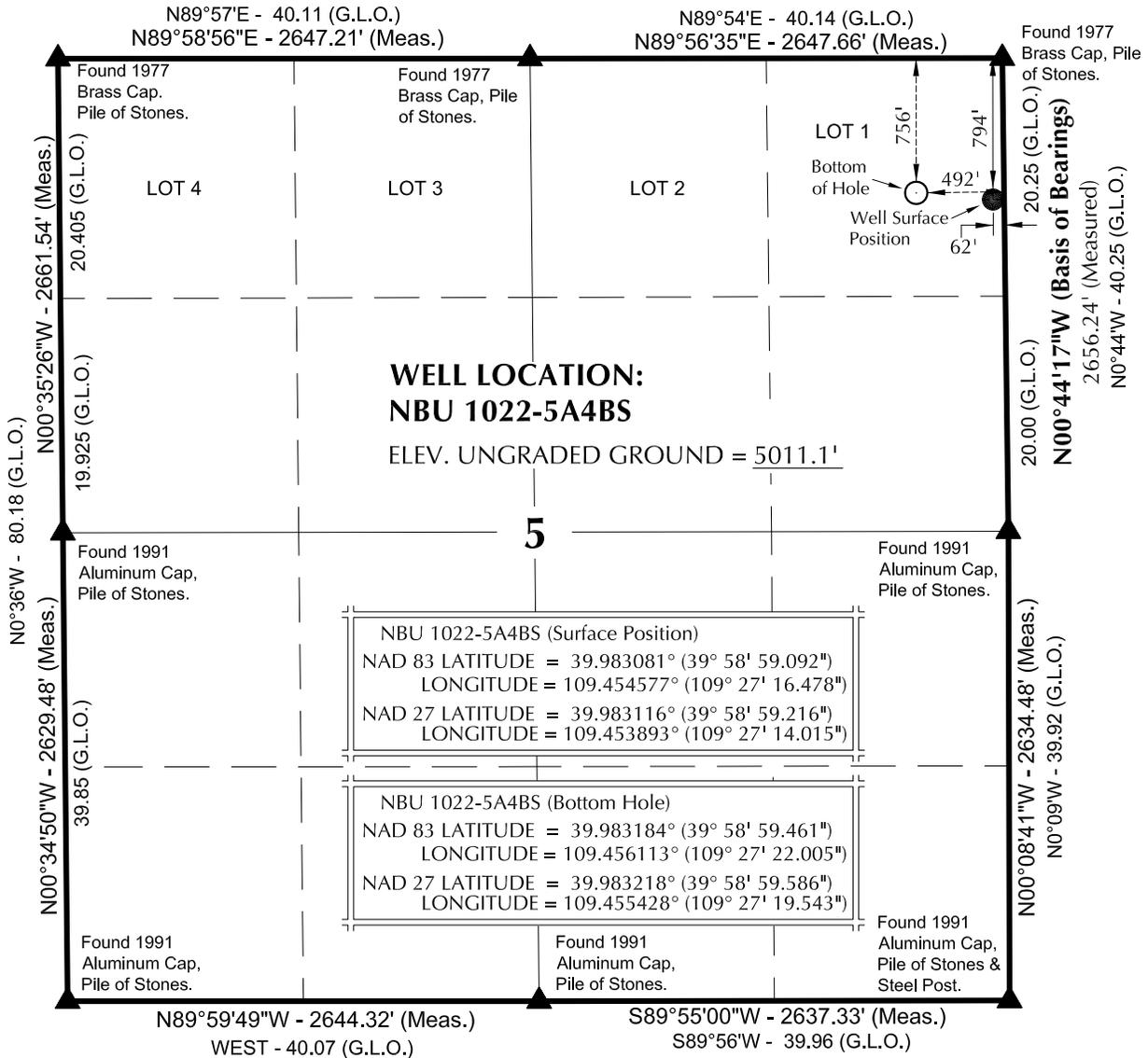
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**DRILLING ENGINEER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

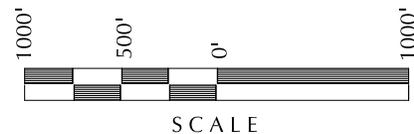
**DRILLING SUPERINTENDENT:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
Kenny Gathings / Lovel Young

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



**NOTES:**

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
- 2. 1 chain = 66 feet.
- 3. The Bottom of hole bears N85°02'12"W 432.01' from the Surface Position.
- 4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
- 5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
- 6. Basis of elevation is Tri-Sta "Two Water" located in Lot 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'.



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

**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.

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

**WELL PAD: NBU 1022-5A**

**NBU 1022-5A4BS  
 WELL PLAT**

**756' FNL, 492' FEL (Bottom Hole)  
 LOT 1 OF SECTION 5, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.**

**TIMBERLINE**

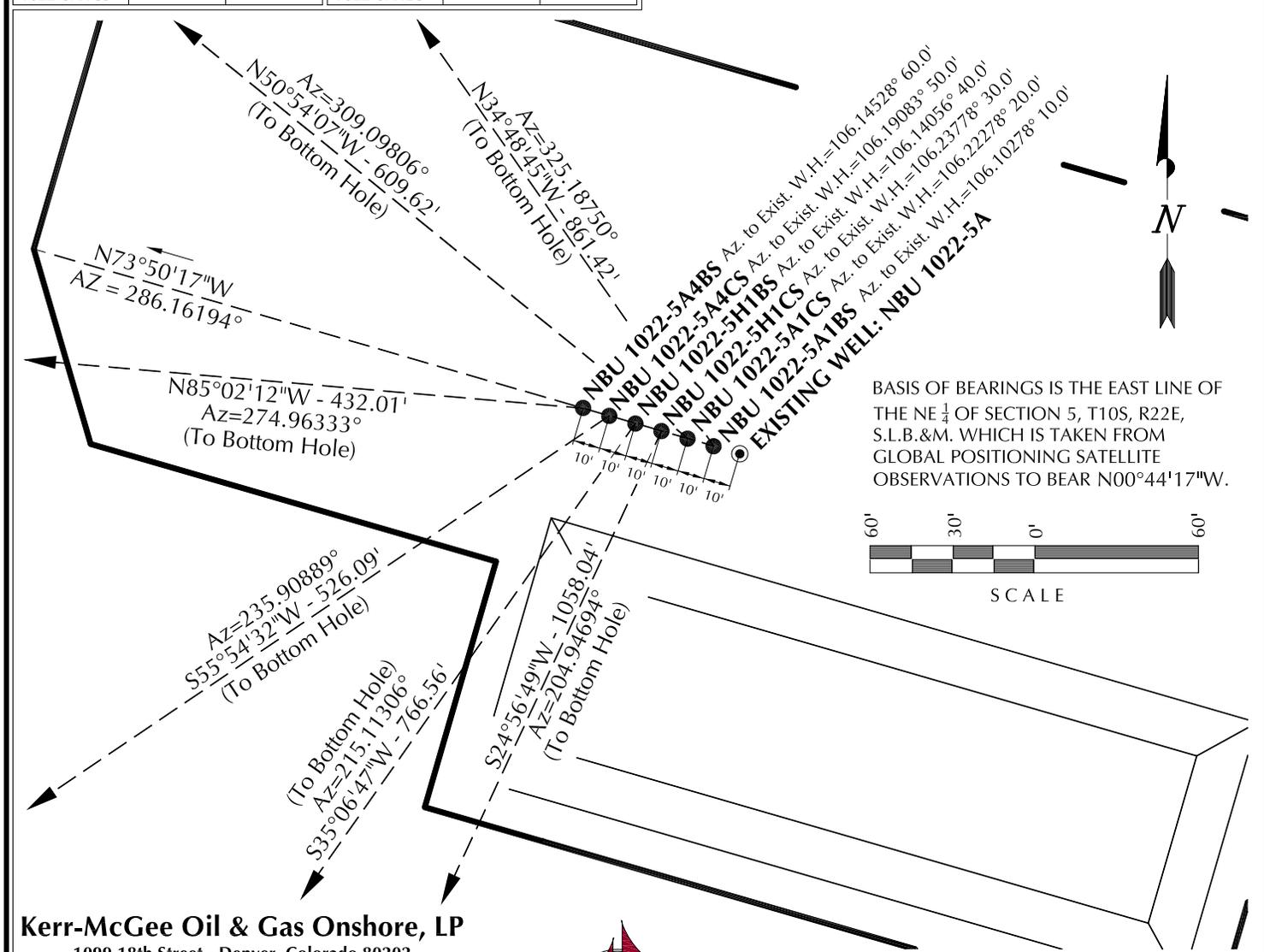
(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 8-7-12	SURVEYED BY: J.W.	SHEET NO: <b>6</b>
DATE DRAWN: 8-15-12	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'		6 OF 18

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-5A1BS	39°58'58.954"	109°27'15.862"	39°58'59.079"	109°27'13.400"	808' FNL 14' FEL	39°59'05.942"	109°27'22.177"	39°59'06.067"	109°27'19.714"	100' FNL 497' FEL
NBU 1022-5A1CS	39°58'58.982"	109°27'15.984"	39°58'59.107"	109°27'13.522"	805' FNL 24' FEL	39°59'02.781"	109°27'22.060"	39°59'02.906"	109°27'19.598"	420' FNL 492' FEL
NBU 1022-5H1CS	39°58'59.010"	109°27'16.108"	39°58'59.135"	109°27'13.645"	802' FNL 33' FEL	39°58'49.532"	109°27'21.840"	39°58'49.657"	109°27'19.378"	1761' FNL 492' FEL
NBU 1022-5H1BS	39°58'59.037"	109°27'16.231"	39°58'59.162"	109°27'13.769"	799' FNL 43' FEL	39°58'52.842"	109°27'21.895"	39°58'52.967"	109°27'19.433"	1426' FNL 492' FEL
NBU 1022-5A4CS	39°58'59.064"	109°27'16.354"	39°58'59.189"	109°27'13.892"	797' FNL 53' FEL	39°58'56.152"	109°27'21.950"	39°58'56.276"	109°27'19.488"	1091' FNL 492' FEL
NBU 1022-5A4BS	39°58'59.092"	109°27'16.478"	39°58'59.216"	109°27'14.015"	794' FNL 62' FEL	39°58'59.461"	109°27'22.005"	39°58'59.586"	109°27'19.543"	756' FNL 492' FEL
NBU 1022-5A	39°58'58.927"	109°27'15.738"	39°58'59.052"	109°27'13.276"	811' FNL 5' FEL					

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 1022-5A1BS	707.2'	-491.8'	NBU 1022-5A1CS	384.5'	-473.1'	NBU 1022-5H1CS	-959.3'	-446.3'	NBU 1022-5H1BS	-627.1'	-440.9'
NBU 1022-5A4CS	-294.9'	-435.7'	NBU 1022-5A4BS	37.4'	-430.4'						



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

**WELL PAD - NBU 1022-5A**

**WELL PAD INTERFERENCE PLAT**  
 WELLS - NBU 1022-5A1BS, NBU 1022-5A1CS, NBU 1022-5H1CS, NBU 1022-5H1BS, NBU 1022-5A4CS & NBU 1022-5A4BS LOCATED IN SECTION 5, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

**609**

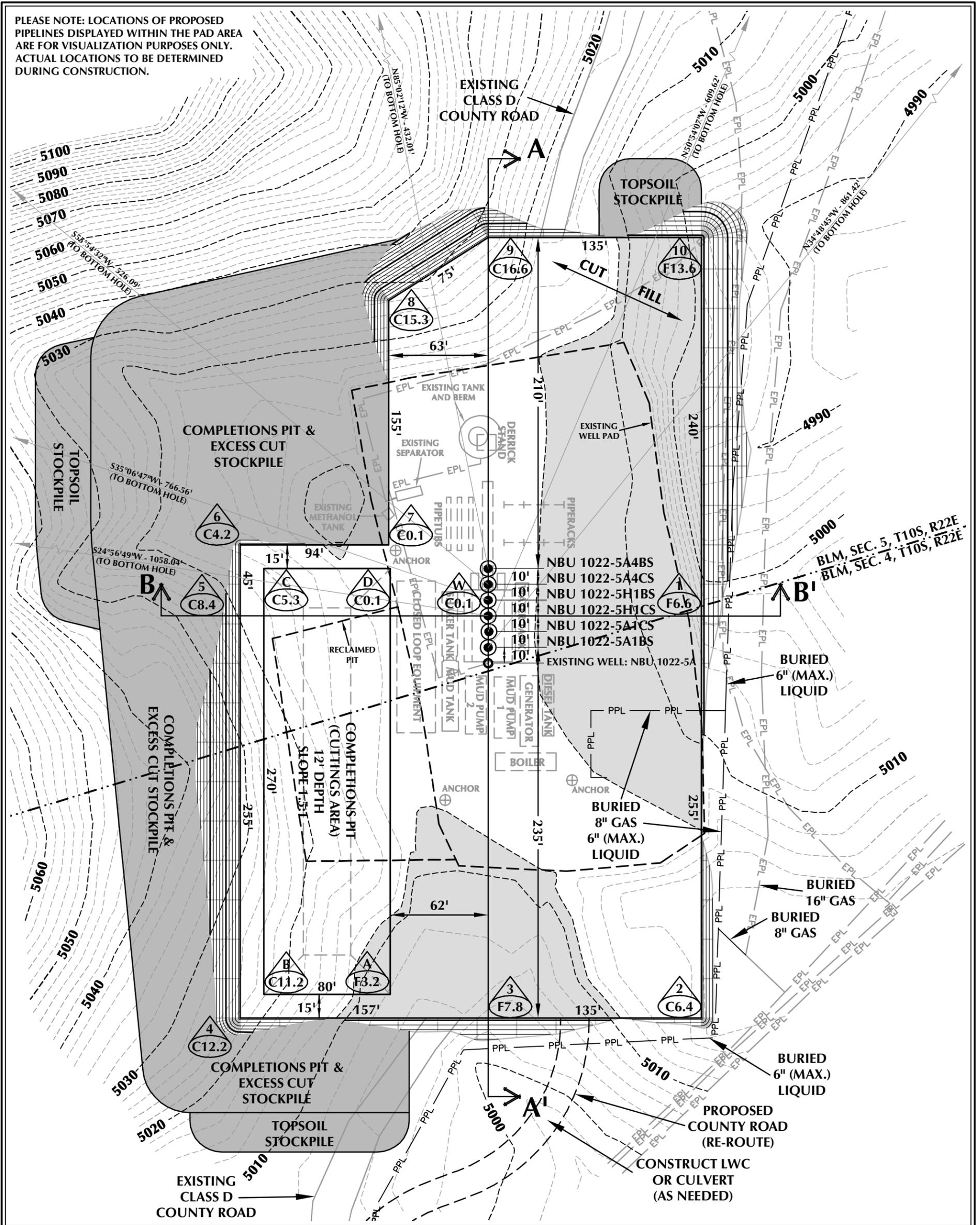
**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

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

DATE SURVEYED: 8-7-12	SURVEYED BY: J.W.	SHEET NO:
DATE DRAWN: 8-15-12	DRAWN BY: T.J.R.	<b>7</b> 7 OF 18
SCALE: 1" = 60'	Date Last Revised:	



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.



**WELL PAD - NBU 1022-5A (CLOSED LOOP) DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 5011.1'  
 FINISHED GRADE ELEVATION = 5011.0'  
 CUT SLOPES = 1:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.32 ACRES  
 TOTAL DISTURBANCE AREA = 4.93 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - NBU 1022-5A**  
 WELL PAD - LOCATION LAYOUT  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



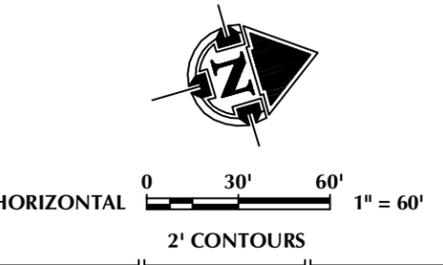
CONSULTING, LLC  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 11,957 C.Y.  
 TOTAL FILL FOR WELL PAD = 7,430 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,654 C.Y.  
 EXCESS MATERIAL = 4,527 C.Y.

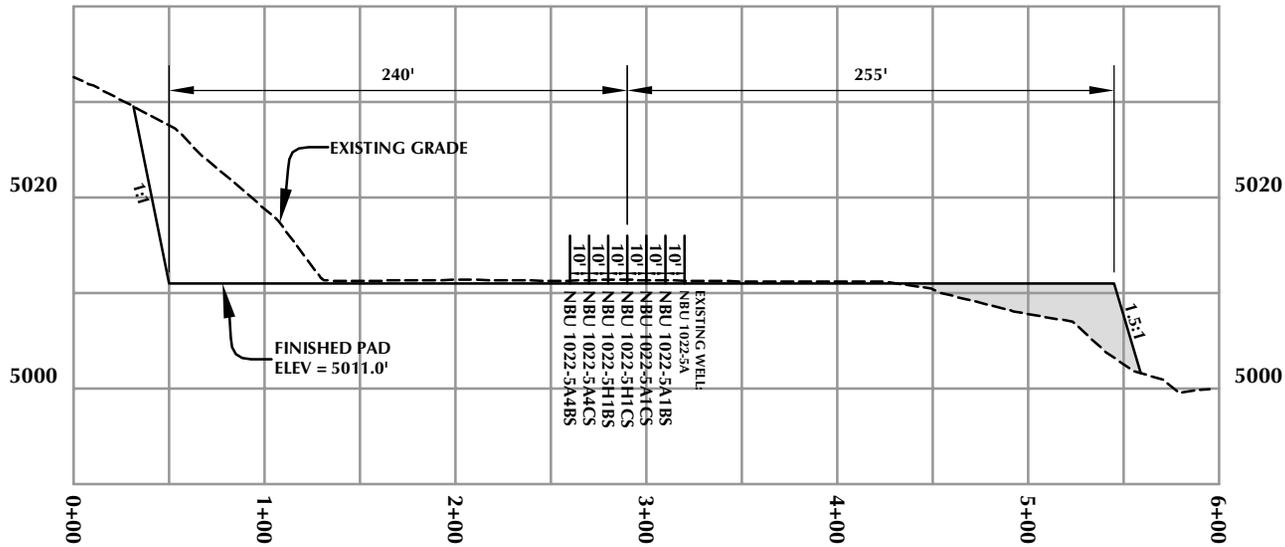
**COMPLETIONS PIT QUANTITIES**  
 TOTAL CUT FOR COMPLETIONS PIT  
 +/- 6,990 C.Y.  
 COMPLETIONS PIT CAPACITY  
 (2' OF FREEBOARD)  
 +/- 26,310 BARRELS

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

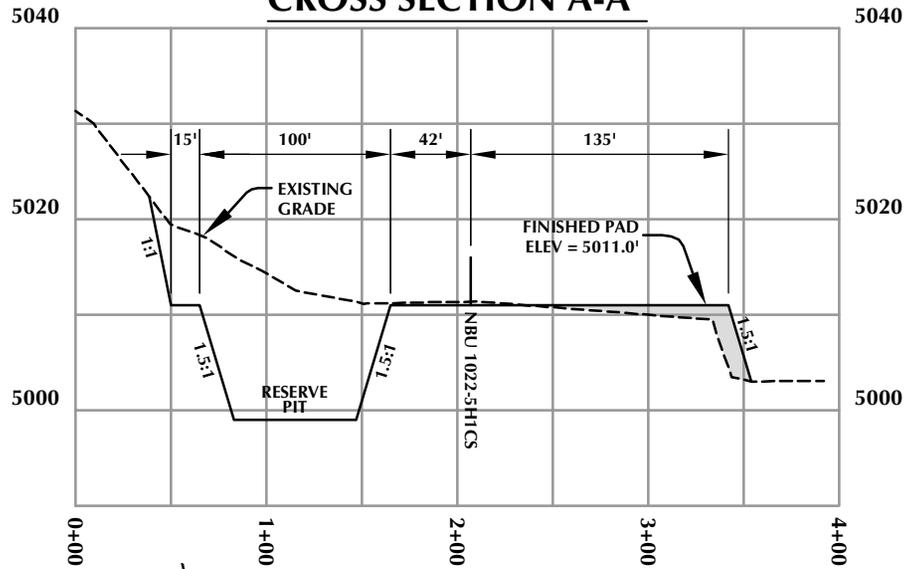
- WELL PAD LEGEND**
- EXISTING WELL LOCATION
  - PROPOSED WELL LOCATION
  - PROPOSED BOTTOM HOLE LOCATION
  - EXISTING CONTOURS (2' INTERVAL)
  - PROPOSED CONTOURS (2' INTERVAL)
  - PROPOSED PIPELINE
  - EXISTING PIPELINE



SCALE: 1"=60' DATE: 10/29/12 SHEET NO:  
 REVISED: **8A** 8A OF 18



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - NBU 1022-5A**

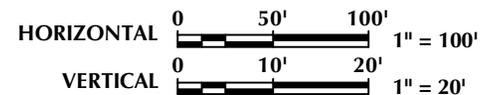
**WELL PAD - CROSS SECTIONS**  
NBU 1022-5A1BS, NBU 1022-5A1CS,  
NBU 1022-5H1CS, NBU 1022-5H1BS,  
NBU 1022-5A4CS & NBU 1022-5A4BS  
LOCATED IN SECTION 5, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



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

**TIMBERLINE**  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'

Date: 9/4/12

SHEET NO:

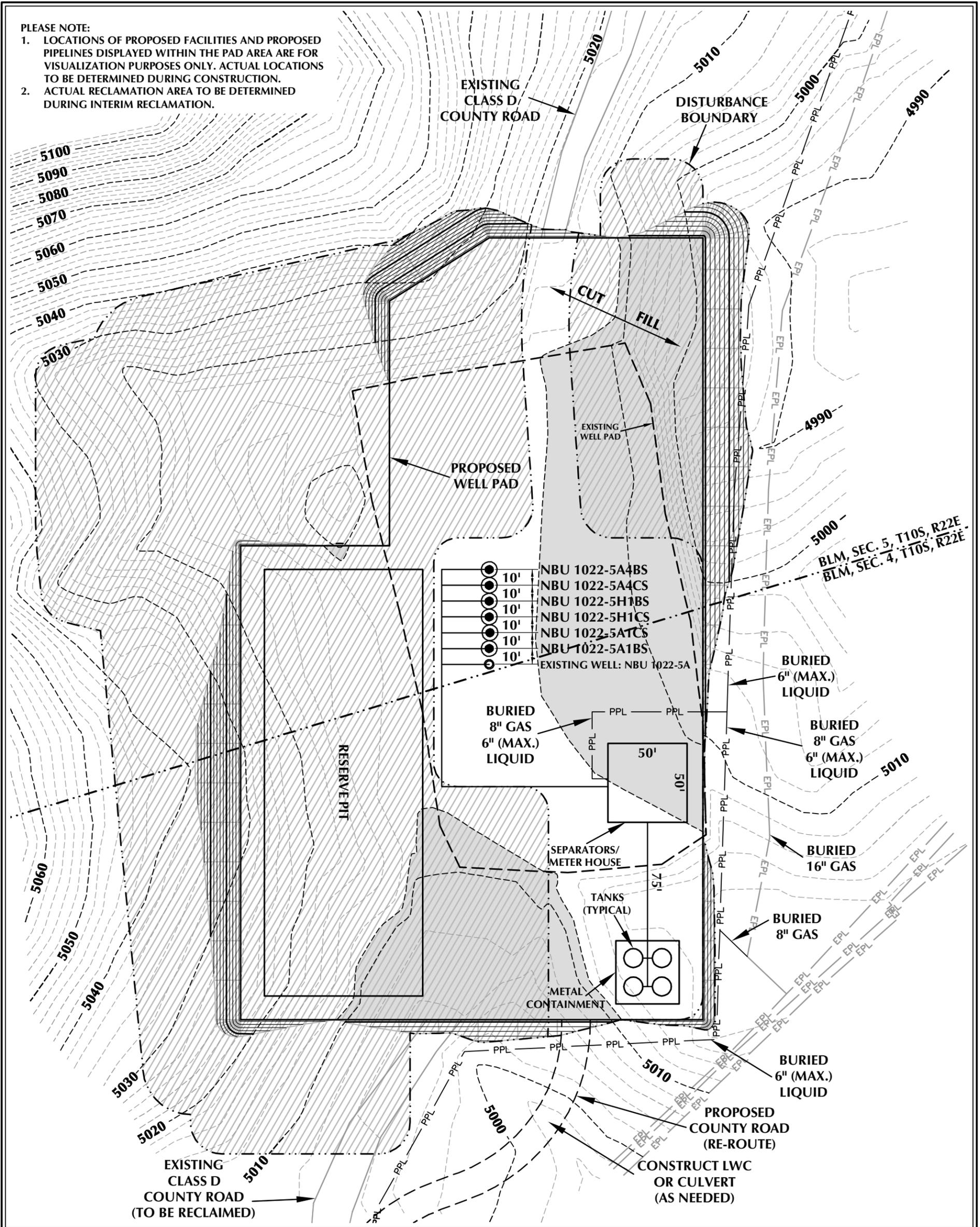
REVISED:

**9**

9 OF 18

**PLEASE NOTE:**

1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.



**WELL PAD - NBU 1022-5A DESIGN SUMMARY**

TOTAL DISTURBANCE AREA = 4.93 ACRES (INCLUDING EXISTING)  
 RECLAMATION AREA = 3.85 ACRES  
 TOTAL WELL PAD AREA AFTER RECLAMATION = 1.08 ACRES

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

**WELL PAD - NBU 1022-5A**

WELL PAD - RECLAMATION LAYOUT  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH



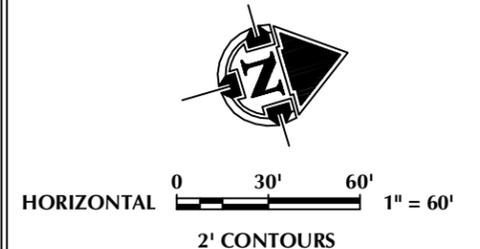
CONSULTING, LLC  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**TIMBERLINE**  
 ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**WELL PAD LEGEND**

	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	EXISTING CONTOURS (2' INTERVAL)
	PROPOSED CONTOURS (2' INTERVAL)
	PROPOSED PIPELINE
	EXISTING PIPELINE
	RECLAMATION AREA



SCALE: 1"=60'	DATE: 10/29/12	SHEET NO:
REVISED:	JID 12/21/12	<b>10</b> 10 OF 18

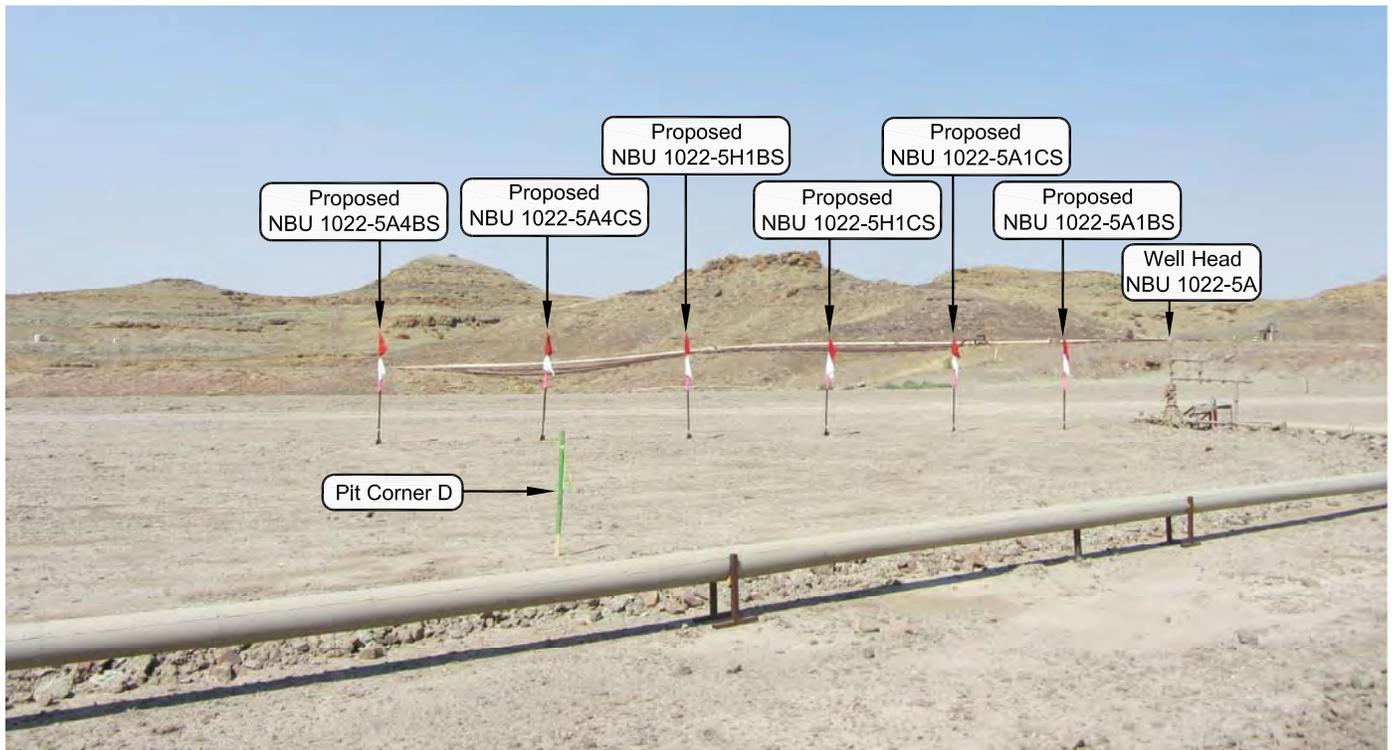


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: NORTHWESTERLY

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

**WELL PAD - NBU 1022-5A**

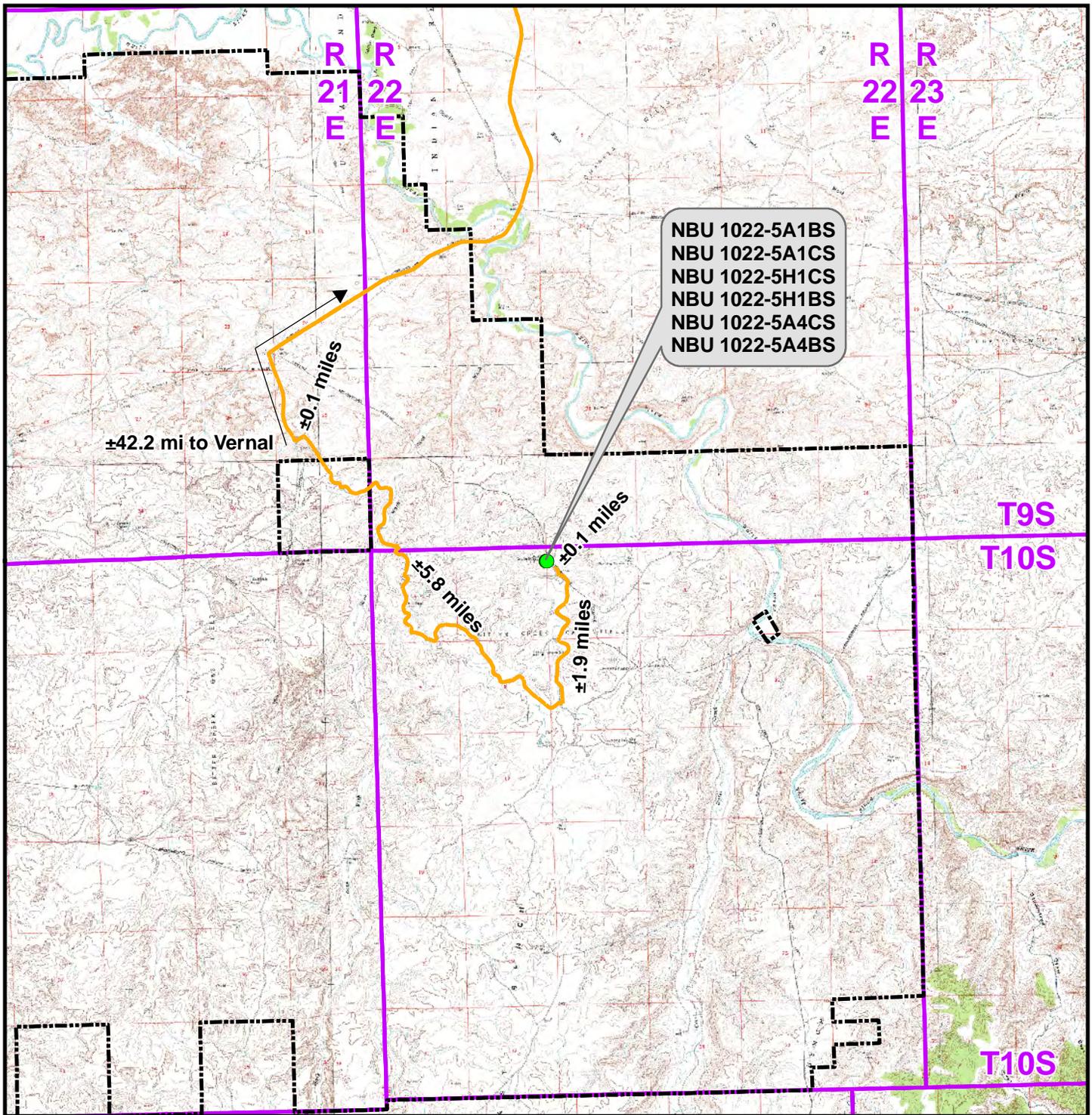
**LOCATION PHOTOS**  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E,  
 S.L.B.&M., Uintah County, Utah.



**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: 8-7-12	PHOTOS TAKEN BY: J.W.	SHEET NO: <b>11</b>
DATE DRAWN: 8-15-12	DRAWN BY: T.J.R.	
Date Last Revised:		11 OF 18



File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5\_FOCUS\GIS\Maps\_ABCDENBU\_1022-5A\NBU\_1022-5A\_A.mxd, 9/3/2012 9:26:34 AM

**Legend**

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

Distance From Well Pad - NBU 1022-5A To Unit Boundary: ±6,086ft

**WELL PAD - NBU 1022-5A**

TOPO A  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

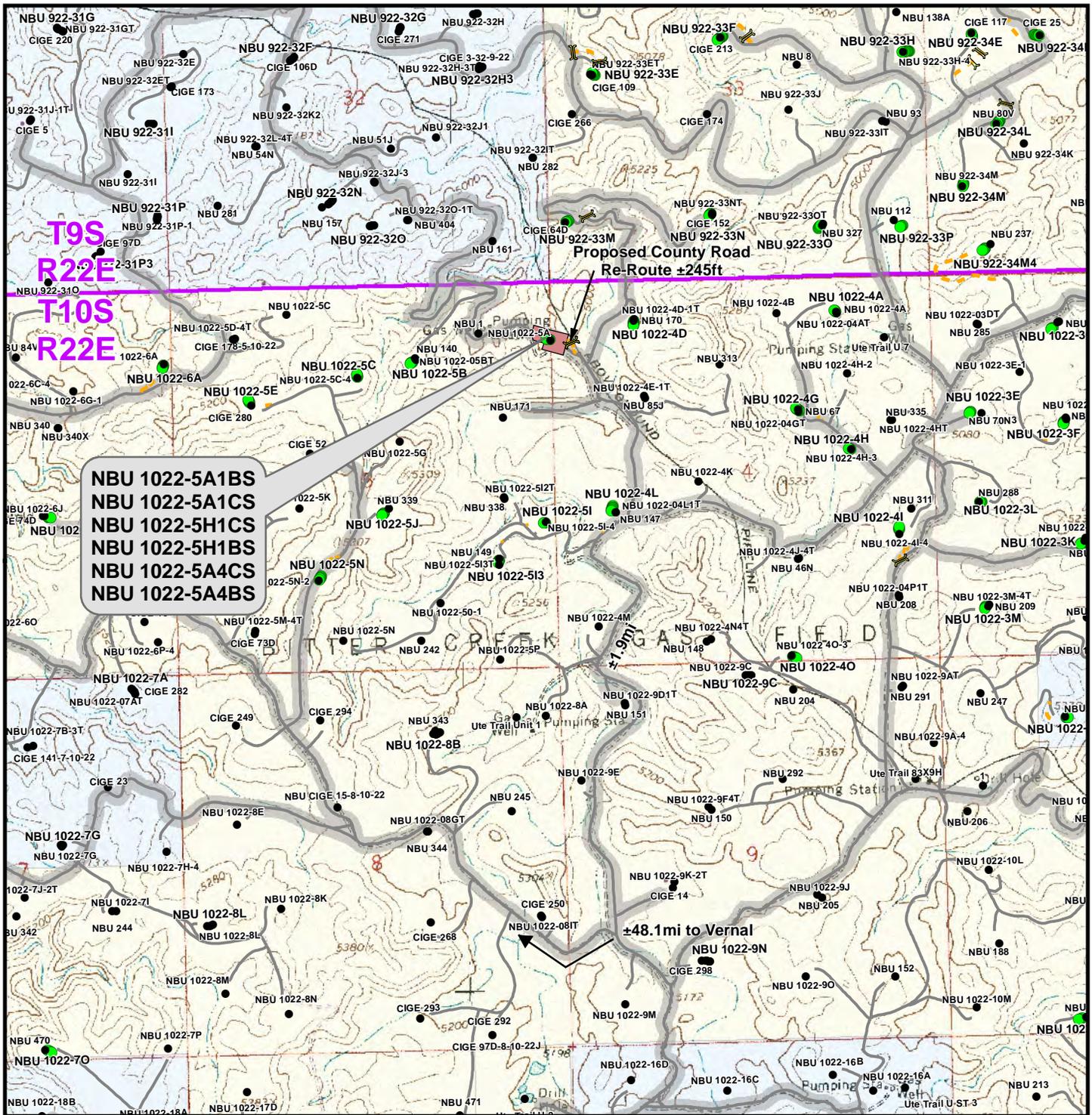
1099 18th Street  
 Denver, Colorado 80202



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



SCALE: 1:100,000	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 4 Sept 2012	<b>12</b>
REVISED:	DATE:	



**NBU 1022-5A1BS**  
**NBU 1022-5A1CS**  
**NBU 1022-5H1CS**  
**NBU 1022-5H1BS**  
**NBU 1022-5A4CS**  
**NBU 1022-5A4BS**

File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5\_FOCUS\GIS\Maps\_ABCDENBU\_1022-5A1BS.mxd, 10/29/2012 6:52:39 PM

**Legend**

- Well - Proposed
- Well - Existing
- Well Pad
- - - Road - Proposed
- - - Road - Existing
- ▬ County Road
- ▬ Culvert/LWC - Proposed
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed County Road Re-Route Length: ±245ft

**WELL PAD - NBU 1022-5A**

**TOPO B**  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

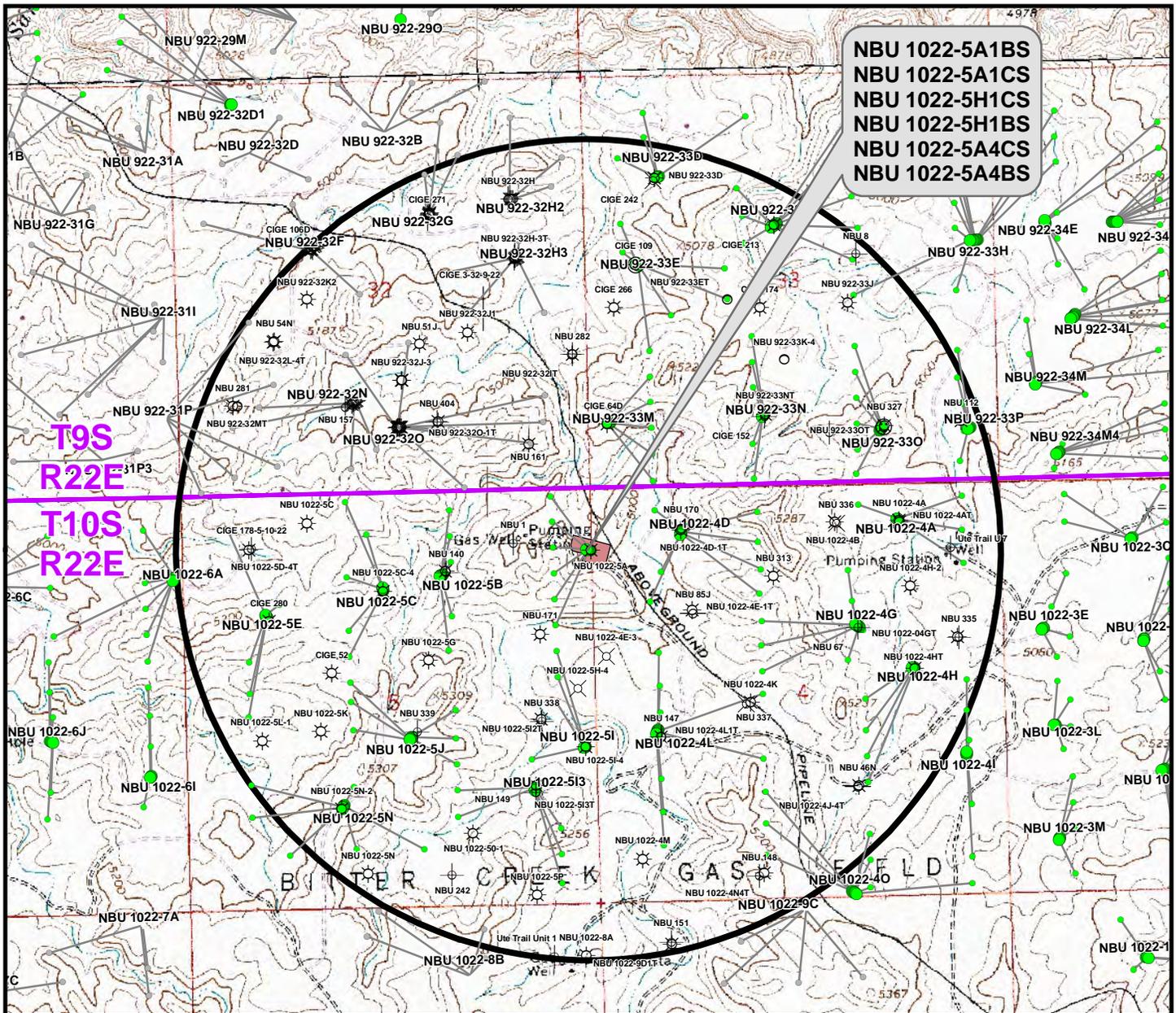
**Kerr-McGee Oil &  
 Gas Onshore L.P.**

1099 18th Street  
 Denver, Colorado 80202



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

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: <b>13</b>
DRAWN: TL	DATE: 4 Sept 2012	
REVISED:	DATE:	13 OF 18



**NBU 1022-5A1BS  
 NBU 1022-5A1CS  
 NBU 1022-5H1CS  
 NBU 1022-5H1BS  
 NBU 1022-5A4CS  
 NBU 1022-5A4BS**

File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5A\NBU 1022-5A\_C.mxd, 10/18/2012 3:44:54 PM

Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-5A1BS	NBU 922-32P3AS BH	728ft
NBU 1022-5A1CS	NBU 1	571ft
NBU 1022-5H1CS	NBU 171	232ft
NBU 1022-5H1BS	NBU 171	488ft
NBU 1022-5A4CS	NBU 1022-5A	559ft
NBU 1022-5A4BS	NBU 1022-5A	491ft

**Legend**

- Well - Proposed
- Well Path
- ☀ Producing
- ⊕ Deferred
- ☀ Active Injector
- ⊕ Plugged & Abandoned
- Bottom Hole - Proposed
- Well Pad
- ☺ Spudded
- ⊗ Cancelled
- ☀ Location Abandoned
- ⊕ Shut-In
- Bottom Hole - Existing
- ◻ Well - 1 Mile Radius
- APD Approved
- ⊖ Temporarily Abandoned
- ⊖ Preliminary Location

**WELL PAD - NBU 1022-5A**

**TOPO C**  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

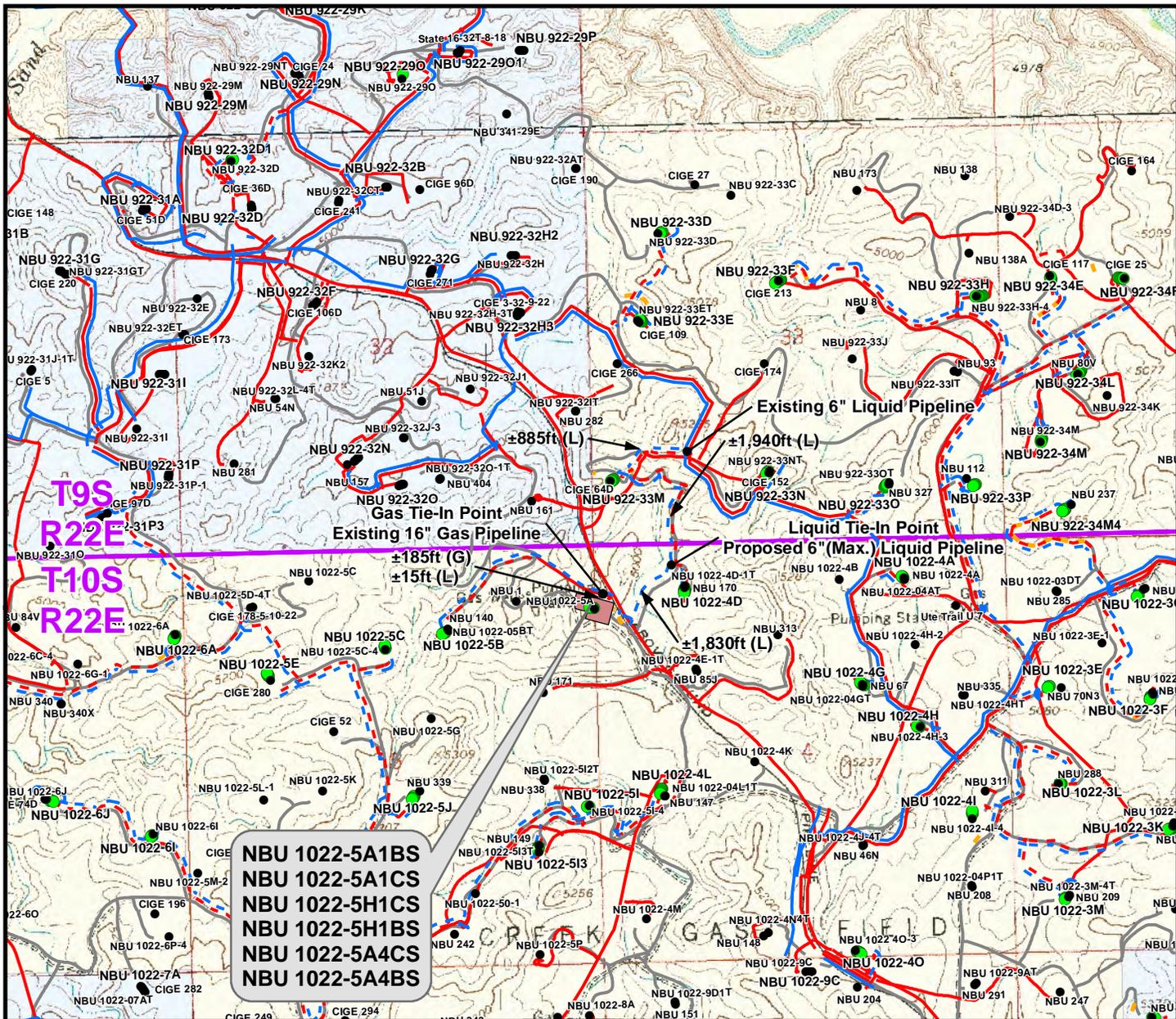
**Kerr-McGee Oil &  
 Gas Onshore L.P.**  
 1099 18th Street  
 Denver, Colorado 80202



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

SCALE: 1" = 2,000ft	NAD83 USP Central	<b>14</b>
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	

SHEET NO:  
14 OF 18



**NBU 1022-5A1BS  
NBU 1022-5A1CS  
NBU 1022-5H1CS  
NBU 1022-5H1BS  
NBU 1022-5A4CS  
NBU 1022-5A4BS**

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±125ft
Buried 6" (Max.) (Edge of Pad to 5B Intersection)	±15ft
Buried 6" (Max.) (5B Intersection to 1022-4D Intersection)	±1,830ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,970ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±125ft
Buried 8" (Edge of Pad to Existing 16" Gas Pipeline)	±185ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±310ft</b>

**Legend**

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

**WELL PAD - NBU 1022-5A**

**TOPO D**  
**NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS**  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street  
 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

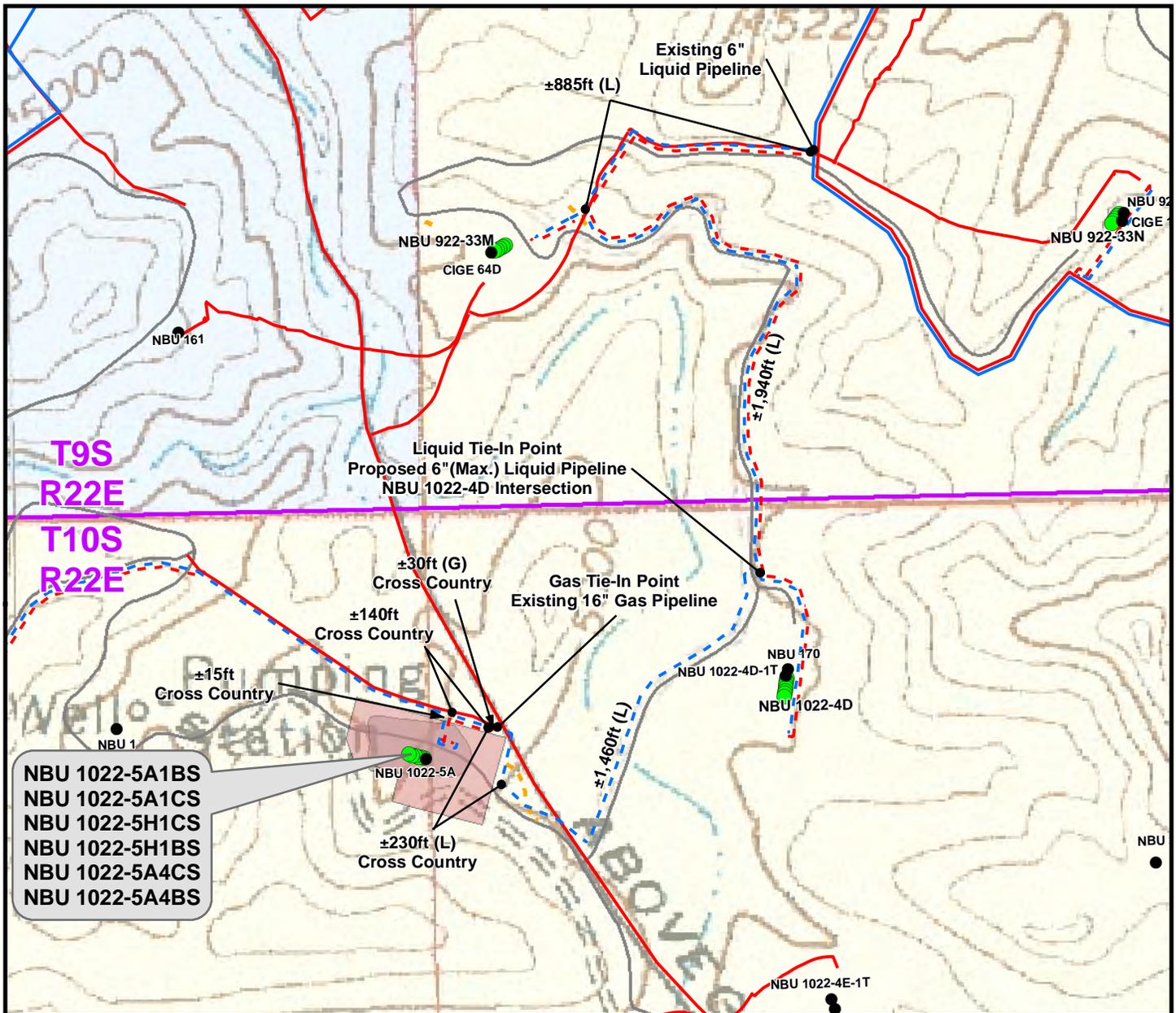
NAD83 USP Central

DATE: 29 Oct 2012

DATE:

SHEET NO:  
**15**  
 15 OF 18

File: K:\ANADARKO\2012\2012\_53\_NBU\_1022-5\FOCUS\GIS\Maps\_ABCDENBU\_1022-5A\_NBU\_1022-5A\_D.mxd, 10/29/2012 6:53:01 PM



- NBU 1022-5A1BS
- NBU 1022-5A1CS
- NBU 1022-5H1CS
- NBU 1022-5H1BS
- NBU 1022-5A4CS
- NBU 1022-5A4BS

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±125ft
Buried 6" (Max.) (Edge of Pad to 5B Intersection)	±15ft
Buried 6" (Max.) (5B Intersection to 1022-4D Intersection)	±1,830ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,970ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±125ft
Buried 8" (Edge of Pad to Existing 16" Gas Pipeline)	±185ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±310ft</b>

**Legend**

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

**WELL PAD - NBU 1022-5A**

TOPO D2 (PAD & PIPELINE DETAIL)  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

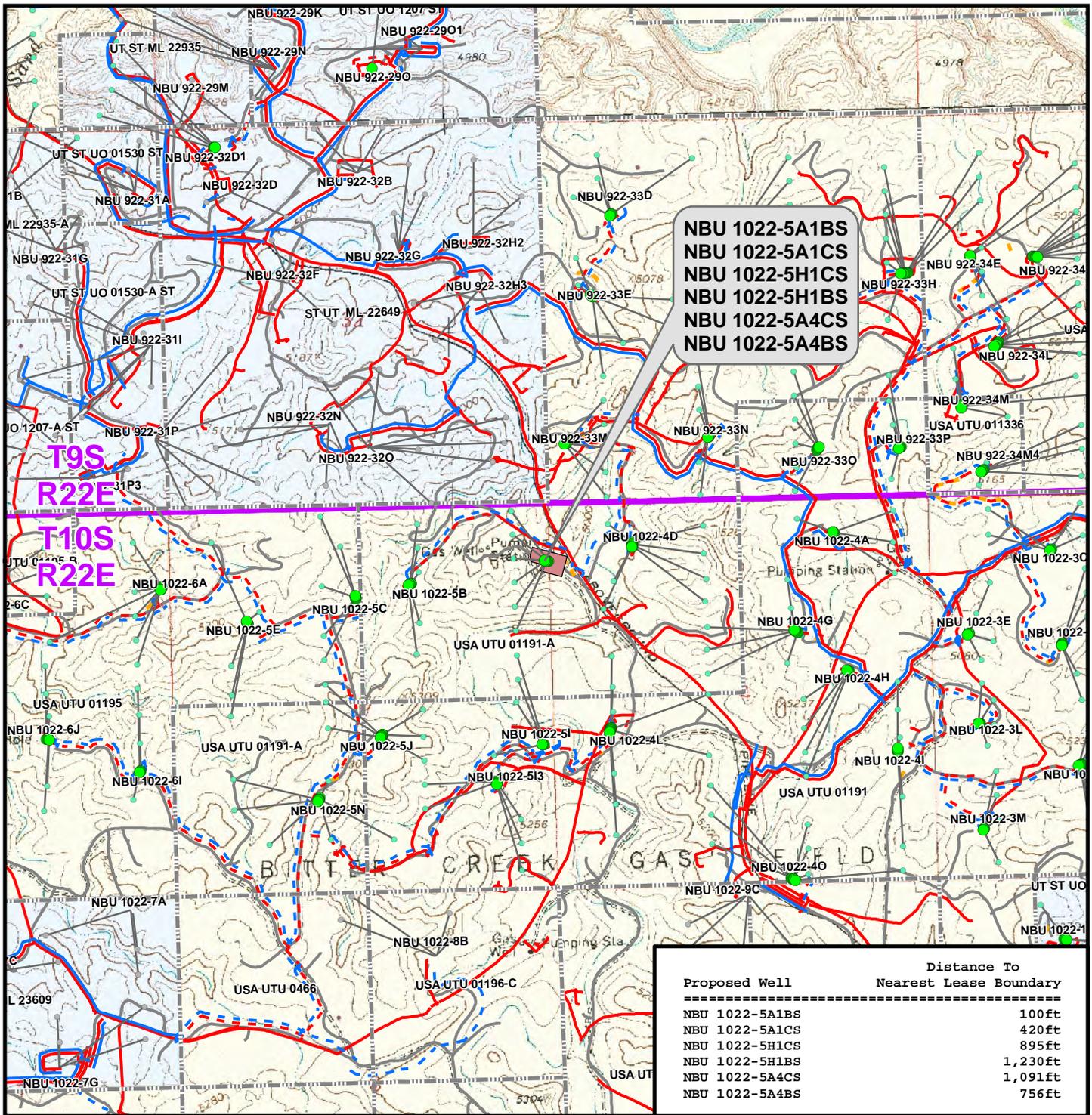
1099 18th Street  
 Denver, Colorado 80202



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

SCALE: 1" = 500ft	NAD83 USP Central	<b>16</b>
DRAWN: TL	DATE: 29 Oct 2012	
REVISED:	DATE:	

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Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-5A1BS	100ft
NBU 1022-5A1CS	420ft
NBU 1022-5H1CS	895ft
NBU 1022-5H1BS	1,230ft
NBU 1022-5A4CS	1,091ft
NBU 1022-5A4BS	756ft

**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 - Existing
- - - Road - Existing
- Indian Reservation
- Bottom Hole - Existing
- - - Gas Pipeline - Existing
- - - State
- Private
- Well Path

**WELL PAD - NBU 1022-5A**

**TOPO E**  
 NBU 1022-5A1BS, NBU 1022-5A1CS,  
 NBU 1022-5H1CS, NBU 1022-5H1BS,  
 NBU 1022-5A4CS & NBU 1022-5A4BS  
 LOCATED IN SECTION 5, T10S, R22E  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street  
 Denver, Colorado 80202



**CONSULTING, LLC**

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft

NAD83 USP Central

SHEET NO:

DRAWN: TL

DATE: 29 Oct 2012

**17**

REVISED:

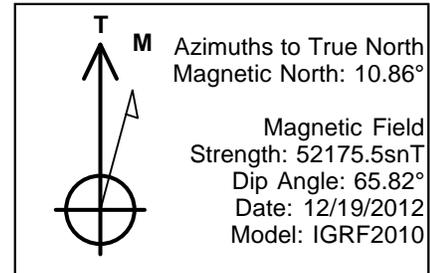
DATE:

17 OF 18

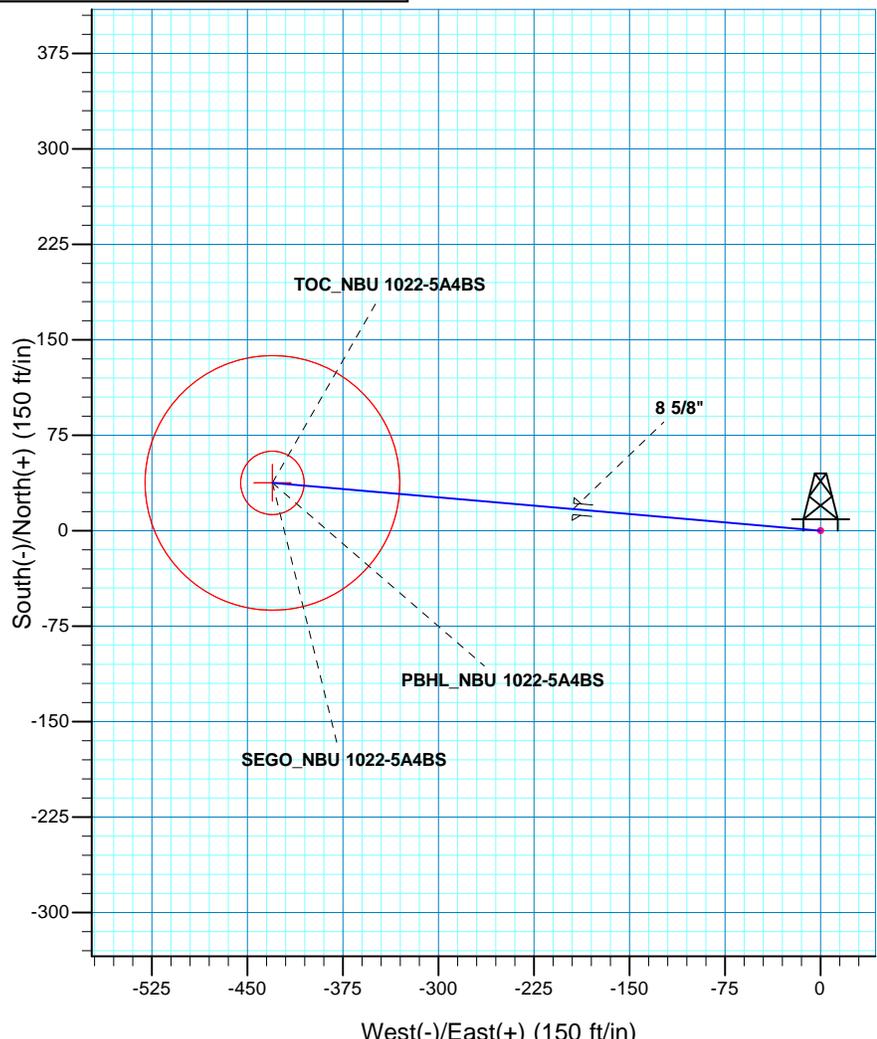
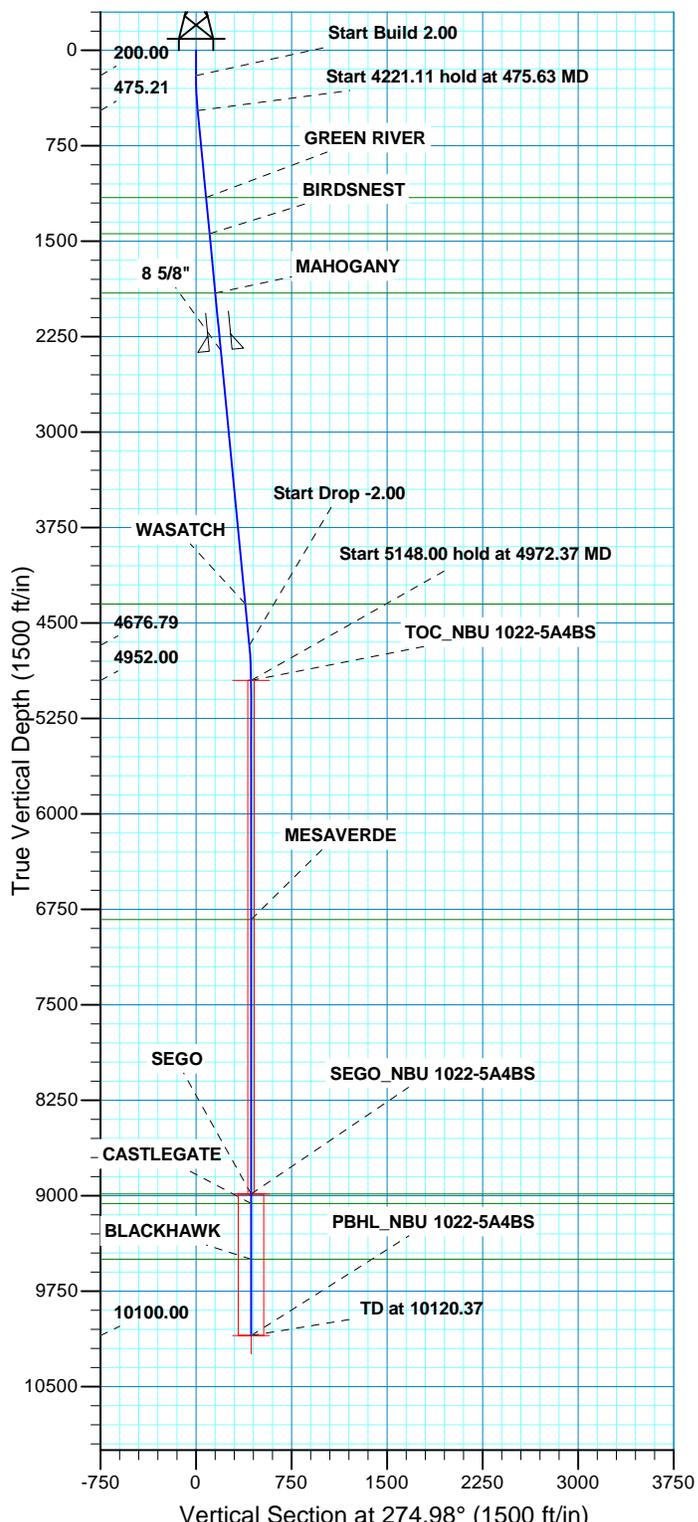
**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD – NBU 1022-5A  
WELLS - NBU 1022-5A1BS, NBU 1022-5A1CS,  
NBU 1022-5H1CS, NBU 1022-5H1BS,  
NBU 1022-5A4CS & NBU 1022-5A4BS  
Section 5, T10S, R22E, S.L.B.&M.**

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 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 5.8 miles to a third Class D County Road to the north. Exit left and proceed in a northerly direction along the third Class D County Road approximately 1.9 miles to the proposed access road to the northwest. Follow road flags in a northwesterly direction approximately 245 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 50.0 miles in a southerly direction.



WELL DETAILS: NBU 1022-5A4BS								
GL 5011 & KB 4 @ 5015.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14523651.70	2073532.67	39.983116	-109.453893			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
TOC	4952.00	37.52	-430.37	14523681.75	2073101.72	39.983219	-109.455429	Point
- plan hits target center								
SEGO	8987.00	37.52	-430.37	14523681.75	2073101.72	39.983219	-109.455429	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10100.00	37.52	-430.37	14523681.75	2073101.72	39.983219	-109.455429	Circle (Radius: 100.00)
- 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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
475.63	5.51	274.98	475.21	1.15	-13.20	2.00	274.98	13.25	
4696.74	5.51	274.98	4676.79	36.37	-417.17	0.00	0.00	418.75	
4972.37	0.00	0.00	4952.00	37.52	-430.37	2.00	180.00	432.00	TOC_NBU 1022-5A4BS
10120.37	0.00	0.00	10100.00	37.52	-430.37	0.00	0.00	432.00	PBHL_NBU 1022-5A4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N			FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)	TVDPath	MDPath	Formation		
Datum: NAD 1927 (NADCON CONUS)	1159.00	1162.60	GREEN RIVER		
Ellipsoid: Clarke 1866	1442.00	1446.92	BIRDSNEST		
Zone: Zone 12N (114 W to 108 W)	1908.00	1915.08	MAHOGANY		
Location: SECTIONS T10S R22E	4352.00	4370.44	WASATCH		
System Datum: Mean Sea Level	6832.00	6852.37	MESAVERDE		
	8987.00	9007.37	SEGO		
	9062.00	9082.37	CASTLEGATE		
	9500.00	9520.37	BLACKHAWK		

CASING DETAILS			
TVD	MD	Name	Size
2358.00	2367.17	8 5/8"	8.625

RECEIVED :



# Scientific Drilling

## **US ROCKIES REGION PLANNING**

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

**NBU 1022 5A PAD**

**NBU 1022-5A4BS**

**OH**

**Plan: PLAN #1 PERMIT**

## **Standard Planning Report**

**19 December, 2012**





<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5A4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Site:</b>	NBU 1022 5A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5A4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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

<b>Site</b>	NBU 1022 5A PAD, SECTION 5 T10S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,523,651.71 usft	<b>Latitude:</b>	39.983116	
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,073,532.67 usft	<b>Longitude:</b>	-109.453893
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.99 °

<b>Well</b>	NBU 1022-5A4BS, 794 FNL 62 FEL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,523,651.71 usft	<b>Latitude:</b>	39.983116
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,073,532.67 usft	<b>Longitude:</b>	-109.453893
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,011.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/19/12	10.86	65.82	52,176

<b>Design</b>	PLAN #1 PERMIT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	274.98

<b>Plan Sections</b>										
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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
475.63	5.51	274.98	475.21	1.15	-13.20	2.00	2.00	0.00	274.98	
4,696.74	5.51	274.98	4,676.79	36.37	-417.17	0.00	0.00	0.00	0.00	
4,972.37	0.00	0.00	4,952.00	37.52	-430.37	2.00	-2.00	0.00	180.00	TOC_NBU 1022-5A4I
10,120.37	0.00	0.00	10,100.00	37.52	-430.37	0.00	0.00	0.00	0.00	PBHL_NBU 1022-5A4I



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5A4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Site:</b>	NBU 1022 5A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5A4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
<b>Start Build 2.00</b>										
300.00	2.00	274.98	299.98	0.15	-1.74	1.75	2.00	2.00	2.00	0.00
400.00	4.00	274.98	399.84	0.61	-6.95	6.98	2.00	2.00	2.00	0.00
475.63	5.51	274.98	475.21	1.15	-13.20	13.25	2.00	2.00	2.00	0.00
<b>Start 4221.11 hold at 475.63 MD</b>										
500.00	5.51	274.98	499.46	1.35	-15.53	15.59	0.00	0.00	0.00	0.00
600.00	5.51	274.98	599.00	2.19	-25.10	25.20	0.00	0.00	0.00	0.00
700.00	5.51	274.98	698.54	3.02	-34.67	34.80	0.00	0.00	0.00	0.00
800.00	5.51	274.98	798.07	3.86	-44.24	44.41	0.00	0.00	0.00	0.00
900.00	5.51	274.98	897.61	4.69	-53.81	54.02	0.00	0.00	0.00	0.00
1,000.00	5.51	274.98	997.15	5.53	-63.38	63.62	0.00	0.00	0.00	0.00
1,100.00	5.51	274.98	1,096.69	6.36	-72.95	73.23	0.00	0.00	0.00	0.00
1,162.60	5.51	274.98	1,159.00	6.88	-78.94	79.24	0.00	0.00	0.00	0.00
<b>GREEN RIVER</b>										
1,200.00	5.51	274.98	1,196.22	7.19	-82.52	82.84	0.00	0.00	0.00	0.00
1,300.00	5.51	274.98	1,295.76	8.03	-92.09	92.44	0.00	0.00	0.00	0.00
1,400.00	5.51	274.98	1,395.30	8.86	-101.66	102.05	0.00	0.00	0.00	0.00
1,446.92	5.51	274.98	1,442.00	9.25	-106.15	106.56	0.00	0.00	0.00	0.00
<b>BIRDSNEST</b>										
1,500.00	5.51	274.98	1,494.84	9.70	-111.23	111.66	0.00	0.00	0.00	0.00
1,600.00	5.51	274.98	1,594.37	10.53	-120.80	121.26	0.00	0.00	0.00	0.00
1,700.00	5.51	274.98	1,693.91	11.37	-130.37	130.87	0.00	0.00	0.00	0.00
1,800.00	5.51	274.98	1,793.45	12.20	-139.94	140.48	0.00	0.00	0.00	0.00
1,900.00	5.51	274.98	1,892.99	13.03	-149.51	150.08	0.00	0.00	0.00	0.00
1,915.08	5.51	274.98	1,908.00	13.16	-150.96	151.53	0.00	0.00	0.00	0.00
<b>MAHOGANY</b>										
2,000.00	5.51	274.98	1,992.52	13.87	-159.08	159.69	0.00	0.00	0.00	0.00
2,100.00	5.51	274.98	2,092.06	14.70	-168.65	169.29	0.00	0.00	0.00	0.00
2,200.00	5.51	274.98	2,191.60	15.54	-178.23	178.90	0.00	0.00	0.00	0.00
2,300.00	5.51	274.98	2,291.14	16.37	-187.80	188.51	0.00	0.00	0.00	0.00
2,367.17	5.51	274.98	2,358.00	16.93	-194.22	194.96	0.00	0.00	0.00	0.00
<b>8 5/8"</b>										
2,400.00	5.51	274.98	2,390.67	17.21	-197.37	198.11	0.00	0.00	0.00	0.00
2,500.00	5.51	274.98	2,490.21	18.04	-206.94	207.72	0.00	0.00	0.00	0.00
2,600.00	5.51	274.98	2,589.75	18.87	-216.51	217.33	0.00	0.00	0.00	0.00
2,700.00	5.51	274.98	2,689.29	19.71	-226.08	226.93	0.00	0.00	0.00	0.00
2,800.00	5.51	274.98	2,788.82	20.54	-235.65	236.54	0.00	0.00	0.00	0.00
2,900.00	5.51	274.98	2,888.36	21.38	-245.22	246.15	0.00	0.00	0.00	0.00
3,000.00	5.51	274.98	2,987.90	22.21	-254.79	255.75	0.00	0.00	0.00	0.00
3,100.00	5.51	274.98	3,087.44	23.05	-264.36	265.36	0.00	0.00	0.00	0.00
3,200.00	5.51	274.98	3,186.97	23.88	-273.93	274.97	0.00	0.00	0.00	0.00
3,300.00	5.51	274.98	3,286.51	24.71	-283.50	284.57	0.00	0.00	0.00	0.00
3,400.00	5.51	274.98	3,386.05	25.55	-293.07	294.18	0.00	0.00	0.00	0.00
3,500.00	5.51	274.98	3,485.59	26.38	-302.64	303.79	0.00	0.00	0.00	0.00
3,600.00	5.51	274.98	3,585.12	27.22	-312.21	313.39	0.00	0.00	0.00	0.00
3,700.00	5.51	274.98	3,684.66	28.05	-321.78	323.00	0.00	0.00	0.00	0.00
3,800.00	5.51	274.98	3,784.20	28.89	-331.35	332.61	0.00	0.00	0.00	0.00
3,900.00	5.51	274.98	3,883.74	29.72	-340.92	342.21	0.00	0.00	0.00	0.00
4,000.00	5.51	274.98	3,983.28	30.55	-350.49	351.82	0.00	0.00	0.00	0.00
4,100.00	5.51	274.98	4,082.81	31.39	-360.06	361.42	0.00	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5A4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Site:</b>	NBU 1022 5A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5A4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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)	
4,200.00	5.51	274.98	4,182.35	32.22	-369.63	371.03	0.00	0.00	0.00	
4,300.00	5.51	274.98	4,281.89	33.06	-379.20	380.64	0.00	0.00	0.00	
4,370.44	5.51	274.98	4,352.00	33.64	-385.94	387.40	0.00	0.00	0.00	
<b>WASATCH</b>										
4,400.00	5.51	274.98	4,381.43	33.89	-388.77	390.24	0.00	0.00	0.00	
4,500.00	5.51	274.98	4,480.96	34.73	-398.34	399.85	0.00	0.00	0.00	
4,600.00	5.51	274.98	4,580.50	35.56	-407.91	409.46	0.00	0.00	0.00	
4,696.74	5.51	274.98	4,676.79	36.37	-417.17	418.75	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
4,700.00	5.45	274.98	4,680.04	36.39	-417.48	419.06	2.00	-2.00	0.00	
4,800.00	3.45	274.98	4,779.73	37.07	-425.20	426.82	2.00	-2.00	0.00	
4,900.00	1.45	274.98	4,879.64	37.44	-429.46	431.09	2.00	-2.00	0.00	
4,972.37	0.00	0.00	4,952.00	37.52	-430.37	432.00	2.00	-2.00	0.00	
<b>Start 5148.00 hold at 4972.37 MD - TOC_NBU 1022-5A4BS</b>										
5,000.00	0.00	0.00	4,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,179.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,279.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,379.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,479.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,579.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,679.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,779.63	37.52	-430.37	432.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,879.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,179.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,279.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,379.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,479.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,579.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,679.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,779.63	37.52	-430.37	432.00	0.00	0.00	0.00	
6,852.37	0.00	0.00	6,832.00	37.52	-430.37	432.00	0.00	0.00	0.00	
<b>MESAVERDE</b>										
6,900.00	0.00	0.00	6,879.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,179.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,279.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,379.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,479.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,579.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,679.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,779.63	37.52	-430.37	432.00	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,879.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,179.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,279.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,379.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,479.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,579.63	37.52	-430.37	432.00	0.00	0.00	0.00	



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5A4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Site:</b>	NBU 1022 5A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5A4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

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)	
8,700.00	0.00	0.00	8,679.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,779.63	37.52	-430.37	432.00	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,879.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,007.37	0.00	0.00	8,987.00	37.52	-430.37	432.00	0.00	0.00	0.00	
<b>SEGO - SEGO_NBU 1022-5A4BS</b>										
9,082.37	0.00	0.00	9,062.00	37.52	-430.37	432.00	0.00	0.00	0.00	
<b>CASTLEGATE</b>										
9,100.00	0.00	0.00	9,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,179.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,279.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,379.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,479.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,520.37	0.00	0.00	9,500.00	37.52	-430.37	432.00	0.00	0.00	0.00	
<b>BLACKHAWK</b>										
9,600.00	0.00	0.00	9,579.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,679.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,779.63	37.52	-430.37	432.00	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,879.63	37.52	-430.37	432.00	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,979.63	37.52	-430.37	432.00	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,079.63	37.52	-430.37	432.00	0.00	0.00	0.00	
10,120.37	0.00	0.00	10,100.00	37.52	-430.37	432.00	0.00	0.00	0.00	
<b>TD at 10120.37 - PBHL_NBU 1022-5A4BS</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TOC_NBU 1022-5A4BS - hit/miss target - Shape - Point	0.00	0.00	4,952.00	37.52	-430.37	14,523,681.76	2,073,101.71	39.983219	-109.455429	
SEGO_NBU 1022-5A4B - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,987.00	37.52	-430.37	14,523,681.76	2,073,101.71	39.983219	-109.455429	
PBHL_NBU 1022-5A4B - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,100.00	37.52	-430.37	14,523,681.76	2,073,101.71	39.983219	-109.455429	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,367.17	2,358.00	8 5/8"	8.625	11.000		



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-5A4BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5011 & KB 4 @ 5015.00ft (ASSUMED)
<b>Site:</b>	NBU 1022 5A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-5A4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PERMIT		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,162.60	1,159.00	GREEN RIVER			
1,446.92	1,442.00	BIRDSNEST			
1,915.08	1,908.00	MAHOGANY			
4,370.44	4,352.00	WASATCH			
6,852.37	6,832.00	MESAVERDE			
9,007.37	8,987.00	SEGO			
9,082.37	9,062.00	CASTLEGATE			
9,520.37	9,500.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.00	200.00	0.00	0.00	Start Build 2.00	
475.63	475.21	1.15	-13.20	Start 4221.11 hold at 475.63 MD	
4,696.74	4,676.79	36.37	-417.17	Start Drop -2.00	
4,972.37	4,952.00	37.52	-430.37	Start 5148.00 hold at 4972.37 MD	
10,120.37	10,100.00	37.52	-430.37	TD at 10120.37	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-5A PAD**

<b><u>API #</u></b>	<b><u>NBU 1022-5A1BS</u></b>		
	Surface: 808 FNL / 14 FEL	NENE	Lot 1
	BHL: 100 FNL / 497 FEL	NENE	Lot 1
<b><u>API #</u></b>	<b><u>NBU 1022-5A1CS</u></b>		
	Surface: 805 FNL / 24 FEL	NENE	Lot 1
	BHL: 420 FNL / 492 FEL	NENE	Lot 1
<b><u>API #</u></b>	<b><u>NBU 1022-5A4BS</u></b>		
	Surface: 794 FNL / 62 FEL	NENE	Lot 1
	BHL: 756 FNL / 492 FEL	NENE	Lot 1
<b><u>API #</u></b>	<b><u>NBU 1022-5A4CS</u></b>		
	Surface: 797 FNL / 53 FEL	NENE	Lot 1
	BHL: 1091 FNL / 492 FEL	NENE	Lot 1
<b><u>API #</u></b>	<b><u>NBU 1022-5H1BS</u></b>		
	Surface: 799 FNL / 43 FEL	NENE	Lot 1
	BHL: 1426 FNL / 492 FEL	SENE	
<b><u>API #</u></b>	<b><u>NBU 1022-5H1CS</u></b>		
	Surface: 802 FNL / 33 FEL	NENE	Lot 1
	BHL: 1761 FNL / 492 FEL	SENE	

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

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.

An on-site meeting was held on October 10-11, 2012. Present were:

- Dave Gordon, Lynn Dehner, Aaron Roe and Melissa Wardle - BLM;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Jacob Dunham - 609 Consulting, LLC.;
- Alan Rabinoff - ICF International;
- Gina Becker, Tony Kazeck, Casey McKee, Charles Chase and Randy Townley- Kerr-McGee

**A. Existing Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Topo B for existing roads.

**B. New or Reconstructed Access Roads:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**The following segments are "on-lease"**

±245' (0.05 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, County Road  
Re-Route from the edge of pad to the existing road to the southeast. Please refer to Topo Map B.

**C. Location of Existing Wells:**

Please refer to Topo C for existing wells.

**D. Location of Existing and/or Proposed Facilities:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

This pad will expand the existing pad for the NBU 1022-5A, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on December 6, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

**GAS GATHERING**

*Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.*

The total gas gathering pipeline distance from the meter to the tie in point is ±310' and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- ±125' (0.02 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±185' (0.04 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad cross country to tie-in to the existing 16" gas pipeline to the north. Please refer to Exhibit A, Line 12.

**LIQUID GATHERING**

*Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,970'$  and the individual segments are broken up as follows:

**The following segments are "onlease", no ROW needed.**

- $\pm 125'$  (0.02 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 385'$  (0.1 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the 1022-5B intersection, then traveling cross country to the east side of the well pad. This pipeline will used concurrently with the NBU 1022-5B pad. Please refer to Exhibit B, Line 11 and Line 12.
- $\pm 1,460'$  (0.3 miles) – Section 4 T10S R22E (NW/4 NW/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the east side of the proposed well pad to tie-in to the proposed 6" liquid pipeline to the northeast at the NBU 1022-4D intersection. This pipeline will be used concurrently with the NBU 1022-5B Pad. Please refer to Exhibit B, Line 10.

**Pipeline Gathering Construction**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**The Anadarko Completions Transportation System (ACTS) information:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

Please refer to Exhibit C for ACTS Lines

**E. Location and Types of Water Supply:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

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

**F. Construction Materials:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**G. Methods for Handling Waste:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Materials Management**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

**I. Well Site Layout:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**J. Plans for Surface Reclamation:**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Interim Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Measures Common to Interim and Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Weed Control**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Monitoring**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**K. Surface/Mineral Ownership:**

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**L. Other Information:**

**Cultural and Paleontological Resources**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

**Resource Reports:**

A Class I literature survey report was completed on October 31, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-311.

A paleontological reconnaissance survey was completed October 24-26, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-194.

Biological field survey was completed October 18-November 9, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-859.

**Proposed Action Annual Emissions Tables:**

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated October 31, 2012.

NBU 1022-5A1BS/ 1022-5A1CS/ 1022-5A4BS  
NBU 1022-5A4CS/ 1022-5H1BS/ 1022-5H1CS

Surface Use Plan of Operations  
6 of 6

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

Gina T. Becker  
Senior Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

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

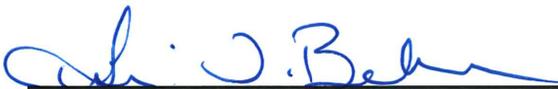
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

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



Gina T. Becker

December 17, 2012

Date

# 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)

February 26, 2013

Memorandum

To: Assistant Field Office Manager Minerals,  
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 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 2013 within the Natural Buttes Unit, Uintah County, Utah.

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

**NBU 1022-5A PAD**

43-047-53530	NBU 1022-5A1BS	Sec 05 T10S R22E 0808 FNL 0014 FEL
	BHL	Sec 05 T10S R22E 0100 FNL 0497 FEL

43-047-53531	NBU 1022-5A4BS	Sec 05 T10S R22E 0794 FNL 0062 FEL
	BHL	Sec 05 T10S R22E 0756 FNL 0492 FEL

43-047-53532	NBU 1022-5A1CS	Sec 05 T10S R22E 0805 FNL 0024 FEL
	BHL	Sec 05 T10S R22E 0420 FNL 0492 FEL

43-047-53589	NBU 1022-5H1CS	Sec 05 T10S R22E 0802 FNL 0033 FEL
	BHL	Sec 05 T10S R22E 1761 FNL 0492 FEL

43-047-53590	NBU 1022-5H1BS	Sec 05 T10S R22E 0799 FNL 0043 FEL
	BHL	Sec 05 T10S R22E 1426 FNL 0492 FEL

43-047-53591	NBU 1022-5A4CS	Sec 05 T10S R22E 0797 FNL 0053 FEL
	BHL	Sec 05 T10S R22E 1091 FNL 0492 FEL

**NBU 1022-5J PAD**

43-047-53563	NBU 1022-5J1BS	Sec 05 T10S R22E 2136 FSL 2386 FEL
	BHL	Sec 05 T10S R22E 2464 FSL 1817 FEL

43-047-53564	NBU 1022-5F4CS	Sec 05 T10S R22E 2115 FSL 2408 FEL
	BHL	Sec 05 T10S R22E 2439 FNL 2143 FWL

43-047-53598	NBU 1022-5K1CS	Sec 05 T10S R22E 2102 FSL 2423 FEL
	BHL	Sec 05 T10S R22E 2246 FSL 2160 FWL

43-047-53599	NBU 1022-5K1BS	Sec 05 T10S R22E 2109 FSL 2415 FEL
	BHL	Sec 05 T10S R22E 2604 FSL 2144 FWL

RECEIVED: February 26, 2013

API #	WELL NAME			LOCATION						
(Proposed PZ WASATCH-MESA VERDE)										
<b>NBU 1022-5J PAD</b>										
43-047-53600	NBU 1022-5J4BS	Sec	05	T10S	R22E	2122	FSL	2400	FEL	
	BHL	Sec	05	T10S	R22E	1765	FSL	1816	FEL	
43-047-53601	NBU 1022-5J1CS	Sec	05	T10S	R22E	2129	FSL	2393	FEL	
	BHL	Sec	05	T10S	R22E	2101	FSL	1816	FEL	
<b>NBU 1022-5I3 PAD</b>										
43-047-53565	NBU 1022-5P4CS	Sec	05	T10S	R22E	1410	FSL	0824	FEL	
	BHL	Sec	05	T10S	R22E	0205	FSL	0499	FEL	
43-047-53566	NBU 1022-5P4BS	Sec	05	T10S	R22E	1420	FSL	0821	FEL	
	BHL	Sec	05	T10S	R22E	0586	FSL	0494	FEL	
43-047-53567	NBU 1022-5P1CS	Sec	05	T10S	R22E	1429	FSL	0818	FEL	
	BHL	Sec	05	T10S	R22E	0921	FSL	0494	FEL	
43-047-53568	NBU 1022-5O1BS	Sec	05	T10S	R22E	1439	FSL	0815	FEL	
	BHL	Sec	05	T10S	R22E	1093	FSL	1818	FEL	
43-047-53569	NBU 1022-5J4CS	Sec	05	T10S	R22E	1448	FSL	0812	FEL	
	BHL	Sec	05	T10S	R22E	1429	FSL	1817	FEL	
<b>NBU 1022-5I PAD</b>										
43-047-53570	NBU 1022-5I3AS	Sec	05	T10S	R22E	1944	FSL	0185	FEL	
	BHL	Sec	05	T10S	R22E	1809	FSL	0852	FEL	
43-047-53571	NBU 1022-5I1BS	Sec	05	T10S	R22E	1947	FSL	0175	FEL	
	BHL	Sec	05	T10S	R22E	2543	FSL	0517	FEL	
43-047-53572	NBU 1022-5H4CS	Sec	05	T10S	R22E	1950	FSL	0166	FEL	
	BHL	Sec	05	T10S	R22E	2432	FNL	0493	FEL	
43-047-53573	NBU 1022-5H4BS	Sec	05	T10S	R22E	1954	FSL	0156	FEL	
	BHL	Sec	05	T10S	R22E	2097	FNL	0492	FEL	
<b>NBU 1022-5E PAD</b>										
43-047-53575	NBU 1022-5E4CS	Sec	05	T10S	R22E	1568	FNL	1089	FWL	
	BHL	Sec	05	T10S	R22E	2555	FNL	0846	FWL	
43-047-53576	NBU 1022-5E4BS	Sec	05	T10S	R22E	1559	FNL	1085	FWL	
	BHL	Sec	05	T10S	R22E	2150	FNL	0854	FWL	
43-047-53577	NBU 1022-5E1AS	Sec	05	T10S	R22E	1550	FNL	1080	FWL	
	BHL	Sec	05	T10S	R22E	1410	FNL	1260	FWL	
43-047-53578	NBU 1022-5D2DS	Sec	05	T10S	R22E	1542	FNL	1075	FWL	
	BHL	Sec	05	T10S	R22E	0435	FNL	0628	FWL	
<b>NBU 1022-5C Pad</b>										
43-047-53579	NBU 1022-5F4BS	Sec	05	T10S	R22E	1261	FNL	2602	FWL	
	BHL	Sec	05	T10S	R22E	2102	FNL	2143	FWL	
43-047-53580	NBU 1022-5F1CS	Sec	05	T10S	R22E	1251	FNL	2600	FWL	
	BHL	Sec	05	T10S	R22E	1766	FNL	2142	FWL	
43-047-53581	NBU 1022-5C4BS	Sec	05	T10S	R22E	1241	FNL	2597	FWL	
	BHL	Sec	05	T10S	R22E	1081	FNL	2140	FWL	
43-047-53582	NBU 1022-5C1DS	Sec	05	T10S	R22E	1222	FNL	2593	FWL	
	BHL	Sec	05	T10S	R22E	0532	FNL	2413	FWL	
43-047-53583	NBU 1022-5C1BS	Sec	05	T10S	R22E	1232	FNL	2595	FWL	
	BHL	Sec	05	T10S	R22E	0115	FNL	2150	FWL	

API #	WELL NAME	LOCATION									
(Proposed PZ WASATCH-MESA VERDE)											
<b>NBU 1022-5B PAD</b>											
43-047-53584	NBU 1022-5G4BS	Sec 05	T10S	R22E	1087	FNL	1961	FEL			
	BHL	Sec 05	T10S	R22E	2052	FNL	1878	FEL			
43-047-53585	NBU 1022-5G1BS	Sec 05	T10S	R22E	1084	FNL	1951	FEL			
	BHL	Sec 05	T10S	R22E	1617	FNL	1823	FEL			
43-047-53586	NBU 1022-5B4BS	Sec 05	T10S	R22E	1075	FNL	1923	FEL			
	BHL	Sec 05	T10S	R22E	0921	FNL	1811	FEL			
43-047-53587	NBU 1022-5B1CS	Sec 05	T10S	R22E	1078	FNL	1932	FEL			
	BHL	Sec 05	T10S	R22E	0586	FNL	1810	FEL			
43-047-53588	NBU 1022-5B1BS	Sec 05	T10S	R22E	1081	FNL	1942	FEL			
	BHL	Sec 05	T10S	R22E	0247	FNL	1804	FEL			
<b>NBU 1022-5N PAD</b>											
43-047-53592	NBU 1022-5O3AS	Sec 05	T10S	R22E	1269	FSL	2004	FWL			
	BHL	Sec 05	T10S	R22E	0680	FSL	2260	FEL			
43-047-53593	NBU 1022-5N1CS	Sec 05	T10S	R22E	1260	FSL	1999	FWL			
	BHL	Sec 05	T10S	R22E	0701	FSL	2151	FWL			
43-047-53594	NBU 1022-5M4AS	Sec 05	T10S	R22E	1235	FSL	1982	FWL			
	BHL	Sec 05	T10S	R22E	0638	FSL	1295	FWL			
43-047-53595	NBU 1022-5M1BS	Sec 05	T10S	R22E	1243	FSL	1988	FWL			
	BHL	Sec 05	T10S	R22E	1141	FSL	0825	FWL			
43-047-53596	NBU 1022-5L4CS	Sec 05	T10S	R22E	1252	FSL	1993	FWL			
	BHL	Sec 05	T10S	R22E	1557	FSL	0826	FWL			
43-047-53597	NBU 1022-5K4CS	Sec 05	T10S	R22E	1277	FSL	2009	FWL			
	BHL	Sec 05	T10S	R22E	1508	FSL	2148	FWL			
<b>NBU 921-21B PAD</b>											
43-047-53604	NBU 921-21A1BS	Sec 21	T09S	R21E	0651	FNL	2056	FEL			
	BHL	Sec 21	T09S	R21E	0085	FNL	0495	FEL			
43-047-53608	NBU 921-21B4CS	Sec 21	T09S	R21E	0650	FNL	2086	FEL			
	BHL	Sec 21	T09S	R21E	1243	FNL	1822	FEL			
43-047-53609	NBU 921-21B1BS	Sec 21	T09S	R21E	0650	FNL	2066	FEL			
	BHL	Sec 21	T09S	R21E	0249	FNL	1822	FEL			
43-047-53622	NBU 921-21B4BS	Sec 21	T09S	R21E	0650	FNL	2076	FEL			
	BHL	Sec 21	T09S	R21E	0911	FNL	1822	FEL			
<b>NBU 921-21C PAD</b>											
43-047-53605	NBU 921-21C4BS	Sec 21	T09S	R21E	0978	FNL	1707	FWL			
	BHL	Sec 21	T09S	R21E	0745	FNL	2153	FWL			
43-047-53606	NBU 921-21C1CS	Sec 21	T09S	R21E	0975	FNL	1698	FWL			
	BHL	Sec 21	T09S	R21E	0414	FNL	2152	FWL			
43-047-53607	NBU 921-21C1BS	Sec 21	T09S	R21E	0972	FNL	1688	FWL			
	BHL	Sec 21	T09S	R21E	0084	FNL	2152	FWL			
43-047-53613	NBU 921-21D4CS	Sec 21	T09S	R21E	0969	FNL	1679	FWL			
	BHL	Sec 21	T09S	R21E	1240	FNL	0826	FWL			

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
<b>NBU 921-21D PAD</b>		
43-047-53610	NBU 921-21D1CS	Sec 21 T09S R21E 0243 FNL 1065 FWL
	BHL	Sec 21 T09S R21E 0578 FNL 0826 FWL
43-047-53611	NBU 921-21D1BS	Sec 21 T09S R21E 0240 FNL 1056 FWL
	BHL	Sec 21 T09S R21E 0248 FNL 0826 FWL
43-047-53623	NBU 921-21D4BS	Sec 21 T09S R21E 0246 FNL 1075 FWL
	BHL	Sec 21 T09S R21E 0929 FNL 0826 FWL
<b>NBU 921-21G PAD</b>		
43-047-53624	NBU 921-21H1CS	Sec 21 T09S R21E 1766 FNL 1748 FEL
	BHL	Sec 21 T09S R21E 1743 FNL 0495 FEL
43-047-53625	NBU 921-21G4BS	Sec 21 T09S R21E 1760 FNL 1768 FEL
	BHL	Sec 21 T09S R21E 2237 FNL 1823 FEL
43-047-53626	NBU 921-21G1CS	Sec 21 T09S R21E 1757 FNL 1777 FEL
	BHL	Sec 21 T09S R21E 1906 FNL 1822 FEL
43-047-53627	NBU 921-21G1BS	Sec 21 T09S R21E 1754 FNL 1787 FEL
	BHL	Sec 21 T09S R21E 1574 FNL 1822 FEL
<b>NBU 921-21F PAD</b>		
43-047-53628	NBU 921-21F4BS	Sec 21 T09S R21E 1613 FNL 2171 FWL
	BHL	Sec 21 T09S R21E 2070 FNL 2154 FWL
43-047-53629	NBU 921-21F1CS	Sec 21 T09S R21E 1612 FNL 2161 FWL
	BHL	Sec 21 T09S R21E 1739 FNL 2153 FWL
43-047-53630	NBU 921-21F1BS	Sec 21 T09S R21E 1615 FNL 2181 FWL
	BHL	Sec 21 T09S R21E 1407 FNL 2153 FWL
43-047-53631	NBU 921-21C4CS	Sec 21 T09S R21E 1616 FNL 2191 FWL
	BHL	Sec 21 T09S R21E 1076 FNL 2153 FWL

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: 2013.02.26 08:11:16 -0700

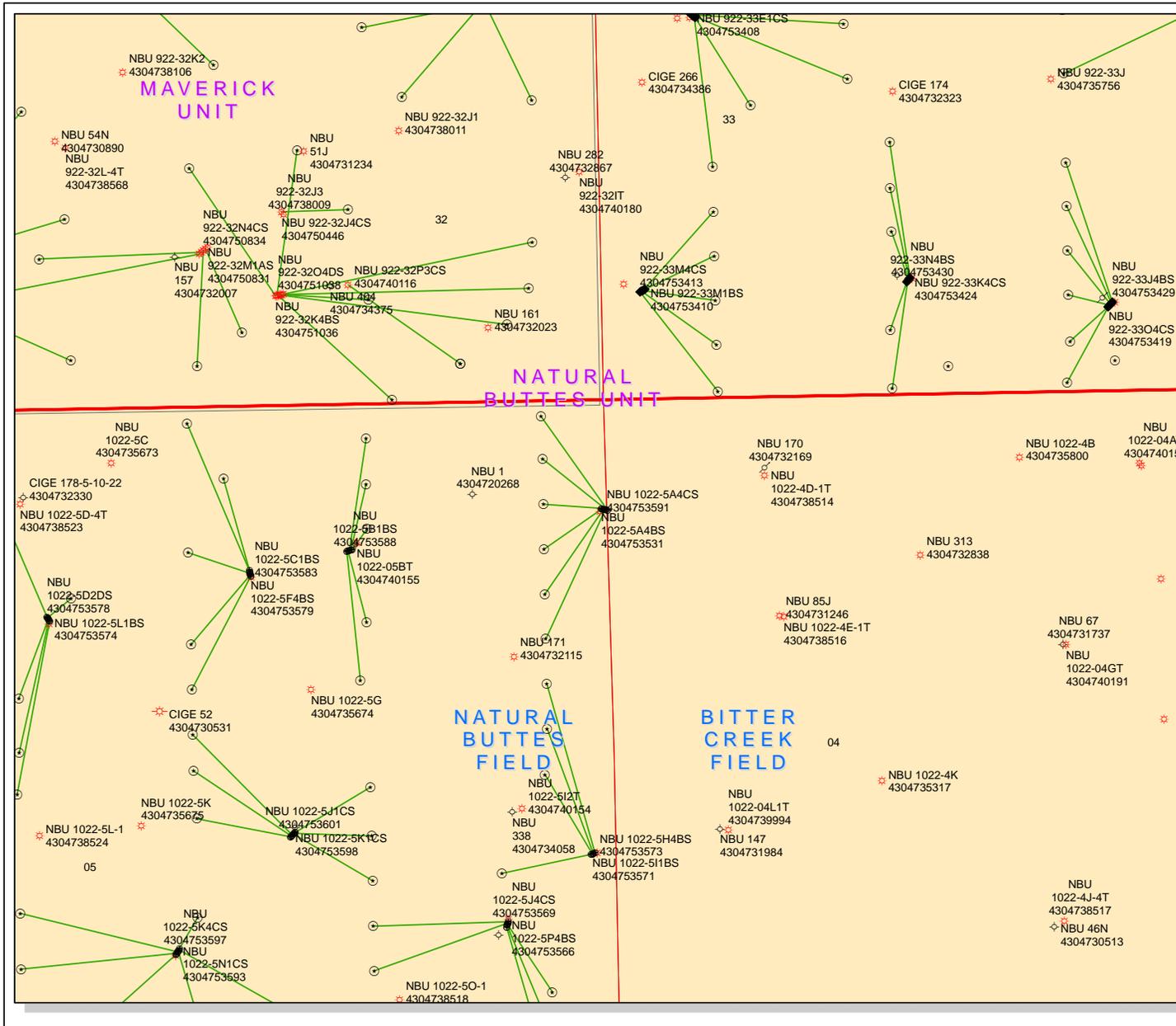
bcc: File - Natural Buttes Unit  
 Division of Oil Gas and Mining  
 Central Files  
 Agr. Sec. Chron  
 Fluid Chron

MCoulthard:mc:2-26-13

RECEIVED: February 26, 2013

API NUMBER	WELL NAME	SURFACE LOCATION
43-047-53530	NBU 1022-5A1BS	Sec 05 T10S R22E 0808 FNL 0014 FEL
43-047-53531	NBU 1022-5A4BS	Sec 05 T10S R22E 0794 FNL 0062 FEL
43-047-53532	NBU 1022-5A1CS	Sec 05 T10S R22E 0805 FNL 0024 FEL
43-047-53563	NBU 1022-5J1BS	Sec 05 T10S R22E 2136 FSL 2386 FEL
43-047-53564	NBU 1022-5F4CS	Sec 05 T10S R22E 2115 FSL 2408 FEL
43-047-53565	NBU 1022-5P4CS	Sec 05 T10S R22E 1410 FSL 0824 FEL
43-047-53566	NBU 1022-5P4BS	Sec 05 T10S R22E 1420 FSL 0821 FEL
43-047-53567	NBU 1022-5P1CS	Sec 05 T10S R22E 1429 FSL 0818 FEL
43-047-53568	NBU 1022-5O1BS	Sec 05 T10S R22E 1439 FSL 0815 FEL
43-047-53569	NBU 1022-5J4CS	Sec 05 T10S R22E 1448 FSL 0812 FEL
43-047-53570	NBU 1022-5I3AS	Sec 05 T10S R22E 1944 FSL 0185 FEL
43-047-53571	NBU 1022-5I1BS	Sec 05 T10S R22E 1947 FSL 0175 FEL
43-047-53572	NBU 1022-5H4CS	Sec 05 T10S R22E 1950 FSL 0166 FEL
43-047-53573	NBU 1022-5H4BS	Sec 05 T10S R22E 1954 FSL 0156 FEL
43-047-53575	NBU 1022-5E4CS	Sec 05 T10S R22E 1568 FNL 1089 FWL
43-047-53576	NBU 1022-5E4BS	Sec 05 T10S R22E 1559 FNL 1085 FWL
43-047-53577	NBU 1022-5E1AS	Sec 05 T10S R22E 1550 FNL 1080 FWL
43-047-53578	NBU 1022-5D2DS	Sec 05 T10S R22E 1542 FNL 1075 FWL
43-047-53579	NBU 1022-5F4BS	Sec 05 T10S R22E 1261 FNL 2602 FWL
43-047-53580	NBU 1022-5F1CS	Sec 05 T10S R22E 1251 FNL 2600 FWL
43-047-53581	NBU 1022-5C4BS	Sec 05 T10S R22E 1241 FNL 2597 FWL
43-047-53582	NBU 1022-5C1DS	Sec 05 T10S R22E 1222 FNL 2593 FWL
43-047-53583	NBU 1022-5C1BS	Sec 05 T10S R22E 1232 FNL 2595 FWL
43-047-53584	NBU 1022-5G4BS	Sec 05 T10S R22E 1087 FNL 1961 FEL
43-047-53585	NBU 1022-5G1BS	Sec 05 T10S R22E 1084 FNL 1951 FEL
43-047-53586	NBU 1022-5B4BS	Sec 05 T10S R22E 1075 FNL 1923 FEL
43-047-53587	NBU 1022-5B1CS	Sec 05 T10S R22E 1078 FNL 1932 FEL
43-047-53588	NBU 1022-5B1BS	Sec 05 T10S R22E 1081 FNL 1942 FEL
43-047-53589	NBU 1022-5H1CS	Sec 05 T10S R22E 0802 FNL 0033 FEL
43-047-53590	NBU 1022-5H1BS	Sec 05 T10S R22E 0799 FNL 0043 FEL
43-047-53591	NBU 1022-5A4CS	Sec 05 T10S R22E 0797 FNL 0053 FEL
43-047-53592	NBU 1022-5O3AS	Sec 05 T10S R22E 1269 FSL 2004 FWL
43-047-53593	NBU 1022-5N1CS	Sec 05 T10S R22E 1260 FSL 1999 FWL
43-047-53594	NBU 1022-5M4AS	Sec 05 T10S R22E 1235 FSL 1982 FWL
43-047-53595	NBU 1022-5M1BS	Sec 05 T10S R22E 1243 FSL 1988 FWL
43-047-53596	NBU 1022-5L4CS	Sec 05 T10S R22E 1252 FSL 1993 FWL
43-047-53597	NBU 1022-5K4CS	Sec 05 T10S R22E 1277 FSL 2009 FWL
43-047-53598	NBU 1022-5K1CS	Sec 05 T10S R22E 2102 FSL 2423 FEL
43-047-53599	NBU 1022-5K1BS	Sec 05 T10S R22E 2109 FSL 2415 FEL
43-047-53600	NBU 1022-5J4BS	Sec 05 T10S R22E 2122 FSL 2400 FEL
43-047-53601	NBU 1022-5J1CS	Sec 05 T10S R22E 2129 FSL 2393 FEL
43-047-53604	NBU 921-21A1BS	Sec 21 T09S R21E 0651 FNL 2056 FEL
43-047-53605	NBU 921-21C4BS	Sec 21 T09S R21E 0978 FNL 1707 FWL
43-047-53606	NBU 921-21C1CS	Sec 21 T09S R21E 0975 FNL 1698 FWL
43-047-53607	NBU 921-21C1BS	Sec 21 T09S R21E 0972 FNL 1688 FWL

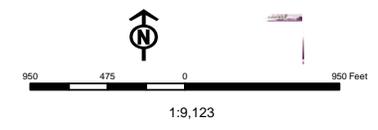
API NUMBER	WELL NAME	SURFACE LOCATION
43-047-53608	NBU 921-21B4CS	Sec 21 T09S R21E 0650 FNL 2086 FEL
43-047-53609	NBU 921-21B1BS	Sec 21 T09S R21E 0650 FNL 2066 FEL
43-047-53610	NBU 921-21D1CS	Sec 21 T09S R21E 0243 FNL 1065 FWL
43-047-53611	NBU 921-21D1BS	Sec 21 T09S R21E 0240 FNL 1056 FWL
43-047-53613	NBU 921-21D4CS	Sec 21 T09S R21E 0969 FNL 1679 FWL
43-047-53622	NBU 921-21B4BS	Sec 21 T09S R21E 0650 FNL 2076 FEL
43-047-53623	NBU 921-21D4BS	Sec 21 T09S R21E 0246 FNL 1075 FWL
43-047-53624	NBU 921-21H1CS	Sec 21 T09S R21E 1766 FNL 1748 FEL
43-047-53625	NBU 921-21G4BS	Sec 21 T09S R21E 1760 FNL 1768 FEL
43-047-53626	NBU 921-21G1CS	Sec 21 T09S R21E 1757 FNL 1777 FEL
43-047-53627	NBU 921-21G1BS	Sec 21 T09S R21E 1754 FNL 1787 FEL
43-047-53628	NBU 921-21F4BS	Sec 21 T09S R21E 1613 FNL 2171 FWL
43-047-53629	NBU 921-21F1CS	Sec 21 T09S R21E 1612 FNL 2161 FWL
43-047-53630	NBU 921-21F1BS	Sec 21 T09S R21E 1615 FNL 2181 FWL
43-047-53631	NBU 921-21C4CS	Sec 21 T09S R21E 1616 FNL 2191 FWL



**API Number: 4304753531**  
**Well Name: NBU 1022-5A4BS**  
**Township T10.0S Range R22.0E Section 05**  
**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 GEOTHERMAL
  - PP OIL
  - SECONDARY
  - TERMINATED
- Fields**
- STATUS**
- Unknown
  - ABANDONED
  - ACTIVE
  - COMBINED
  - INACTIVE
  - STORAGE
  - TERMINATED



## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 2/6/2013

API NO. ASSIGNED: 43047535310000

WELL NAME: NBU 1022-5A4BS

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

PHONE NUMBER: 720 929-6086

CONTACT: Gina Becker

PROPOSED LOCATION: NENE 05 100S 220E

Permit Tech Review: 

SURFACE: 0794 FNL 0062 FEL

Engineering Review: 

BOTTOM: 0756 FNL 0492 FEL

Geology Review: 

COUNTY: UINTAH

LATITUDE: 39.98304

LONGITUDE: -109.45450

UTM SURF EASTINGS: 631959.00

NORTHINGS: 4427018.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-01191-A

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: FEDERAL - WYB000291
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingle 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 - Commingle - ddoucet  
 4 - Federal Approval - dmason  
 15 - Directional - dmason  
 17 - Oil Shale 190-5(b) - dmason



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 1022-5A4BS  
**API Well Number:** 43047535310000  
**Lease Number:** UTU-01191-A  
**Surface Owner:** FEDERAL  
**Approval Date:** 3/12/2013

### Issued to:

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

### Authority:

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

### Duration:

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

### Commingle:

In accordance with Board Cause No. 173-14, commingling 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:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

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.

**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 at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at <http://oilgas.ogm.utah.gov>

**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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

JAN 08 2013

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

**BLM**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU01191A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR-MCGEE OIL & GAS ONSHORE Contact: GINA T BECKER Email: GINA.BECKER@ANADARKO.COM		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address P.O. BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 1022-5A4BS
3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086		9. API Well No. 43 047 5353
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NENE Lot 1 794FNL 62FEL 39.983081 N Lat, 109.454577 W Lon At proposed prod. zone NENE Lot 1 756FNL 492FEL 39.983184 N Lat, 109.456113 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 50 MILES SOUTHEAST OF VERNAL, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 5 T10S R22E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 756	16. No. of Acres in Lease 1363.20	12. County or Parish UINTAH
17. Spacing Unit dedicated to this well	13. State UT	18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 491
19. Proposed Depth 10120 MD 10100 TVD	20. BLM/BIA Bond No. on file WYB000291	21. Elevations (Show whether DF, KB, RT, GL, etc.) 5011 GL
22. Approximate date work will start 06/01/2012	23. Estimated duration 60-90 DAYS	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	Date 01/03/2013
--	--	--------------------

Title  
REGULATORY ANALYST II

Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date JUN 04 2013
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #175841 verified by the BLM Well Information System  
For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal  
Committed to AFMSS for processing by ROBIN R. HANSEN on 01/14/2013 ()

**NOTICE OF APPROVAL**

**RECEIVED**  
JUN 07 2013  
DIV. OF OIL, GAS & MINING

**UDOGM**

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***



**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE**

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

**Company:** KERR MCGEE  
**Well No:** NBU 1022-5A4BS  
**API No:** 43-047-53531

**Location:** NENE, Sec. LOT 1, T10S, R22E  
**Lease No:** UTU-01191A  
**Agreement:**

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:blm_ut_vn_opreport@blm.gov">blm_ut_vn_opreport@blm.gov</a>
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- Mitigation measures can be found in Appendix B, Table B-2, of the GNB ROD (BLM 2012b) under the following sections of the table:
  - Air Quality
  - Soils
  - Vegetation: *Sclerocactus wetlandicus*
  - Wildlife: Colorado River Fish

Where populations or individuals of *Sclerocactus wetlandicus* are located within 300 feet of the proposed edge of project ROWs, the following actions will be taken to minimize impacts:

- Silt fencing will be used to protect cacti that are within 300 feet and downslope or downwind of surface disturbance. Fencing is intended to prevent sedimentation or dust deposition and will be evaluated for effectiveness by a qualified botanist.
- A qualified botanist will be on site to monitor surface-disturbing activities when cacti are within 300 feet of any surface disturbance.
- Dust abatement (consisting of water only) will occur during construction where plants are closer than 300 feet from surface-disturbing activities.
- Cacti within 300 feet of proposed surface disturbance will be flagged immediately prior to surface-disturbing activities and flags will be removed immediately after surface-disturbing activities are completed. Leaving cacti flagged for as short a time as possible will minimize drawing attention to the cacti location and reduce potential for theft.
- Pipelines will be sited to maximize distance from adjacent cacti locations.
- Project personnel associated with construction activities will be instructed to drive at a speed limit of 15 miles per hour on unpaved roads and remain in existing roadway ROWs at all times.

For permanent surface pipelines, KMG will adhere to existing cacti survey/buffer guidelines of 300 feet, or amended guidelines if developed by the BLM and USFWS. In areas where avoidance by 300 feet is not feasible and populations or individuals of *Sclerocactus wetlandicus* are within 50 feet of proposed project components, the following actions will be taken to minimize impacts:

- Prior to construction, flag individual cactus. Once pipe installation is complete, remove the flagging.
- Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
- A qualified botanist will be present during construction to monitor surface line installation.

The following considerations are required for those wells where KMG deems completion fluid recycling is appropriate based on new well density and topography:

- Temporary lines associated with recycling of completion water will be sited in existing ROWs. The pressure in the lines is less than 50 pounds per square inch and the lines are constructed of rigid aluminum; therefore, virtually no movement will occur during operation.
- If surface water completion lines are placed within the footprint of a road disturbance where vegetation does not grow, *Sclerocactus wetlandicus* surveys will not be necessary.
- A qualified botanist will survey a 50-foot-wide corridor along roads where temporary lines are planned to ensure *Sclerocactus wetlandicus* is not present.
- If cacti are present within the 50-foot-wide survey corridor and avoidance is necessary (to ensure the line is more than 50 feet away from identified cactus), the new alignment will, if possible, be such that the cacti are topographically higher than the re-aligned line so a potential spill from the line will not impact the identified cacti.
- If it is not possible to re-align the surface lines to avoid individuals or populations of the *Sclerocactus wetlandicus* that are within 50 feet of surface disturbance, the following actions will be taken to minimize impacts:
  - Prior to construction, KMG will flag individual cacti. Once pipe installation is complete, remove the flagging.
  - Prior to construction, KMG will install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing.
  - A qualified botanist will be present during construction to monitor surface line installation.

Avoidance of cactus by 300 feet will take priority in the expansion of pads within the cactus core conservation areas. When the 300-foot buffer cannot be avoided in pad expansion, KMG will notify the USFWS and work with the BLM to determine pad expansion that places a priority on avoiding cactus impacts.

KMG will follow existing ROWs and/or roads in constructing new buried pipelines within the cactus core conservation areas. For instance, where a new buried pipeline is unable to follow an existing ROW and/or road and exceeds 600 feet in length, KMG will work with the USFWS and the BLM to determine a route that places a priority on avoiding cactus impacts.

Maintenance activities on pipelines within cactus core conservation areas will avoid impacts to cactus, to the extent possible.

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established

- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.
- Bird exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals (BLM 2012b).
- KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks (BLM 2012b).
- Tree removal within pinyon-juniper habitat will occur outside of the nesting season for migratory birds (approximately 4/1 to 7/31 (BLM 2012b).
- Damage to livestock and livestock facilities would be reported as quickly as possible to the BLM and affected livestock operators. Operators would develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars.
- If partial or complete removal of a fence cannot be avoided, the fence would be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence would be braced and a cattleguard and gate installed per BLM guidance.
- On well pads 1022-6C, 1022-6D, 1022-5A, and 1022-5B: Construction and development activities will be prohibited from 3/1 through 8/15, pending the results of a preconstruction nest occupancy survey (BLM 2012b; BLM 2008a).

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- Gamma Ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.

Kerr-McGee Oil & Gas Onshore L.P. shall adhere to all referenced requirements in the SOP (version: "Standard Operating Practice Agreements for the Greater Natural Buttes Field", Oct 21, 2012). The operator shall also comply with applicable laws and regulations; with lease terms Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the authorized officer.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.



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 20, 2014

Teena Paulo  
Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street, Suite 600  
Denver, CO 80202

Re: APDs Rescinded for Kerr-McGee O&G Onshore, L.P., Uintah County

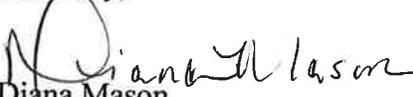
Dear Ms. Paulo:

Enclosed find the list of APDs that you have asked to be rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded, effective February 20, 2014.

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

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

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

43-047-52301	NBU 1022-25D3AS
43-047-52302	NBU 1022-25E2AS
43-047-53531	NBU 1022-5A4BS
43-047-53579	NBU 1022-5F4BS
43-047-50107	NBU 921-8B4S
43-047-50109	NBU 921-8A1S
43-047-52299	NBU 1022-25F2AS
43-047-52296	NBU 1022-25C3DS
43-047-52297	NBU 1022-25C3AS
43-047-52295	NBU 1022-25C2DS
43-047-52300	NBU 1022-25D3DS
43-047-52298	NBU 1022-25D2DS
43-047-51025	NBU 921-11I

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 07 2015

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

BLM

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU01191A
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE-Mail: JENNIFER.THOMAS@ANADARKO.COM		6. If Indian, Allottee or Tribe Name
3a. Address P.O. BOX 173779 1099 18TH STREET, SUITE 600 DENVER, CO 80217	3b. Phone No. (include area code) Ph: 720-929-6808	7. If Unit or CA/Agreement, Name and/or No. UTU63047A
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 5 T10S R22E Mer SLB NENE 794FNL 62FEL		8. Well Name and No. NBU 1022-5A4BS
		9. API Well No. 43-047-53531
		10. Field and Pool, or Exploratory NATURAL BUTTES
		11. County or Parish, and State UINTAH COUNTY, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original APD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

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

APD - 6/4/13  
NEPA - 2013-179 EA

VERNAL FIELD OFFICE
ENG. <i>RPP</i> 6/2/15
GEOL. _____
E.S. _____
PET. _____
RECL. _____

CONDITIONS OF APPROVAL ATTACHED

RECEIVED

JUN 15 2015

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #301009 verified by the BLM Well Information System For KERR MCGEE OIL &amp; GAS ONSHORE, sent to the Vernal Committed to AFMSS for processing by JOHNETTA MAGEE on 05/11/2015 ()</b>	
Name (Printed/Typed) JENNIFER THOMAS	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 05/07/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <i>J. Thomas</i>	Assistant Field Manager Lands & Mineral Resources	JUN 05 2015
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	VERNAL FIELD OFFICE Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

UDOGM

# **CONDITIONS OF APPROVAL**

## **Kerr McGee Oil and Gas Onshore LP.**

### **Notice of Intent APD Extension**

**Lease:** UTU-01191A  
**Well:** NBU 1022-5A4BS  
**Location:** NENE Sec 5-T10S-R22E

An extension for the referenced APD is granted with the following conditions:

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1. The extension and APD shall expire on 06/04/2017.
2. No other extension shall be granted.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (435) 781-2777