API Well Number: 43047535640000

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

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 1022-5F4CS

2. TYPE OF WORK
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

3. FIELD OR WILDCAT
NATURAL BUTTES

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

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

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

7. OPERATOR PHONE
720 929-6515

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

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

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU-01195

11. MINERAL OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

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

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

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

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

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

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

19. SLANT
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2115 FSL 2408 FEL	NWSE	5	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	2439 FNL 2143 FWL	SENW	5	10.0 S	22.0 E	S
At Total Depth	2439 FNL 2143 FWL	SENW	5	10.0 S	22.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
219

23. NUMBER OF ACRES IN DRILLING UNIT
578

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
268

26. PROPOSED DEPTH
MD: 10515 TVD: 10350

27. ELEVATION - GROUND LEVEL
5229

28. BOND NUMBER
WYB000291

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
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 - 2600	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 - 10515	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	320	3.38	12.0
							50/50 Poz	1530	1.31	14.3

ATTACHMENTS

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

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

NAME Gina Becker | **TITLE** Regulatory Analyst II | **PHONE** 720 929-6086

SIGNATURE | **DATE** 02/06/2013 | **EMAIL** gina.becker@anadarko.com

API NUMBER ASSIGNED
43047535640000

APPROVAL

Permit Manager

RECEIVED: March 12, 2013

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

NBU 1022-5F4CS

Surface: 2115 FSL / 2408 FEL NWSE
BHL: 2439 FNL / 2143 FWL SENW

Section 5 T10S R22E

Unitah County, Utah
Mineral Lease: UTU-01195

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:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,335'	
Birds Nest	1,658'	Water
Mahogany	2,145'	Water
Wasatch	4,548'	Gas
Mesaverde	7,090'	Gas
Sego	9,228'	Gas
Castlegate	9,309'	Gas
Blackhawk	9,750'	Gas
TVD =	10,350'	
TD =	10,515'	

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.

RECEIVED: February 04, 2013

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 10350' TVD, approximately equals 6,624 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,332 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 9228' TVD, approximately equals 5,629 psi (0.61 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,623 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

Please refer to the 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

RECEIVED: February 04, 2013

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 27, 2012
WELL NAME	**NBU 1022-5F4CS**	TD	10,350' TVD 10,515' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah FINISHED ELEVATION 5,229'
SURFACE LOCATION	NWSE 2115 FSL 2408 FEL	Sec 5 T 10S	R 22E
	Latitude: 39.976537	Longitude: -109.462856	NAD 83
BTM HOLE LOCATION	SENW 2439 FNL 2143 FWL	Sec 5 T 10S	R 22E
	Latitude: 39.978559	Longitude: -109.465546	NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
All water flows encountered while drilling will be reported to the appropriate agencies.			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
	Green River @	1,335'			
	Top of Birds Nest @	1,658'			
	Mahogany @	2,145'			
	Preset f/ GL @ 2,600' TVD				
	Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	4,548'			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg
	Mesaverde @	7,090' TVD			
	Sego @	9,228' TVD			
	Castlegate @	9,309' TVD			
	Blackhawk	9,750' TVD			
Max anticipated Mud required 12.5 ppg	TD @	10,350' TVD 10,515' MD			

RECEIVED: February 04, 2013

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,600	28.00	IJ-55	LTC	2.07	1.55	5.46	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	1.29		3.72
	4-1/2"	5,000	to	10,515'	11.60	HCP-110	LTC	1.19	1.29	5.39	

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					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,100'	Premium cmt + 16% Gel + 10 pps gilsonite	260	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	4,045'	Premium Lite II +0.25 pps celloflake + .4% FL-52	320	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	6,470'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,530	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: _____ **DATE:** _____

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: February 04, 2013

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 27, 2012
WELL NAME	**NBU 1022-5F4CS**	TD	9,228' TVD 9,393' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah FINISHED ELEVATION 5,229'
SURFACE LOCATION	NWSE 2115 FSL 2408 FEL	Sec 5 T 10S	R 22E
	Latitude: 39.976537	Longitude: -109.462856	NAD 83
BTM HOLE LOCATION	SENW 2439 FNL 2143 FWL	Sec 5 T 10S	R 22E
	Latitude: 39.978559	Longitude: -109.465546	NAD 83
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
		200'	12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.			11.00'	8-5/8", 28#, IJ-55, LTC	Air mist
	Green River @	1,335'			
	Top of Birds Nest @	1,658'			
	Mahogany @	2,145'			
	Preset f/ GL @	2,600' TVD			
	Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	4,548'			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.0 ppg
	Mesaverde @	7,090' TVD			
	Sego @	9,228' TVD			
Max anticipated Mud required 12.0 ppg	TD @	9,228' TVD 9,393' MD			

RECEIVED: February 04, 2013

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,600	28.00	IJ-55	LTC	2.07	1.55	5.46	N/A
								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.10		3.00
								7,780	6,350	223,000	
	4-1/2"	5,000	to	9,393'	11.60	I-80	LTC	1.11	1.10	5.36	

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	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					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,100'	Premium cmt + 16% Gel + 10 pps gilsonite	260	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 + 3% salt BWOC + GR 3 pps					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,043'	Premium Lite II +0.25 pps celloflake + .4% FL-52	320	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	5,350'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,260	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

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DRILLING ENGINEER: _____ **DATE:** _____

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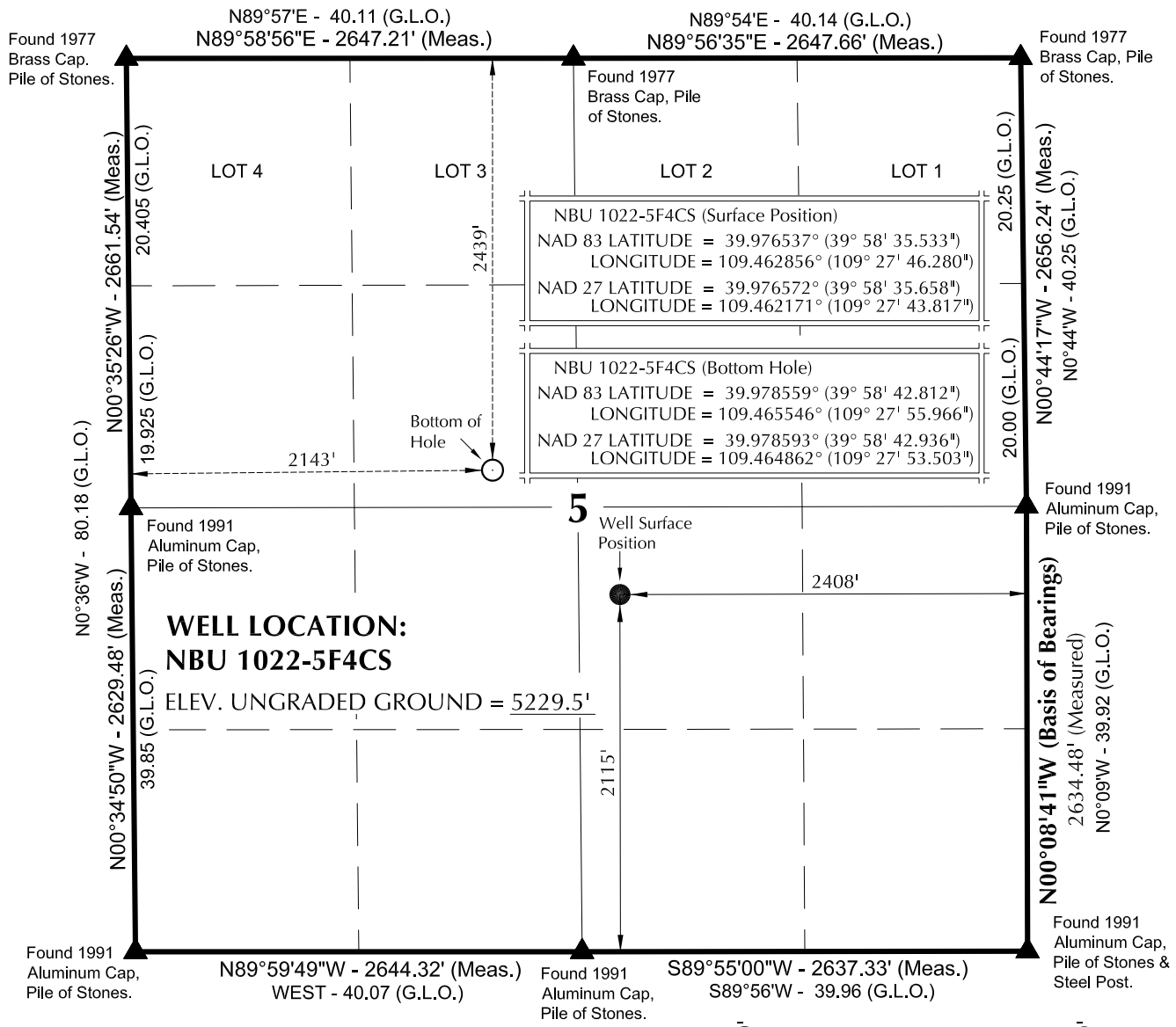
DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: February 04, 2013

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 N45°40'23"W 1054.35' 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'.

N

1000' 500' 0' 1000'

SCALE

SURVEYOR'S CERTIFICATE

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

9-5-12

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

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

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

WELL PAD: NBU 1022-5J

NBU 1022-5F4CS
WELL PLAT
2439' FNL, 2143' FWL (Bottom Hole)
SE ¼ NW ¼ OF 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

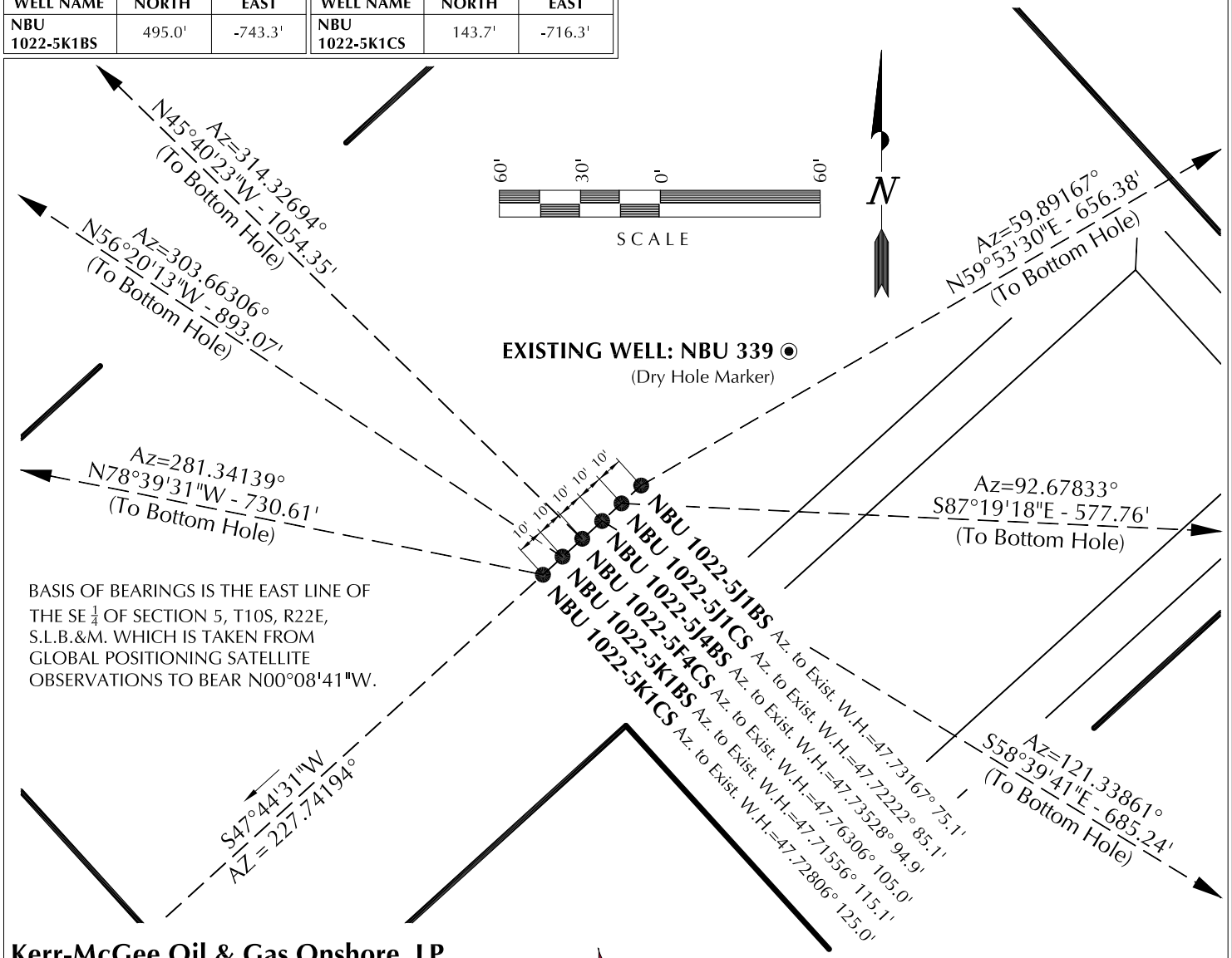
DATE SURVEYED: 8-8-12	SURVEYED BY: M.B.	SHEET NO:
DATE DRAWN: 8-17-12	DRAWN BY: T.J.R.	4
SCALE: 1" = 1000'	Date Last Revised:	4 OF 18

API Well Number: 43047535640000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 1022-5J1BS	39°58'35.731" 39.976592°	109°27'45.995" 109.462776°	39°58'35.856" 39.976627°	109°27'43.532" 109.462092°	2136' FSL 2386' FEL	39°58'38.984" 39.977496°	109°27'38.703" 109.460751°	39°58'39.109" 39.977530°	109°27'36.240" 109.460067°	2464' FSL 1817' FEL
NBU 1022-5J1CS	39°58'35.665" 39.976574°	109°27'46.090" 109.462803°	39°58'35.790" 39.976608°	109°27'43.627" 109.462119°	2129' FSL 2393' FEL	39°58'35.398" 39.976499°	109°27'38.678" 109.460744°	39°58'35.523" 39.976534°	109°27'36.216" 109.460060°	2101' FSL 1816' FEL
NBU 1022-5J4BS	39°58'35.600" 39.976555°	109°27'46.184" 109.462829°	39°58'35.724" 39.976590°	109°27'43.720" 109.462145°	2122' FSL 2400' FEL	39°58'32.078" 39.975577°	109°27'38.668" 109.460741°	39°58'32.203" 39.975612°	109°27'36.205" 109.460057°	1765' FSL 1816' FEL
NBU 1022-5F4CS	39°58'35.533" 39.976537°	109°27'46.280" 109.462856°	39°58'35.658" 39.976572°	109°27'43.817" 109.462171°	2115' FSL 2408' FEL	39°58'42.812" 39.978559°	109°27'55.966" 109.465546°	39°58'42.936" 39.978593°	109°27'53.503" 109.464862°	2439' FNL 2143' FWL
NBU 1022-5K1BS	39°58'35.465" 39.976518°	109°27'46.375" 109.462882°	39°58'35.590" 39.976553°	109°27'43.912" 109.462198°	2109' FSL 2415' FEL	39°58'40.356" 39.977877°	109°27'55.921" 109.465534°	39°58'40.481" 39.977911°	109°27'53.457" 109.464849°	2604' FSL 2144' FWL
NBU 1022-5K1CS	39°58'35.400" 39.976500°	109°27'46.469" 109.462908°	39°58'35.525" 39.976535°	109°27'44.006" 109.462224°	2102' FSL 2423' FEL	39°58'36.819" 39.976894°	109°27'55.669" 109.465463°	39°58'36.944" 39.976929°	109°27'53.205" 109.464779°	2246' FSL 2160' FWL
NBU 339	39°58'36.230" 39.976731°	109°27'45.282" 109.462578°	39°58'36.355" 39.976765°	109°27'42.819" 109.461894°	2186' FSL 2330' 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 1022-5J1BS	329.3'	567.8'	NBU 1022-5J1CS	-27.0'	577.1'	NBU 1022-5J4BS	-356.4'	585.3'	NBU 1022-5F4CS	736.7'	-754.2'
NBU 1022-5K1BS	495.0'	-743.3'	NBU 1022-5K1CS	143.7'	-716.3'						



BASIS OF BEARINGS IS THE EAST LINE OF THE SE $\frac{1}{4}$ OF SECTION 5, T10S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°08'41"W.

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

WELL PAD - NBU 1022-5J

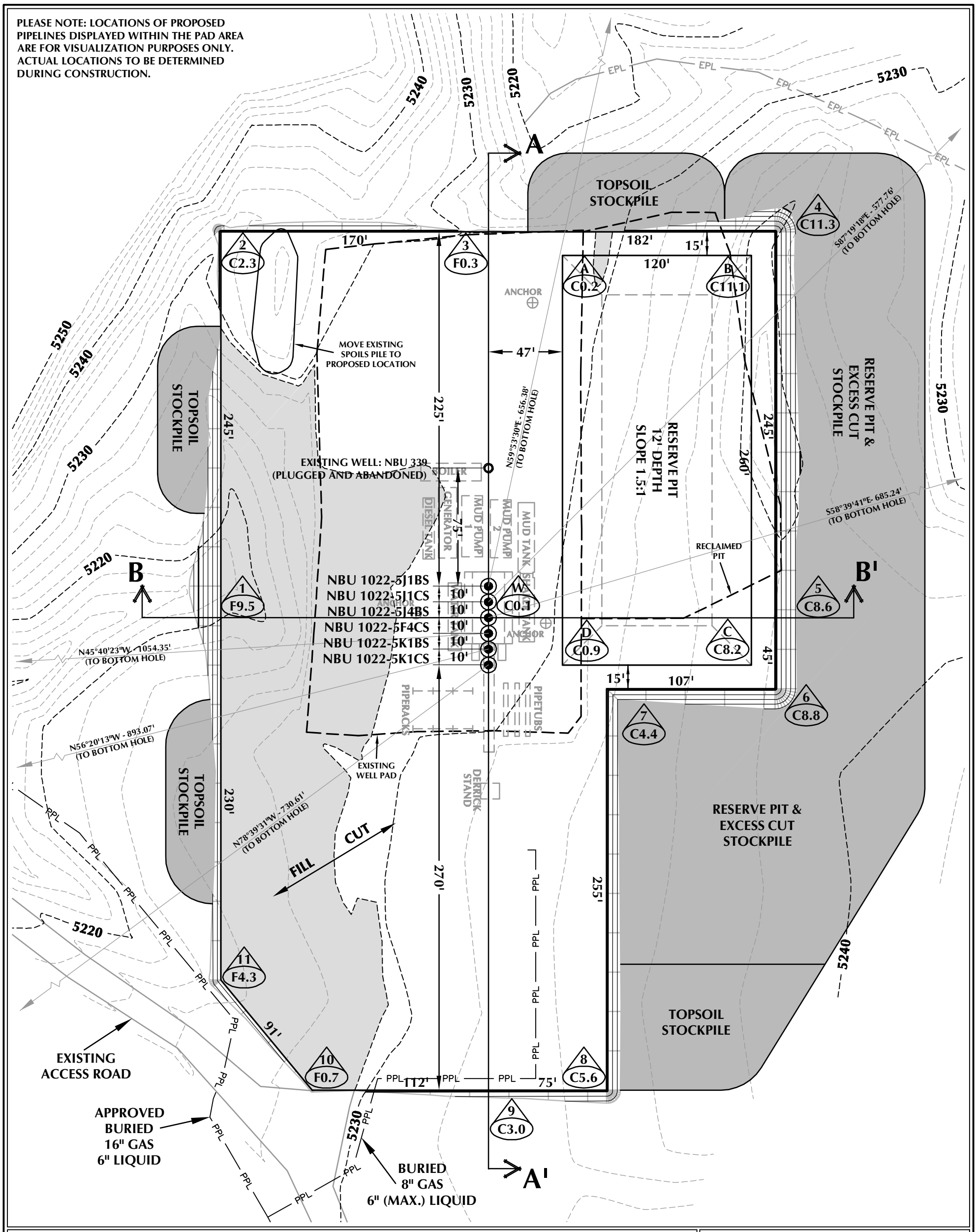
WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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: 8-8-12	SURVEYED BY: M.B.	SHEET NO: 7
DATE DRAWN: 8-17-12	DRAWN BY: T.J.R.	
SCALE: 1" = 60'	Date Last Revised:	7 OF 18

RECEIVED: February 04, 2013



WELL PAD - NBU 1022-5J DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5229.5'
FINISHED GRADE ELEVATION = 5229.4'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 4.04 ACRES
TOTAL DISTURBANCE AREA = 5.87 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 12,114 C.Y.
TOTAL FILL FOR WELL PAD = 5,263 C.Y.
TOPSOIL @ 6" DEPTH = 2,286 C.Y.
EXCESS MATERIAL = 6,851 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 11,020 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 42,290 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

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

WELL PAD - NBU 1022-5J

WELL PAD - LOCATION LAYOUT
NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

SCALE: 1"=60' | DATE: 9/4/12 | SHEET NO: 8
REVISED:
8 OF 18

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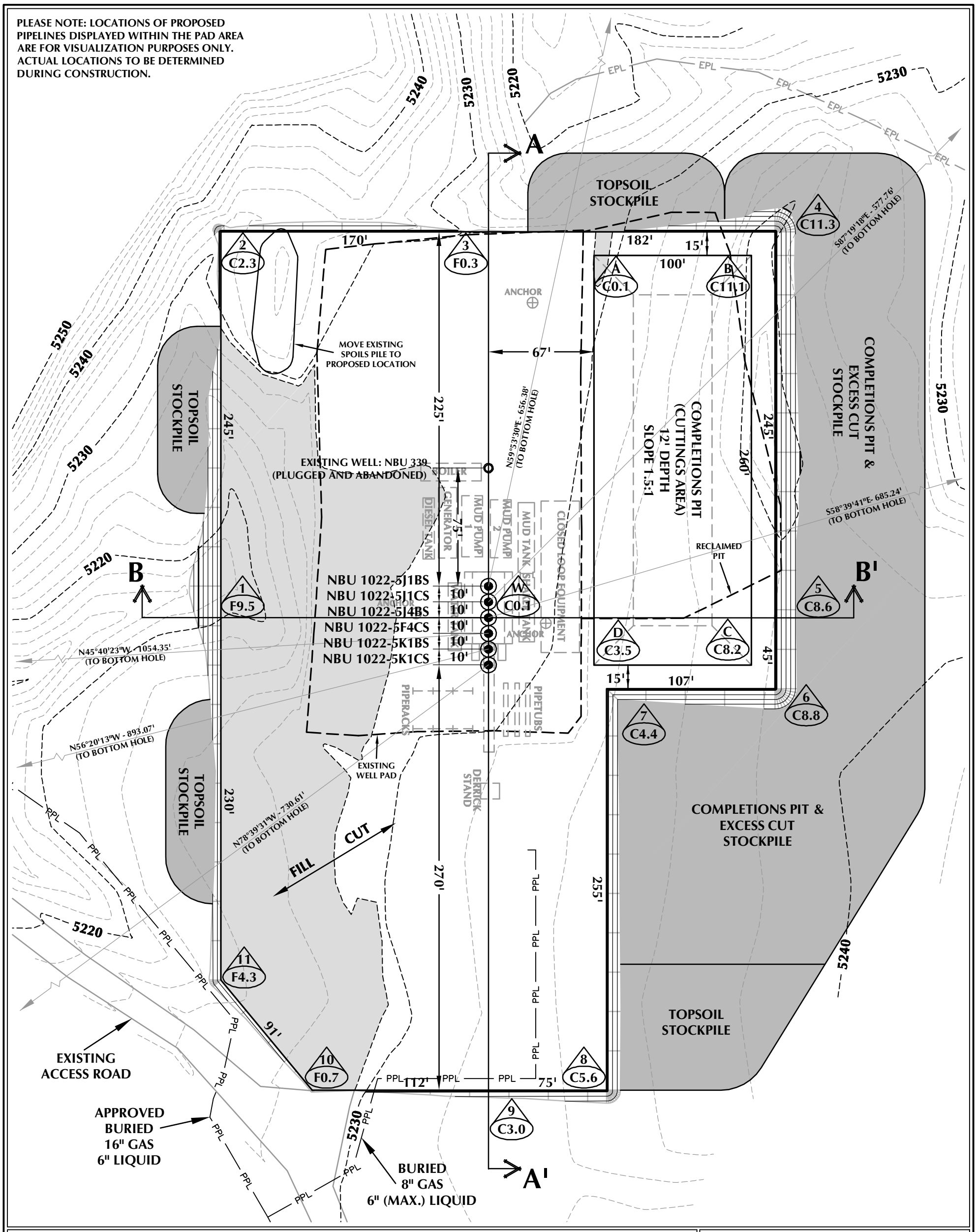

WELL PAD - NBU 1022-5J (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5229.5'
FINISHED GRADE ELEVATION = 5229.4'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 4.04 ACRES
TOTAL DISTURBANCE AREA = 5.87 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-5J

WELL PAD - LOCATION LAYOUT
NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 12,114 C.Y.
TOTAL FILL FOR WELL PAD = 5,263 C.Y.
TOPSOIL @ 6" DEPTH = 2,286 C.Y.
EXCESS MATERIAL = 6,851 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 8,870 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 33,770 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

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Fax 307-674-0182

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

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

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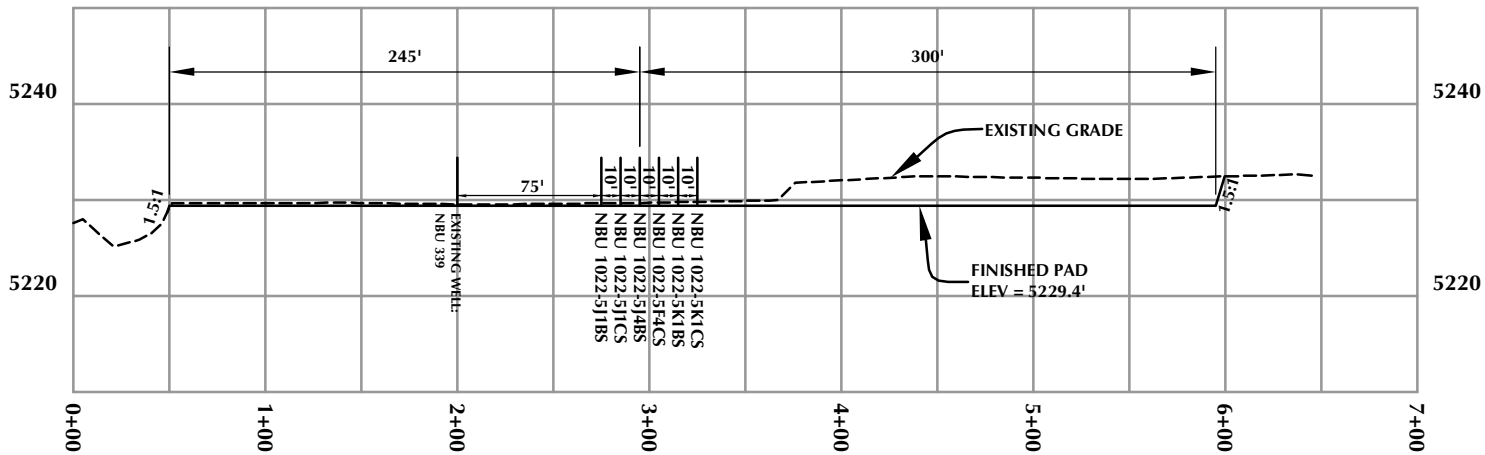
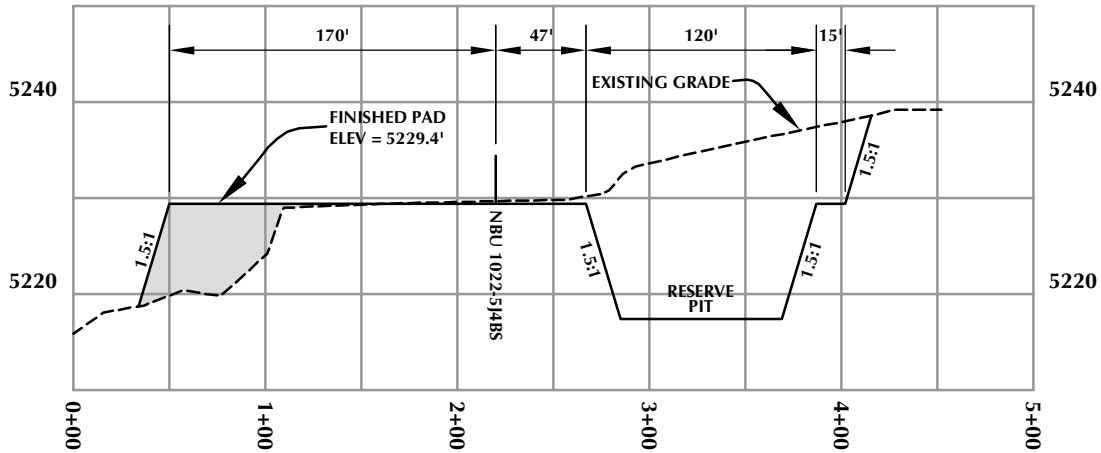


CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - NBU 1022-5J

WELL PAD - CROSS SECTIONS
NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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CONSULTING, LLC
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209 NORTH 300 WEST - VERNAL, UTAH 84078

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

Scale: 1"=100' | Date: 9/4/12 | SHEET NO: 9
REVISED:
9 OF 18

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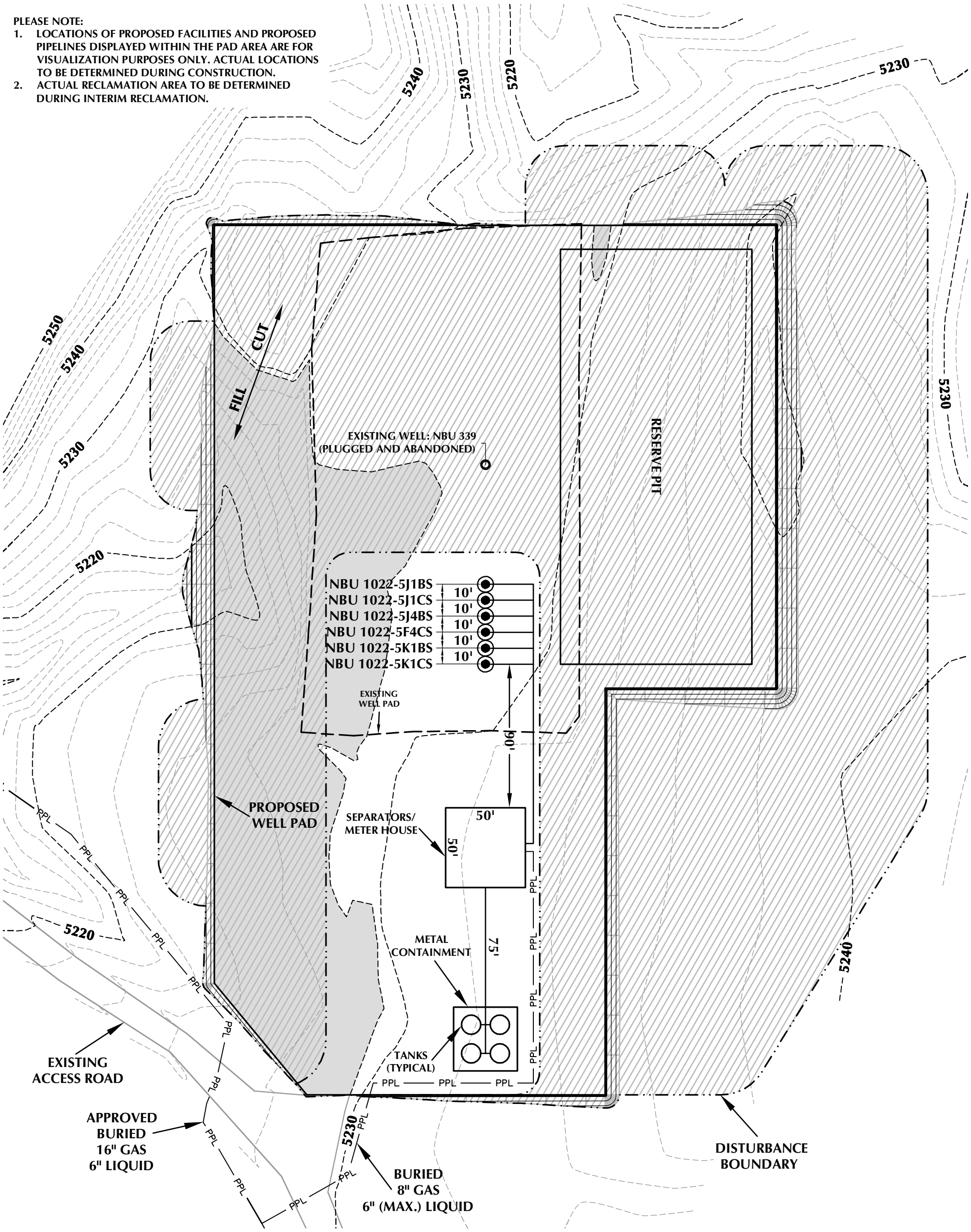
PLEASE NOTE:
1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.



WELL PAD - NBU 1022-5J DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.87 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 4.82 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.05 ACRES

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE
- RECLAMATION AREA

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

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

WELL PAD - NBU 1022-5J

WELL PAD - RECLAMATION LAYOUT
NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

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Sheridan, WY 82801
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ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 9/4/12 | SHEET NO: 10 10 OF 18
REVISED:

K:\ANADARKO\2012\2012_53_NBU_1022-5_FOCUS\DWGS\NBU 1022-5J\NBU 1022-5J.dwg, 9/6/2012 7:40:20 AM, kimberly

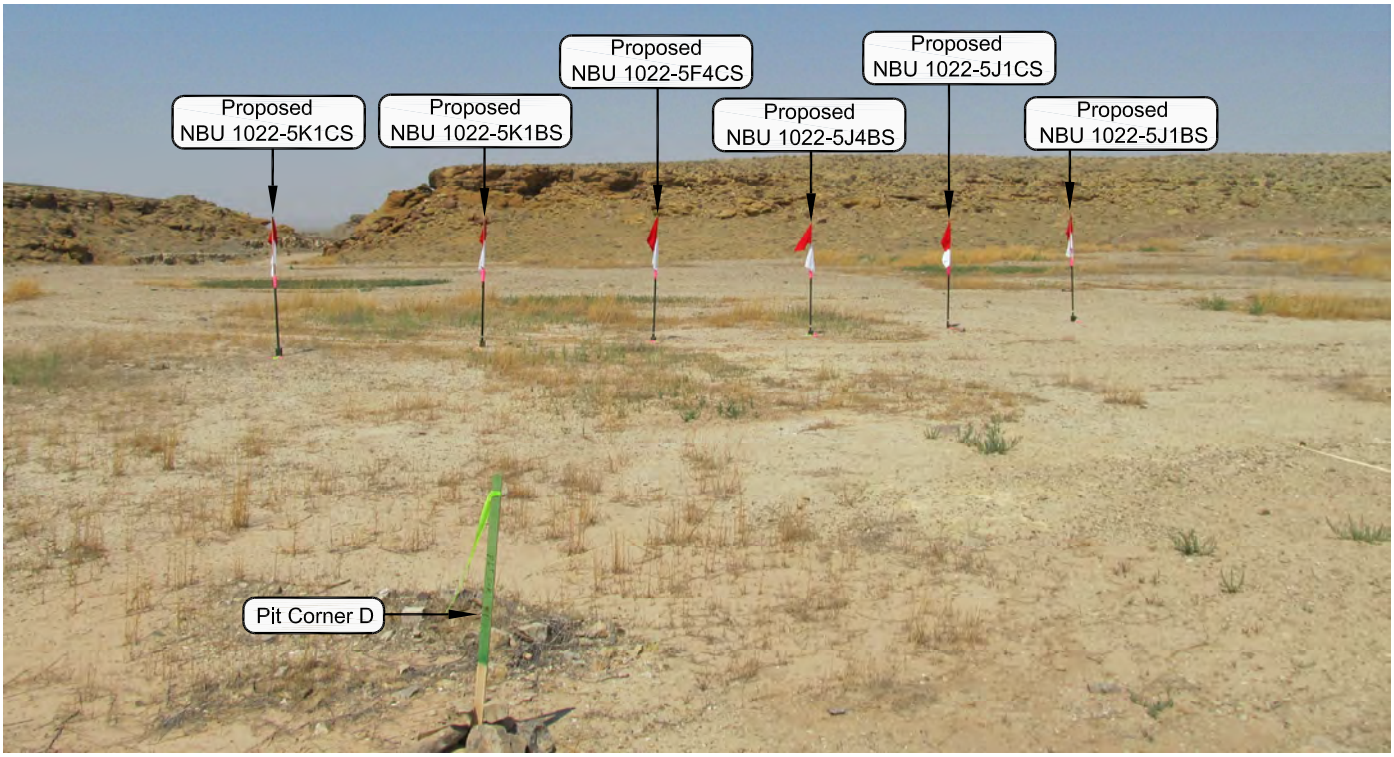

PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE **CAMERA ANGLE: NORTHWESTERLY**

PHOTO VIEW: FROM EXISTING ACCESS ROAD **CAMERA ANGLE: NORTHEASTERLY**

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

WELL PAD - NBU 1022-5J

LOCATION PHOTOS
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS LOCATED IN SECTION 5, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

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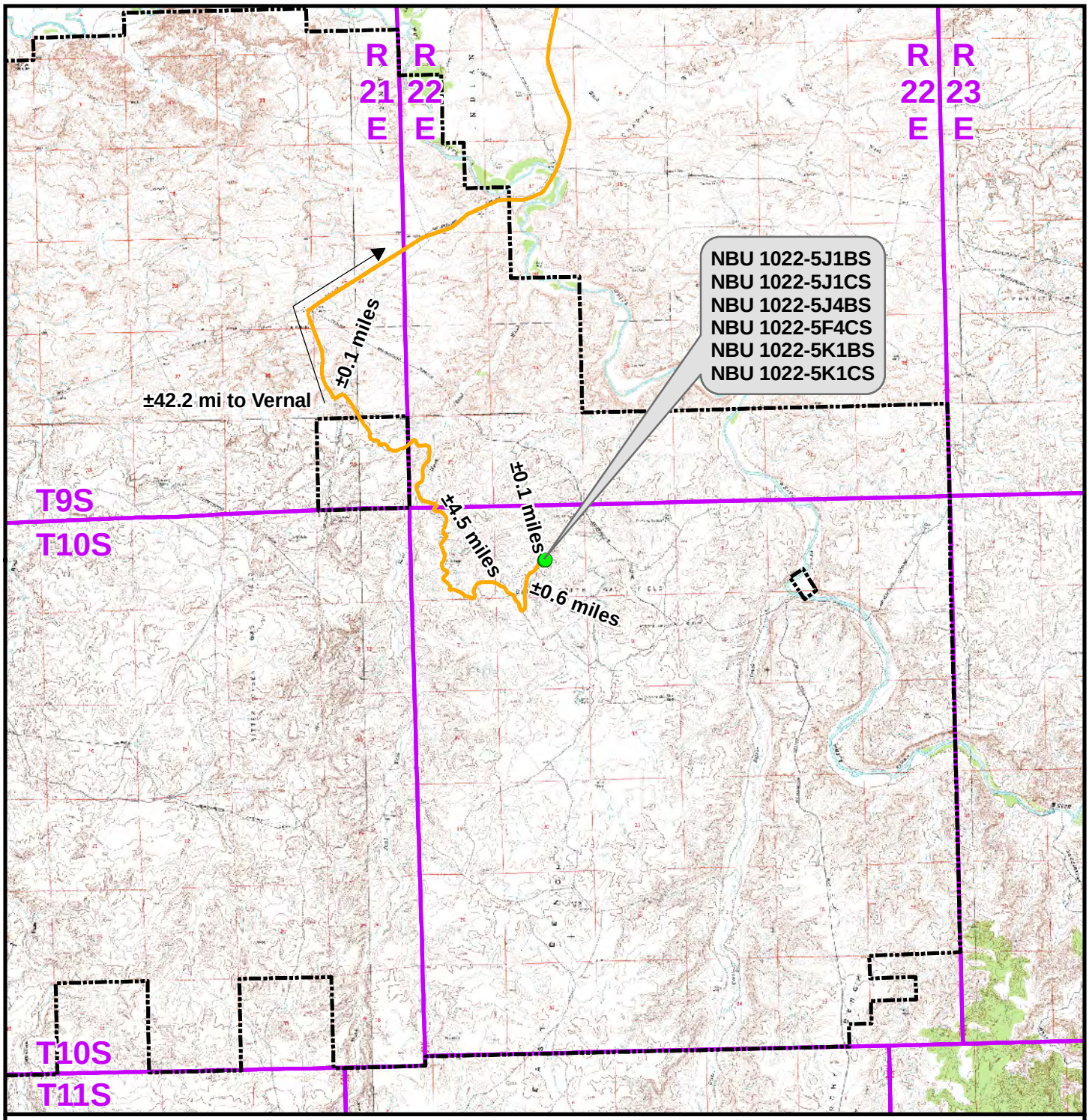
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 8-8-12	PHOTOS TAKEN BY: M.B.	SHEET NO:
DATE DRAWN: 8-17-12	DRAWN BY: T.J.R.	11
Date Last Revised:		11 OF 18

RECEIVED: February 04, 2013



Legend

Distance From Well Pad - NBU 1022-5J To Unit Boundary: ±8,410ft

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

WELL PAD - NBU 1022-5J

TOPO A
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
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

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

N

SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 4 Sept 2012	12 OF 18
REVISED:	DATE:	

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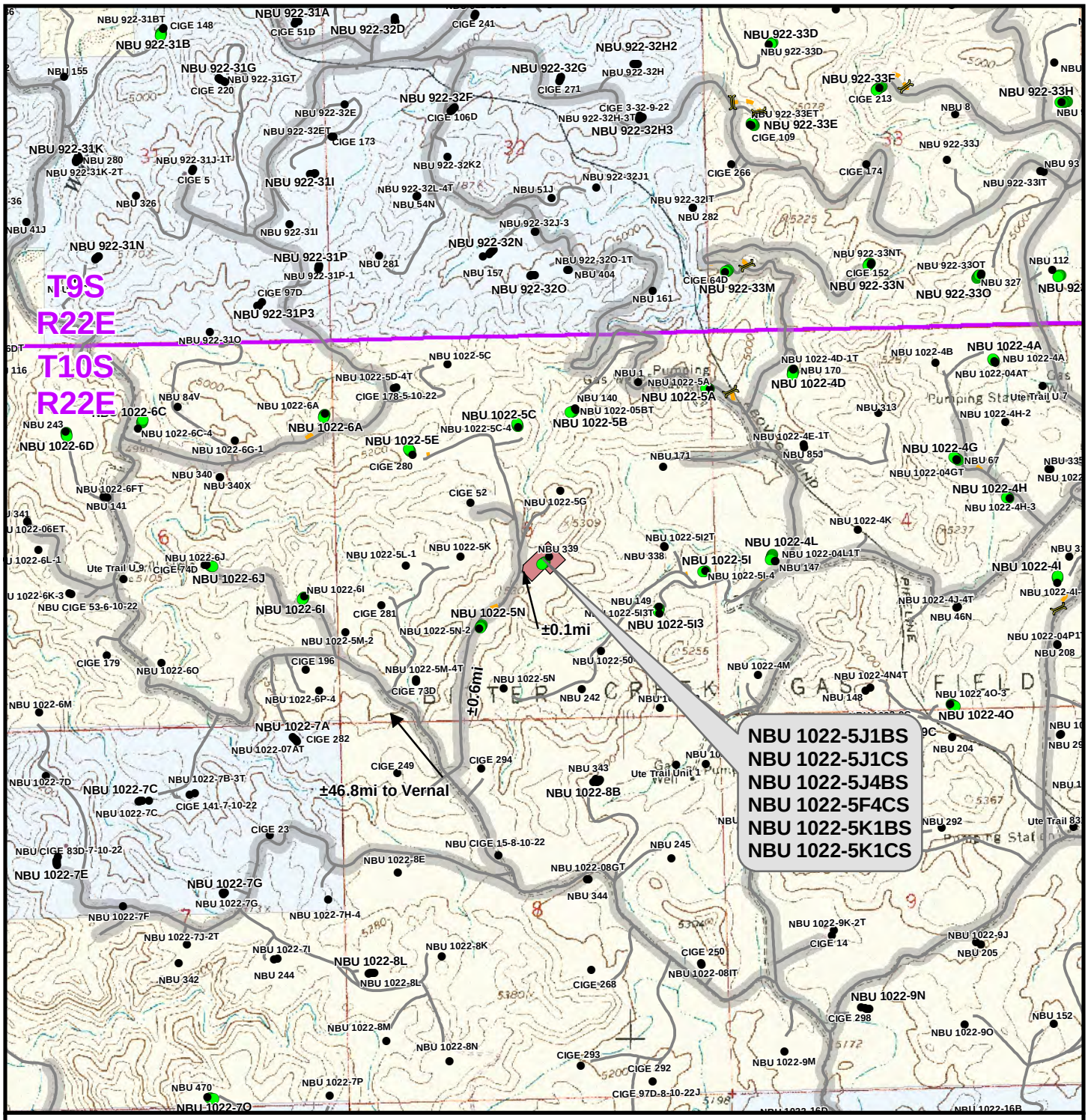
RECEIVED: February 04, 2013



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 Road Length: ±0ft

WELL PAD - NBU 1022-5J

TOPO B
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
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

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

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 29 Oct 2012	13 OF 18
REVISED:	DATE:	

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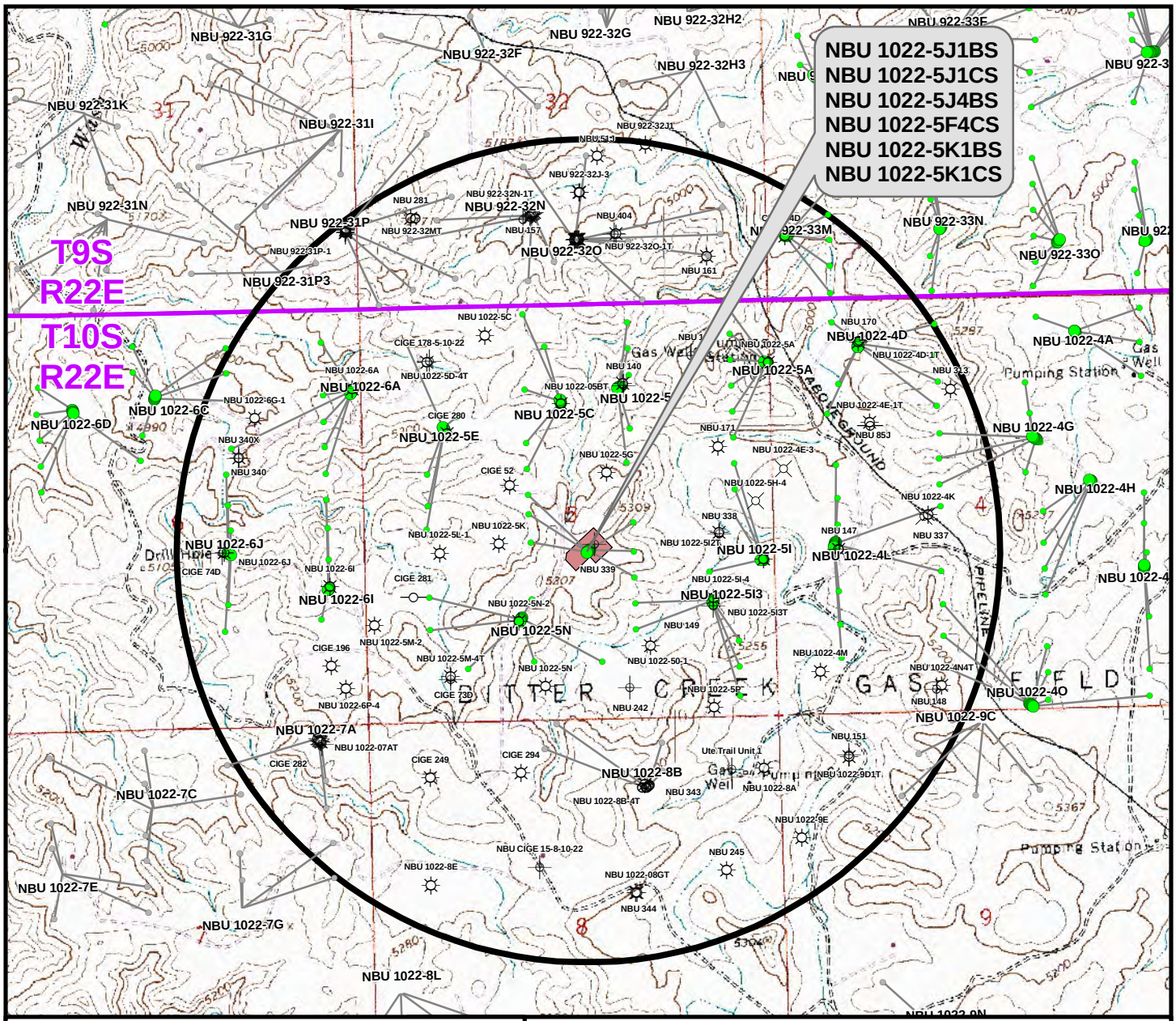

Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-5J1BS	NBU 339	583ft
NBU 1022-5J1CS	NBU 339	521ft
NBU 1022-5J4BS	NBU 339	665ft
NBU 1022-5F4CS	CIGE 52	268ft
NBU 1022-5K1BS	CIGE 52	446ft
NBU 1022-5K1CS	NBU 1022-5K	420ft

Legend

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

WELL PAD - NBU 1022-5J

TOPO C
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E S.L.B.&M., UINTAH COUNTY, UTAH

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1099 18th Street
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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 14
DRAWN: TL	DATE: 29 Oct 2012	14 OF 18
REVISED:	DATE:	

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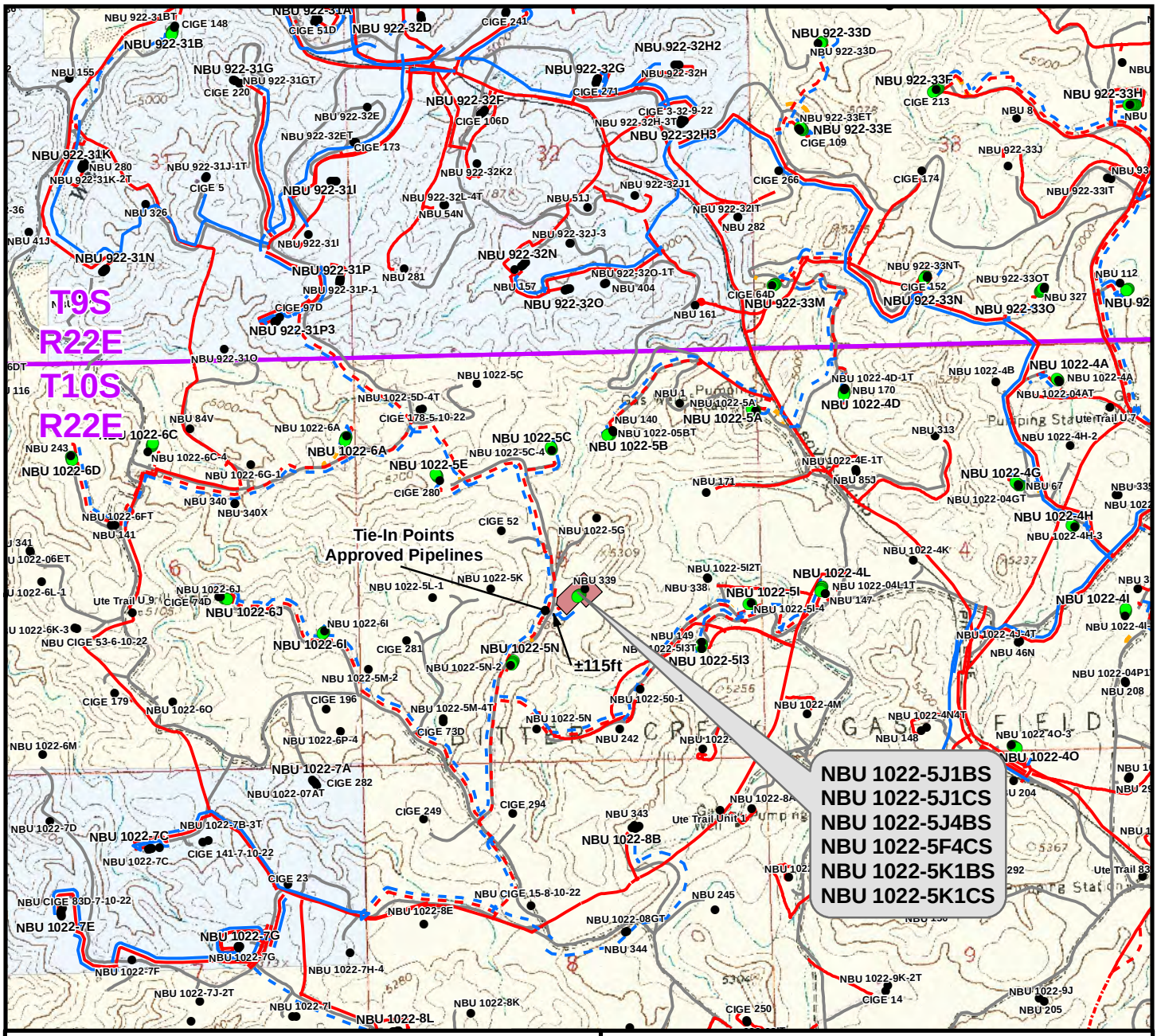
RECEIVED: February 04, 2013

API Well Number: 43047535640000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±260ft
Buried 6"(Max.) (Edge of Pad to Approved 6" Liquid Pipeline)	±115ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±375ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±260ft
Buried 8" (Edge of Pad to Approved 16" Gas Pipeline)	±115ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±375ft

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 1022-5J

TOPO D
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
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
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Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 15
DRAWN: TL	DATE: 29 Oct 2012	15 OF 18
REVISED:	DATE:	

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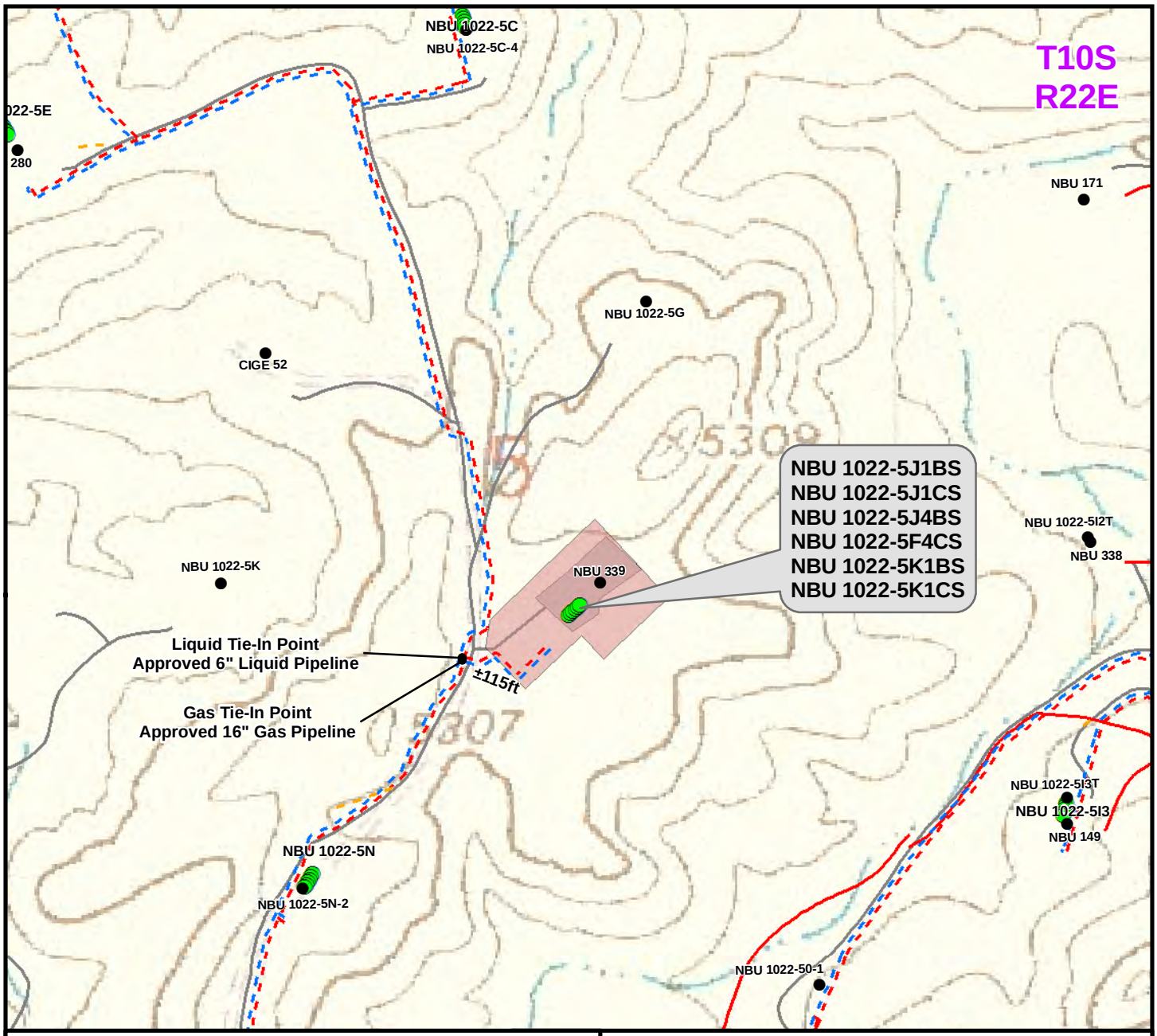
RECEIVED: February 04, 2013

API Well Number: 43047535640000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±260ft
Buried 6"(Max.) (Edge of Pad to Approved 6" Liquid Pipeline)	±115ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±375ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±260ft
Buried 8" (Edge of Pad to Approved 16" Gas Pipeline)	±115ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±375ft

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 1022-5J

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
LOCATED IN SECTION 5, T10S, R22E
S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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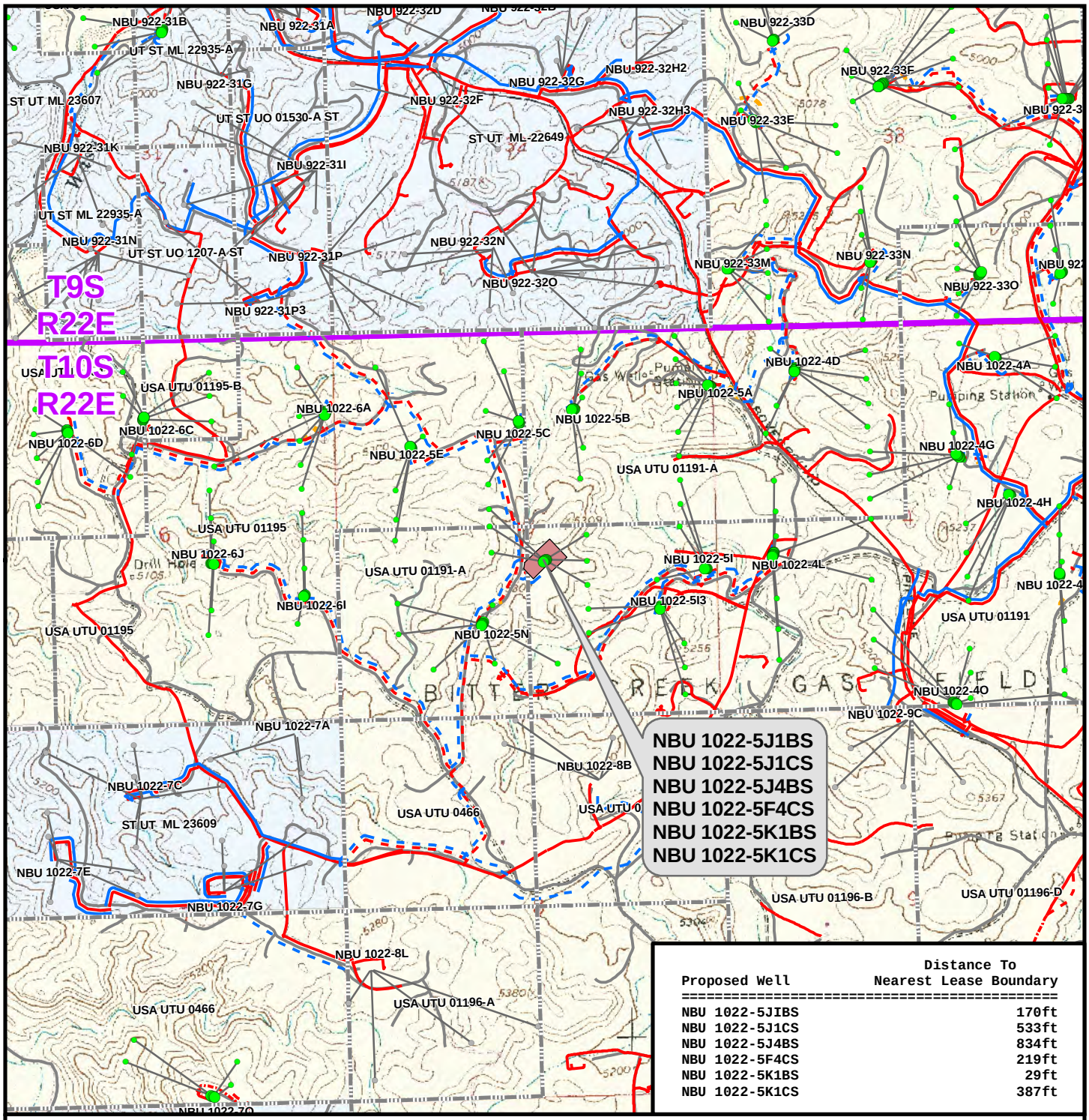
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO: 16
DRAWN: TL	DATE: 4 Sept 2012	16 OF 18
REVISED:	DATE:	

File: K:\ANADARKO\2012\2012_53_NBU_1022-5_FOCUS\GIS\Maps_ABCDE\NBU 1022-5J\NBU 1022-5J_D2.mxd, 9/5/2012 12:49:53 PM

RECEIVED: February 04, 2013



Proposed Well	Distance To Nearest Lease Boundary
NBU 1022-5JIBS	170ft
NBU 1022-5J1CS	533ft
NBU 1022-5J4BS	834ft
NBU 1022-5F4CS	219ft
NBU 1022-5K1BS	29ft
NBU 1022-5K1CS	387ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- 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 1022-5J

TOPO E
NBU 1022-5J1BS, NBU 1022-5J1CS, NBU 1022-5J4BS, NBU 1022-5F4CS, NBU 1022-5K1BS & NBU 1022-5K1CS
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

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 17
DRAWN: TL	DATE: 29 Oct 2012	17 OF 18
REVISED:	DATE:	

File: K:\ANADARKO\2012\2012_53_NBU_1022-5_FOCUS\GIS\Maps_ABCDE\NBU 1022-5J\NBU 1022-5J_E.mxd, 10/29/2012 6:34:59 PM

RECEIVED: February 04, 2013

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 1022-5J
WELLS - NBU 1022-5J1BS, NBU 1022-5J1CS,
NBU 1022-5J4BS, NBU 1022-5F4CS,
NBU 1022-5K1BS & NBU 1022-5K1CS
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 4.5 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 0.6 miles to a service road to the northeast. Exit right and proceed in a northeasterly direction along the service road approximately 0.1 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.4 miles in a southerly direction.

RECEIVED: February 04, 2013

API Well Number: 43047525640000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-5J PAD
Well: NBU 1022-5F4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Scientific Drilling

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.86°

Magnetic Field
Strength: 52169.1snT
Dip Angle: 65.82°
Date: 2012/12/19
Model: IGRF2010

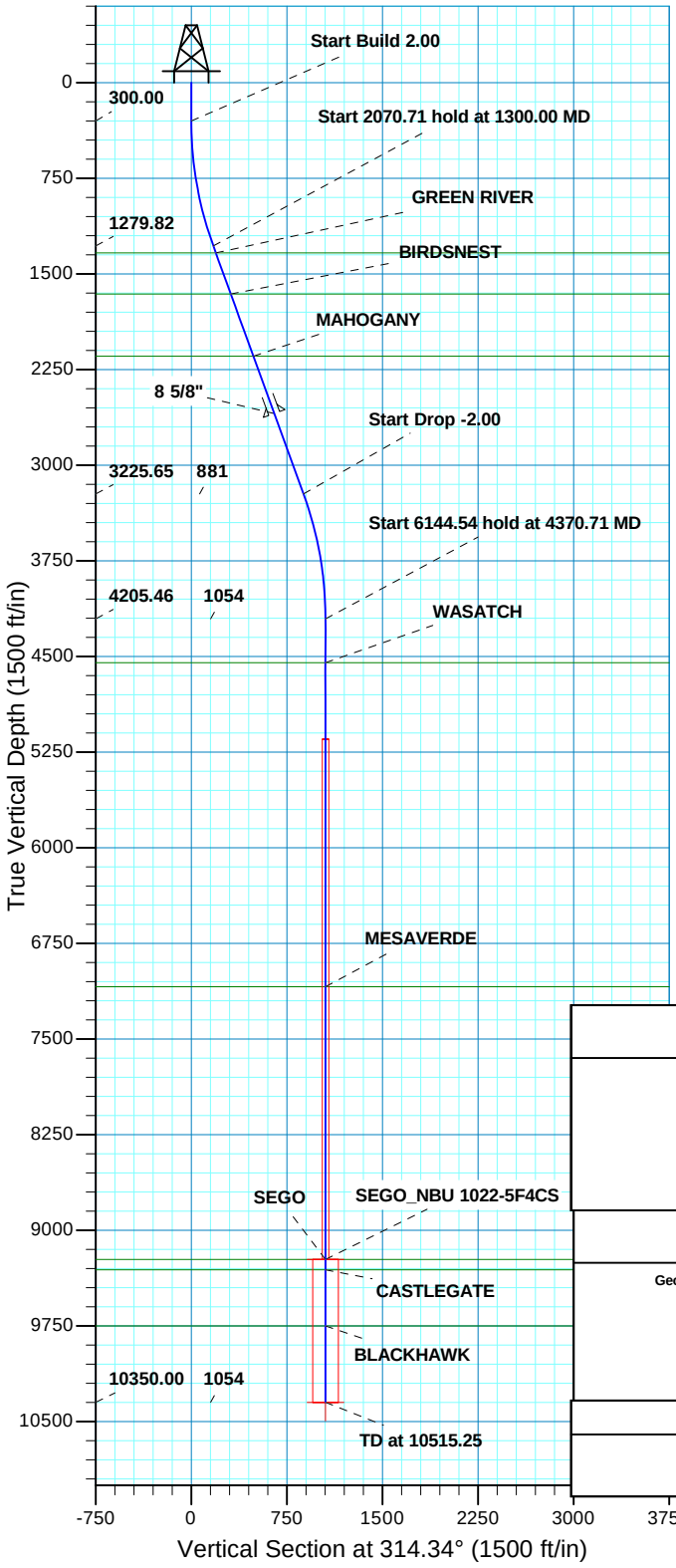
WELL DETAILS: NBU 1022-5F4CS

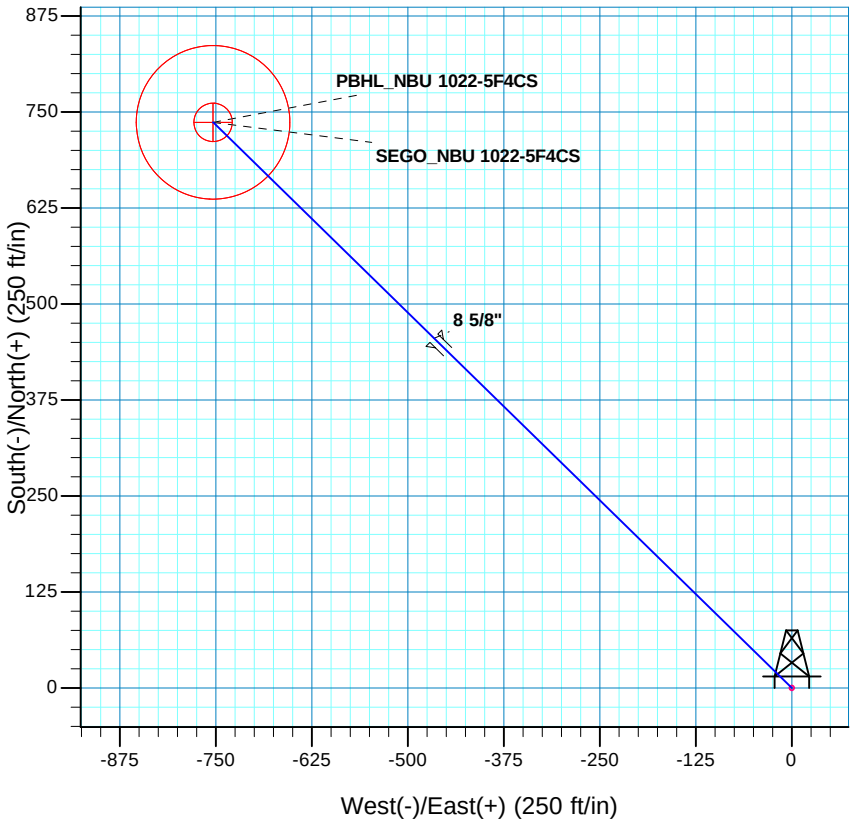
GL 5229 & KB 4 @ 5233.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14521228.55	2071254.51	39.9765717	-109.4621718

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	9228.00	736.45	-753.70	14521951.89	2070488.23	39.9785937	-109.4648616	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10350.00	736.45	-753.70	14521951.89	2070488.23	39.9785937	-109.4648616	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	314.34	1279.82	120.74	-123.57	2.00	314.34	172.77	
3370.71	20.00	314.34	3225.65	615.70	-630.13	0.00	0.00	880.99	
4370.71	0.00	0.00	4205.46	736.45	-753.70	2.00	180.00	1053.76	
10515.25	0.00	0.00	10350.00	736.45	-753.70	0.00	0.00	1053.76	PBHL_NBU 1022-5F4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 5 T10N R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1335.00	1358.73	GREEN RIVER
1658.00	1702.46	BIRDSNEST
2145.00	2220.71	MAHOGANY
4548.00	4713.25	WASATCH
7090.00	7255.25	MESAVERDE
9228.00	9393.25	SEGO
9309.00	9474.25	CASTLEGATE
9750.00	9915.25	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2595.00	2699.59	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-5F4CS/OH)

Created By: RobertScott Date: 9:05, December 27 2012

RECEIVED:

API Well Number: 43047535640000

Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 1022-5J PAD
NBU 1022-5F4CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

27 December, 2012

Anadarko Petroleum Corporation

RECEIVED: February 04, 2013

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Site:	NBU 1022-5J PAD	**North Reference:**	True
Well:	NBU 1022-5F4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 1022-5J PAD, SECTION 5 T10N R22E

Site Position:		**Northing:**	14,521,228.55 usft	**Latitude:**	39.9765717
From:	Lat/Long	**Easting:**	2,071,254.51 usft	**Longitude:**	-109.4621718
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.99 °

Well NBU 1022-5F4CS, 2115 FSL 2408 FEL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,521,228.55 usft	**Latitude:**	39.9765717
	+E/-W	0.00 ft	**Easting:**	2,071,254.51 usft	**Longitude:**	-109.4621718
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,229.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2012/12/19	10.86	65.82	52,169

Design PLAN #1 PRELIMINARY

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	314.34

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	314.34	1,279.82	120.74	-123.57	2.00	2.00	0.00	314.34	
3,370.71	20.00	314.34	3,225.65	615.70	-630.13	0.00	0.00	0.00	0.00	
4,370.71	0.00	0.00	4,205.46	736.45	-753.70	2.00	-2.00	0.00	180.00	
10,515.25	0.00	0.00	10,350.00	736.45	-753.70	0.00	0.00	0.00	0.00	PBHL_NBU 1022-5F4

RECEIVED: February 04, 2013

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Site:	NBU 1022-5J PAD	**North Reference:**	True
Well:	NBU 1022-5F4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	314.34	399.98	1.22	-1.25	1.75	2.00	2.00	0.00
500.00	4.00	314.34	499.84	4.88	-4.99	6.98	2.00	2.00	0.00
600.00	6.00	314.34	599.45	10.97	-11.22	15.69	2.00	2.00	0.00
700.00	8.00	314.34	698.70	19.48	-19.94	27.88	2.00	2.00	0.00
800.00	10.00	314.34	797.47	30.42	-31.13	43.52	2.00	2.00	0.00
900.00	12.00	314.34	895.62	43.75	-44.78	62.60	2.00	2.00	0.00
1,000.00	14.00	314.34	993.06	59.47	-60.86	85.10	2.00	2.00	0.00
1,100.00	16.00	314.34	1,089.64	77.56	-79.38	110.98	2.00	2.00	0.00
1,200.00	18.00	314.34	1,185.27	97.99	-100.29	140.21	2.00	2.00	0.00
1,300.00	20.00	314.34	1,279.82	120.74	-123.57	172.77	2.00	2.00	0.00
Start 2070.71 hold at 1300.00 MD									
1,358.73	20.00	314.34	1,335.00	134.78	-137.94	192.85	0.00	0.00	0.00
GREEN RIVER									
1,400.00	20.00	314.34	1,373.78	144.65	-148.03	206.97	0.00	0.00	0.00
1,500.00	20.00	314.34	1,467.75	168.55	-172.50	241.17	0.00	0.00	0.00
1,600.00	20.00	314.34	1,561.72	192.45	-196.96	275.37	0.00	0.00	0.00
1,700.00	20.00	314.34	1,655.69	216.35	-221.42	309.58	0.00	0.00	0.00
1,702.46	20.00	314.34	1,658.00	216.94	-222.02	310.42	0.00	0.00	0.00
BIRDSNEST									
1,800.00	20.00	314.34	1,749.66	240.26	-245.89	343.78	0.00	0.00	0.00
1,900.00	20.00	314.34	1,843.63	264.16	-270.35	377.98	0.00	0.00	0.00
2,000.00	20.00	314.34	1,937.60	288.06	-294.81	412.18	0.00	0.00	0.00
2,100.00	20.00	314.34	2,031.57	311.97	-319.27	446.38	0.00	0.00	0.00
2,200.00	20.00	314.34	2,125.54	335.87	-343.74	480.59	0.00	0.00	0.00
2,220.71	20.00	314.34	2,145.00	340.82	-348.80	487.67	0.00	0.00	0.00
MAHOGANY									
2,300.00	20.00	314.34	2,219.51	359.77	-368.20	514.79	0.00	0.00	0.00
2,400.00	20.00	314.34	2,313.48	383.67	-392.66	548.99	0.00	0.00	0.00
2,500.00	20.00	314.34	2,407.45	407.58	-417.13	583.19	0.00	0.00	0.00
2,600.00	20.00	314.34	2,501.42	431.48	-441.59	617.39	0.00	0.00	0.00
2,699.59	20.00	314.34	2,595.00	455.29	-465.95	651.46	0.00	0.00	0.00
8 5/8"									
2,700.00	20.00	314.34	2,595.39	455.38	-466.05	651.60	0.00	0.00	0.00
2,800.00	20.00	314.34	2,689.35	479.29	-490.51	685.80	0.00	0.00	0.00
2,900.00	20.00	314.34	2,783.32	503.19	-514.98	720.00	0.00	0.00	0.00
3,000.00	20.00	314.34	2,877.29	527.09	-539.44	754.20	0.00	0.00	0.00
3,100.00	20.00	314.34	2,971.26	551.00	-563.90	788.40	0.00	0.00	0.00
3,200.00	20.00	314.34	3,065.23	574.90	-588.36	822.61	0.00	0.00	0.00
3,300.00	20.00	314.34	3,159.20	598.80	-612.83	856.81	0.00	0.00	0.00
3,370.71	20.00	314.34	3,225.65	615.70	-630.13	880.99	0.00	0.00	0.00
Start Drop -2.00									
3,400.00	19.41	314.34	3,253.22	622.61	-637.19	890.87	2.00	-2.00	0.00
3,500.00	17.41	314.34	3,348.10	644.68	-659.78	922.46	2.00	-2.00	0.00
3,600.00	15.41	314.34	3,444.02	664.43	-679.99	950.71	2.00	-2.00	0.00
3,700.00	13.41	314.34	3,540.86	681.82	-697.80	975.60	2.00	-2.00	0.00
3,800.00	11.41	314.34	3,638.52	696.85	-713.17	997.10	2.00	-2.00	0.00
3,900.00	9.41	314.34	3,736.87	709.48	-726.10	1,015.18	2.00	-2.00	0.00
4,000.00	7.41	314.34	3,835.79	719.71	-736.57	1,029.81	2.00	-2.00	0.00

RECEIVED: February 04, 2013

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Site:	NBU 1022-5J PAD	**North Reference:**	True
Well:	NBU 1022-5F4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
4,100.00	5.41	314.34	3,935.15	727.51	-744.56	1,040.98	2.00	-2.00	0.00
4,200.00	3.41	314.34	4,034.85	732.89	-750.06	1,048.68	2.00	-2.00	0.00
4,300.00	1.41	314.34	4,134.76	735.84	-753.07	1,052.89	2.00	-2.00	0.00
4,370.71	0.00	0.00	4,205.46	736.45	-753.70	1,053.76	2.00	-2.00	0.00
Start 6144.54 hold at 4370.71 MD									
4,400.00	0.00	0.00	4,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
4,500.00	0.00	0.00	4,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
4,600.00	0.00	0.00	4,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
4,700.00	0.00	0.00	4,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
4,713.25	0.00	0.00	4,548.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
WASATCH									
4,800.00	0.00	0.00	4,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
4,900.00	0.00	0.00	4,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,000.00	0.00	0.00	4,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,100.00	0.00	0.00	4,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,200.00	0.00	0.00	5,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,300.00	0.00	0.00	5,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,400.00	0.00	0.00	5,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,500.00	0.00	0.00	5,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,600.00	0.00	0.00	5,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,700.00	0.00	0.00	5,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,800.00	0.00	0.00	5,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
5,900.00	0.00	0.00	5,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,000.00	0.00	0.00	5,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,100.00	0.00	0.00	5,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,200.00	0.00	0.00	6,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,300.00	0.00	0.00	6,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,400.00	0.00	0.00	6,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,500.00	0.00	0.00	6,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,600.00	0.00	0.00	6,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,700.00	0.00	0.00	6,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,800.00	0.00	0.00	6,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
6,900.00	0.00	0.00	6,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,000.00	0.00	0.00	6,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,100.00	0.00	0.00	6,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,200.00	0.00	0.00	7,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,255.25	0.00	0.00	7,090.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
MESAVERDE									
7,300.00	0.00	0.00	7,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,400.00	0.00	0.00	7,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,500.00	0.00	0.00	7,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,600.00	0.00	0.00	7,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,700.00	0.00	0.00	7,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,800.00	0.00	0.00	7,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
7,900.00	0.00	0.00	7,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,000.00	0.00	0.00	7,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,100.00	0.00	0.00	7,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,200.00	0.00	0.00	8,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,300.00	0.00	0.00	8,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,400.00	0.00	0.00	8,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,500.00	0.00	0.00	8,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,600.00	0.00	0.00	8,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,700.00	0.00	0.00	8,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00

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Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Site:	NBU 1022-5J PAD	**North Reference:**	True
Well:	NBU 1022-5F4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
8,900.00	0.00	0.00	8,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,000.00	0.00	0.00	8,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,100.00	0.00	0.00	8,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,200.00	0.00	0.00	9,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,300.00	0.00	0.00	9,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,393.25	0.00	0.00	9,228.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
SEGO - SEGO_NBU 1022-5F4CS									
9,400.00	0.00	0.00	9,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,474.25	0.00	0.00	9,309.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
CASTLEGATE									
9,500.00	0.00	0.00	9,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,600.00	0.00	0.00	9,434.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,700.00	0.00	0.00	9,534.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,800.00	0.00	0.00	9,634.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,900.00	0.00	0.00	9,734.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
9,915.25	0.00	0.00	9,750.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
BLACKHAWK									
10,000.00	0.00	0.00	9,834.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,100.00	0.00	0.00	9,934.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,200.00	0.00	0.00	10,034.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,300.00	0.00	0.00	10,134.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,400.00	0.00	0.00	10,234.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,500.00	0.00	0.00	10,334.75	736.45	-753.70	1,053.76	0.00	0.00	0.00
10,515.25	0.00	0.00	10,350.00	736.45	-753.70	1,053.76	0.00	0.00	0.00
TD at 10515.25 - PBHL_NBU 1022-5F4CS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 1022-5F4C - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,228.00	736.45	-753.70	14,521,951.89	2,070,488.22	39.9785937	-109.4648616
PBHL_NBU 1022-5F4C - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,350.00	736.45	-753.70	14,521,951.89	2,070,488.22	39.9785937	-109.4648616

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,699.59	2,595.00	8 5/8"	8.625	11.000

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Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5229 & KB 4 @ 5233.00ft (ASSUMED)
Site:	NBU 1022-5J PAD	**North Reference:**	True
Well:	NBU 1022-5F4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,358.73	1,331.00	GREEN RIVER			
1,702.46	1,654.00	BIRDSNEST			
2,220.71	2,141.00	MAHOGANY			
4,713.25	4,544.00	WASATCH			
7,255.25	7,086.00	MESAVERDE			
9,393.25	9,224.00	SEGO			
9,474.25	9,305.00	CASTLEGATE			
9,915.25	9,746.00	BLACKHAWK			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	120.74	-123.57	Start 2070.71 hold at 1300.00 MD
3,370.71	3,225.65	615.70	-630.13	Start Drop -2.00
4,370.71	4,205.46	736.45	-753.70	Start 6144.54 hold at 4370.71 MD
10,515.25	10,350.00	736.45	-753.70	TD at 10515.25

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

NBU 1022-5J PAD

API #	NBU 1022-5F4CS		
Surface:	2115 FSL / 2408 FEL	NWSE	Lot
BHL:	2439 FNL / 2143 FWL	SENW	Lot

API #	NBU 1022-5J1BS		
Surface:	2136 FSL / 2386 FEL	NWSE	Lot
BHL:	2464 FSL / 1817 FEL	NWSE	Lot

API #	NBU 1022-5J1CS		
Surface:	2129 FSL / 2393 FEL	NWSE	Lot
BHL:	2101 FSL / 1816 FEL	NWSE	Lot

API #	NBU 1022-5J4BS		
Surface:	2122 FSL / 2400 FEL	NWSE	Lot
BHL:	1765 FSL / 1816 FEL	NWSE	Lot

API #	NBU 1022-5K1BS		
Surface:	2109 FSL / 2415 FEL	NWSE	Lot
BHL:	2604 FSL / 2144 FWL	NESW	Lot

API #	NBU 1022-5K1CS		
Surface:	2102 FSL / 2423 FEL	NWSE	Lot
BHL:	2246 FSL / 2160 FWL	NESW	Lot

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.

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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"

No new access road is proposed. Please refer to Topo Map B.

C. Location of Existing Wells:

Please refer to Topo C for exiting 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 339, which is a plugged and abandoned gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on December 12, 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 ±375' and the individual segments are broken up as follows:

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

±260' (0.05 miles) – Section 5 T10S R22E (NW/4 SE/4) – On-lease UTU01191, 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.

±115' (0.02 miles) – Section 5 T10S R22E (NE/4 SW/4) – On-lease UTU01191-A, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad traveling west to tie-in to the approved 16" gas pipeline in the NE/4 SW/4. Please refer to Exhibit A, Line 7.

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 ±375' and the individual segments are broken up as follows:

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

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±260' (0.05 miles) – Section 5 T10S R22E (NW/4 SE/4) – On-lease UTU01191, 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.

±115' (0.02 miles) – Section 5 T10S R22E (NE/4 SW/4) – On-lease UTU01191-A, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad traveling west to tie-in to the approved 6" liquid pipeline in the NE/4 SW/4. Please refer to Exhibit B, Line 7.

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.

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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.

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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.

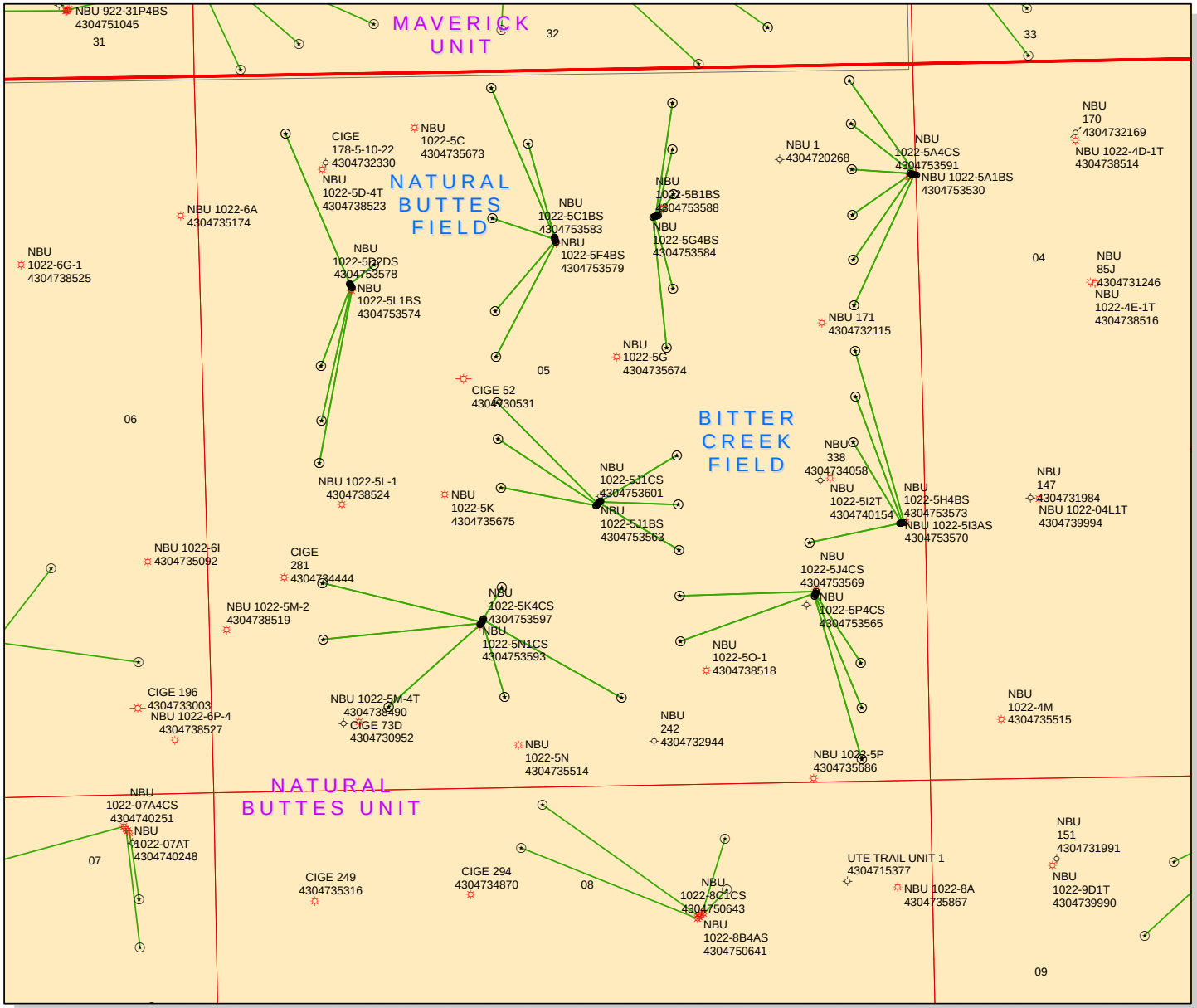
Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

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 18, 2012
Date

API Well Number: 43047535640000



API Number: 4304753564

Well Name: NBU 1022-5F4CS

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

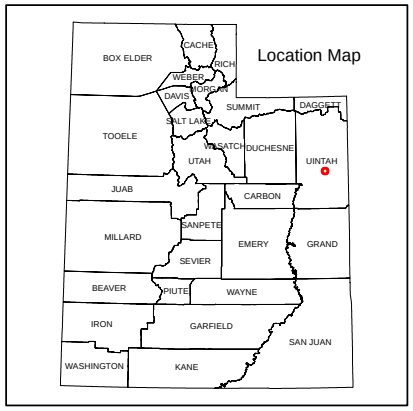
STATUS

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

Fields

STATUS

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED



N

950 475 0 950 Feet

1:9,123

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

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
(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

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API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-5J PAD

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

NBU 1022-5I3 PAD

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

NBU 1022-5I PAD

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

NBU 1022-5E PAD

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

NBU 1022-5C Pad

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

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API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-5B PAD

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

NBU 1022-5N PAD

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

NBU 921-21B PAD

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

NBU 921-21C PAD

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

RECEIVED: February 26, 2013

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-21D PAD

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

NBU 921-21G PAD

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

NBU 921-21F PAD

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 -07'00'

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

RECEIVED: February 26, 2013

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

RECEIVED: February 26, 2013

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 2/6/2013
API NO. ASSIGNED: 43047535640000
WELL NAME: NBU 1022-5F4CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
PHONE NUMBER: 720 929-6086
CONTACT: Gina Becker

PROPOSED LOCATION: NWSE 05 100S 220E
Permit Tech Review: ✔

SURFACE: 2115 FSL 2408 FEL
Engineering Review: ✔

BOTTOM: 2439 FNL 2143 FWL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 39.97645
LONGITUDE: -109.46286
UTM SURF EASTINGS: 631257.00
NORTHINGS: 4426275.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 1 - Federal
LEASE NUMBER: UTU-01195
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**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

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

Board Cause No: Cause 173-14
Effective Date: 12/2/1999
Siting: Suspends General Siting

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason

RECEIVED: March 12, 2013

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 1022-5F4CS
API Well Number: 43047535640000
Lease Number: UTU-01195
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

Form 3160-3
(August 2007)

RECEIVED
JAN 08 2013
BLM

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU01195

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
UTU63047A

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.
NBU 1022-5F4CS

2. Name of Operator
KERR-MCGEE OIL & GAS ONSHORE
Contact: GINA T BECKER
Email: GINA.BECKER@ANADARKO.COM

9. API Well No.
43-047-53564

3a. Address
P.O. BOX 173779
DENVER, CO 80202-3779

3b. Phone No. (include area code)
Ph: 720-929-6086
Fx: 720-929-7086

10. Field and Pool, or Exploratory
NATURAL BUTTES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NWSE 2115FSL 2408FEL 39.976537 N Lat, 109.462856 W Lon

At proposed prod. zone SENW 2439FNL 2143FWL 39.978559 N Lat, 109.465546 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 5 T10S R22E Mer SLB

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 47 MILES SOUTHEAST OF VERNAL, UTAH

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
219

16. No. of Acres in Lease
577.75

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
268

19. Proposed Depth
10515 MD
10350 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
5229 GL

22. Approximate date work will start
06/01/2012

23. Estimated duration
60-90 DAYS

RECEIVED
JUN 21 2013
DIV. OF OIL, GAS & MINING

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. 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
01/02/2013

Title
REGULATORY ANALYST II

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
JUN 18 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 #175385 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

**** 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 Oil & Gas Onshore, LP**	**Location:**	**NWSE, Sec. 5, T10S, R22E**
Well No:	**NBU 1022-5F4CS**	**Lease No:**	**UTU-01195**
API No:	**43-047-53564**	**Agreement:**	**Natural Butte**

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: blm_ut_vn_opreport@blm.gov
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_x 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_x 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 devises 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 will be reported as quickly as possible to the BLM and affected livestock operators. Operators will develop and employ prevention measures to avoid damaging fences, gates, and cattle guards, including upgrading cattle guard 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 will be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence will be braced and a cattle guard and gate installed per BLM guidance.

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 Agreement 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 in CD (compact disc) format to the Vernal BLM Field Office. 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.

- 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.

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

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

PHONE NUMBER: 720 929-6515 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ✓ SPUD REPORT — Date of Spud: 9/26/2013
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Spud well 09/26/2013 @ 08:00. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix.
Anticipated surface spud date and surface casing cement 12/02/2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 27, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	9/27/2013

RECEIVED: Sep. 27, 2013

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

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

PHONE NUMBER: 720 929-6582

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 1/2/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Drilled to 2,770 ft. TD in Quarter 4 of 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 03, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst

SIGNATURE	DATE
N/A	1/2/2014

RECEIVED: Jan. 02, 2014

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

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

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 4/2/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No actitivy for Quarter 1 of 2014. Well Drilled to 2,770 ft.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
April 02, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst

SIGNATURE	DATE
N/A	4/2/2014

RECEIVED: Apr. 02, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

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

PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/24/2014	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Drilled to 9,440 ft. in Quarter 2 of 2014. Thank you.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
June 25, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst
SIGNATURE N/A		**DATE** 6/24/2014

RECEIVED: Jun. 24, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6100 EXT

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ✓ DRILLING REPORT — Report Date: 9/12/2014

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Started completing the well. Well TD at 9,440 ft. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 12, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Kay E. Kelly	720 929 6582	Regulatory Analyst

SIGNATURE	DATE
N/A	9/12/2014

RECEIVED: Sep. 12, 2014

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-5F4CS

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

9. API NUMBER: 43047535640000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6100 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2115 FSL 2408 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 12/17/2014
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

The NBU 1022-5F4CS was placed on production 12/17/2014 after a new well completion. Producing from the MESAVERDE.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
December 19, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Doreen Green	435 781-9758	Regulatory Analyst II

SIGNATURE	DATE
N/A	12/18/2014

RECEIVED: Dec. 18, 2014

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU01195

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. UTU63047A

2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE LP
Contact: DOREEN GREEN
E-Mail: Doreen.Green@anadarko.com

8. Lease Name and Well No. NBU 1022-5F4CS

3. Address P.O. BOX 173779 DENVER, CO 82017
3a. Phone No. (include area code) Ph: 720-929-6000

9. API Well No. 43-047-53564

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface NWSE 2115FSL 2408FEL 39.976537 N Lat, 109.462856 W Lon
At top prod interval reported below SENW 2440FNL 2122FWL
At total depth SENW 2443FNL 2135FWL

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 5 T10S R22E Mer SLB

12. County or Parish UINTAH
13. State UT

14. Date Spudded 09/26/2013
15. Date T.D. Reached 04/26/2014
16. Date Completed ☐ D & A ☒ Ready to Prod. 12/17/2014
17. Elevations (DF, KB, RT, GL)* 5253 KB

18. Total Depth: MD 9440 TVD 9281
19. Plug Back T.D.: MD 9373 TVD 9214
20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
RADIAL CEMENT BOND GAMMA RAY CCL TEMP

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J55	28.0	24	2763		900		0	
7.875	4.500 I-80	11.6	24	9421		1755		360	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8854							

25. Producing Intervals

Formation	Top	Bottom
A) MESAVERDE	7091	9269
B)		
C)		
D)		

26. Perforation Record

Perforated Interval	Size	No. Holes	Perf. Status
7091 TO 9269	0.410	216	OPEN

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
7091 TO 9269	PUMP 12,996 BBLS SLICKWATER,54 BBLS HCL ACID (12.5%-18%), 282,105 LBS 30/50 MESH SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
12/17/2014	12/30/2014	24	→	5.0	2028.0	565.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
20/64	1510	2253.0	→	5	2028	565		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #286663 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

RECEIVED: Dec. 31, 2014

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas*(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	1373
				BIRD'S NEST	1740
				MAHOGANY	2256
				WASATCH	4739
				MESAVERDE	7088

32. Additional remarks (include plugging procedure):
Attached Drilling and Operations Summary Reports, Final Survey, and Perf Report.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #286663 Verified by the BLM Well Information System.
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal

Name *(please print)* DOREEN GREEN Title REGULATORY ANALYST II

Signature (Electronic Submission) Date 12/31/2014

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 fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
11/12/2013	3:30 - 4:00	0.50	MIRU	01	C	P	60	REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD
	4:00 - 5:00	1.00	MIRU	01	C	P	60	SKID RIG 20' TO NBU 1022-5F4CS, RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS,
	5:00 - 5:30	0.50	MIRU	01	C	P	60	PICK UP NOV 8", 1.83 DEGREE BENT MOTOR (RUN # 2) .17 REV/GAL PICK UP BAKER 12 1/4" DRILL BIT .
	5:30 - 7:00	1.50	DRLSUR	02	B	P	60	SPUD @ 11/12/2013 05:30. DRILL 12.25" HOLE 40' TO 210' (170' @ 113 FPH). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.3# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	7:00 - 7:30	0.50	DRLSUR	06	A	P	230	CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY.
	7:30 - 8:30	1.00	DRLSUR	06	A	P	230	BREAK 12 1/4" BIT. MAKE UP BAKER 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL,
	8:30 - 9:00	0.50	DRLSUR	06	A	P	230	TOOL, TRIP IN HOLE.
	9:00 - 12:00	3.00	DRLSUR	02	B	P	230	DRILL 11" SURFACE HOLE FROM 210' TO 620' (410' @ 136 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 930/640. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 54/47/50 K. DRAG 4 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 2.7' HIGH / 0.6' LEFT OF THE LINE WITH 35' OF SLIDE @ 4.69%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	12:00 - 18:00	6.00	DRLSUR	02	B	P	640	DRILL 11" SURFACE HOLE FROM 620' TO 1,060' (440' @ 73 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1100/900. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 70/50/60 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3' HIGH / 2.5' RIGHT OF THE LINE WITH 105' OF SLIDE @ 15%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLSUR	02	B	P	1080	DRILL 11" SURFACE HOLE FROM 1,060' TO 1,510' (450' @ 75 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1300/1100. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/60/70 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 6' HIGH / 1.8' RIGHT OF THE LINE WITH 80' OF SLIDE @ 12%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
11/13/2013	0:00 - 6:00	6.00	DRLSUR	02	B	P	1530	DRILL 11" SURFACE HOLE FROM 1,510' TO 1,870' (360' @ 60 FPH). WEIGHT ON BIT 18-22 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1300/1100. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/60/70 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 6' HIGH / 1.8' RIGHT OF THE LINE WITH 80' OF SLIDE @ 12%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:00 - 12:00	6.00	DRLSUR	02	B	P	1890	DRILL 11" SURFACE HOLE FROM 1,870' TO 2,230' (360' @ 60 FPH). WEIGHT ON BIT 18-22 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 90/70/80 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 18' HIGH / 2.1' RIGHT OF THE LINE WITH 295' OF SLIDE @ 20.1%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	12:00 - 18:00	6.00	DRLSUR	02	B	P	2250	DRILL 11" SURFACE HOLE FROM 2,230' TO 2,470' (240' @ 40 FPH). WEIGHT ON BIT 18-22 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 100/80/90 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 13.1' HIGH / 3.1' LEFT OF THE LINE WITH 61' OF SLIDE @ 17%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	18:00 - 0:00	6.00	DRLSUR	02	B	P	2490	DRILL 11" SURFACE HOLE FROM 2,470' TO 2,770' (300' @ 50 FPH). WEIGHT ON BIT 18-22 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 100/80/90 K. DRAG 10 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 7.5' HIGH / 2.3' LEFT OF THE LINE WITH 190' OF SLIDE @ 21%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.4# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
11/14/2013	0:00 - 2:00	2.00	DRLSUR	05	C	P	2790	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, 1,000 BBLS OF FRESH WATER ON LOCATION FOR CEMENT JOB.
	2:00 - 6:30	4.50	DRLSUR	06	A	P	2790	PRE JOB SAFETY MEETING, TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN.
	6:30 - 9:00	2.50	CSGSUR	12	C	P	2790	RUN 62 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 62 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,742.70' KB. SET TOP OF BAFFLE PLATE @ 2,696.60'.

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	9:00 - 11:00	2.00	CSGSUR	12	C	P	2790	PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 1,500 PSI. PUMP 151.1 BBLS OF WATER AHEAD CLEARING SHOE. MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX & PUMP 300 SX OF PREMIUM CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 61.4 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 168.2 BBLS OF FRESH WATER. NO RETURNS THROUGH OUT JOB. FINAL LIFT OF 155 PSI AT 3 BBL/MINUTE. BUMPED PLUG @ 525 PSI. FLOAT HELD. HELD @ 700 PSI FOR 5 MINUTES WITHOUT BLEED OFF. RELEASE RIG @ 11/14/2013 11:00 HRS SHUT DOWN AND WASH UP TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SACKS PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. NO RETURNS TO SURFACE. WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE WITH 175 SACKS (35.8 BBLS.) SAME CEMENT, 3 BBL NO CEMENT RETURNS TO SURFACE. WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE WITH 175 SACKS (35.8 BBLS.) SAME CEMENT, 3 BBL NO CEMENT RETURNS TO SURFACE. RIG DOWN CEMENTERS. CEMENT JOB FINISHED @ 11/14/2013 16:30.
4/23/2014	17:30 - 18:00	0.50	MIRU3	01	C	P	2790	SKID RIG TO NBU 1022-5F4CS, WELL 4 OF 6
	18:00 - 19:00	1.00	PRPSPD	14	A	P	2790	NIPPLE UP BOPE
	19:00 - 23:00	4.00	PRPSPD	15	A	P	2790	HOLD PRE JOB SAFETY MEETING WITH A-1 TESTERS AND RIG CREW / PICK UP TEST ASSEMBLY / TEST BOPE / TEST ANNULAR TO 250 PSI LOW/ 5 MIN, 2500 PSI HIGH 10 MIN - TEST PIPE & BLIND RAMS, FLOOR VALVES, IBOP, KILL LINE VALVES. CHOKE LINE VALVES, CHOKE LINE, AND CHOKE MANIFOLD TO 250 PSI LOW/ 5 MIN - 5000 PSI HIGH 10 MIN, FUNCTIONED BOTH CHOKES WITH PRESSURE / HELD ACCUMULATOR FUNCTION TEST / TESTED CASING TO 1500 PSI FOR 30 MINUTES
	23:00 - 23:30	0.50	PRPSPD	09	A	P	2790	SLIP AND CUT 105' DRILLING LINE
	23:30 - 0:00	0.50	PRPSPD	24	B	P	2790	INSTALL WEAR BUSHING
4/24/2014	0:00 - 3:00	3.00	PRPSPD	06	A	P	2790	PICK UP BIT, MOTOR, MWD, SCRIBE AND TEST MOTOR / TRIP IN HOLE / TAG CEMENT @ 2,593'
	3:00 - 4:30	1.50	DRLPRC	02	F	P	2790	DRILL SHOE TRACK F/ 2,593' TO 2,790'

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
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Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	4:30 - 10:00	5.50	DRLPRC	02	D	P	2790	DRILL / SLIDE / SURVEY / F/ 2,790' T/ 3,593' =803'' @ 146 FPH WOB 20,000 - 25,000 TOP DRIVE RPM 60 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 1,700 / 1,500 TORQUE ON/OFF BTM 10,000/ 7,450 PICK UP WT 143,000 SLACK OFF WT 91,000 ROT WT 103,000 SLIDE 265' = 41.67% @ 2.5 HRS 39.45' LOW, 7.32' LEFT OF CENTER LINE MUD WT 8.4 VIS 27 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: SEEPAGE 5 / 7 BBLS HR
	10:00 - 10:30	0.50	DRLPRC	07	A	P	3593	RIG SERVICE / RECORD SLOW PUMP RATES
	10:30 - 18:00	7.50	DRLPRC	02	D	P	3593	DRILL / SLIDE / SURVEY / F/ 3,593' T/ 4,577' = 984' @ 131.2 FPH WOB 20,000 - 25,000 TOP DRIVE RPM 60 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 1,870 / 1,520 TORQUE ON/OFF BTM 12,000 / 9,020 PICK UP WT 150,000 SLACK OFF WT 94,000 ROT WT 109,000 SLIDE 213' = 18.64% @ 3 HRS 14.91' NORTH, 11.40' WEST OF CENTER LINE MUD WT 8.5 VIS 27 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: SEEPAGE 1 / 2 BBLS HR
	18:00 - 0:00	6.00	DRLPRV	02	B	P	4577	DRILL / SLIDE / SURVEY / F/ 4,577' T/ 6,068' = 1491' @ 248.5 FPH WOB 20,000 - 25,000 TOP DRIVE RPM 65 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 2,215 / 1,945 TORQUE ON/OFF BTM 15,040 / 9,680 PICK UP WT 155,000 SLACK OFF WT 105,000 ROT WT 136,000 SLIDE 25' = 1.81% @ 0.25 HRS 4.55' NORTH, 9.59' WEST OF CENTER LINE MUD WT 8.7 VIS 28 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: NONE VERTICAL AT 4,680'

RECEIVED: Dec. 31, 2014

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN		Spud date: 11/12/2013
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
4/25/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	6068	DRILL / SLIDE / SURVEY / F/ 6,068' T/ 7,209' = 1141' @ 190.1 FPH WOB 20,000 - 25,000 TOP DRIVE RPM 65 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 2,240 / 1,950 TORQUE ON/OFF BTM 11,940 / 9,120 PICK UP WT 225,000 SLACK OFF WT 125,000 ROT WT 160,000 SLIDE 25' = 3.59% @ 0.42 HRS 2.68' NORTH, 10.79' WEST OF CENTER LINE MUD WT 8.6 VIS 28 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: NONE
	6:00 - 8:30	2.50	DRLPRV	02	B	P	7209	DRILL / SLIDE / SURVEY / F/ 7,209' T/ 7,490' = 281' @ 112.4 FPH WOB 20,000 - 26,000 TOP DRIVE RPM 65 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 2,245 / 2,000 TORQUE ON/OFF BTM 12,040 / 9,500 PICK UP WT 230,000 SLACK OFF WT 130,000 ROT WT 161,000 SLIDE 32' = 4.71% @ 0.67 HRS 3.99' NORTH, 6.63' WEST OF CENTER LINE MUD WT 8.6 VIS 28 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: SEEPING 2 TO 4 BBL / HOUR
	8:30 - 9:00	0.50	DRLPRV	07	A	P	7490	RIG SERVICE / CHANGE ROTATING RUBBERS / RECORD SLOW PUMP RATE
	9:00 - 18:00	9.00	DRLPRV	02	B	P	7490	DRILL / SLIDE / SURVEY / F/ 7,490' T/ 8,605' = 1,115' @ 123.9 FPH WOB 20,000 - 26,000 TOP DRIVE RPM 65 MUD MOTOR RPM 83 PUMPS 170 SPM = 598 GPM PUMP PRESSURE ON/OFF BTM 2,390 / 2,200 TORQUE ON/OFF BTM 17,000 / 9,000 PICK UP WT 265,000 SLACK OFF WT 148,000 ROT WT 185,000 SLIDE 37' = 2.99% @ 0.67 HRS 3.99' NORTH, 6.63' WEST OF CENTER LINE MUD WT 8.6 VIS 28 ZECO ON LINE , 2 CENTRIFUGES ON DEWATER & MUD CLEANER RUNNING HOLE ISSUES: SEEPING 2 TO 4 BBL / HOUR

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	18:00 - 0:00	6.00	DRLPRV	02	B	P	8605	DRILL / SLIDE / SURVEY / F/ 8,605' T/ 9,114' = 509' @ 84.8 FPH WOB 20,000 - 26,000 TOP DRIVE RPM 65 MUD MOTOR RPM 70 PUMPS 142 SPM = 500 GPM PUMP PRESSURE ON/OFF BTM 2,480 / 2,345 TORQUE ON/OFF BTM 13,200 / 10,000 PICK UP WT 255,000 SLACK OFF WT 150,000 ROT WT 188,000 SLIDE 0' = 0% @ 0 HRS 2.89' NORTH, 1.85' WEST OF CENTER LINE MUD WT 11.3 VIS 39 ZECO OFF LINE - MUD CLEANER RUNNING HOLE ISSUES: NONE 4' FLARE STARTING @ 8,450' INCREASING TO 30' @ 9,000' ROLL HOLE WITH HEAVY MUD STARTING @ 9,000'
4/26/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	9114	DRILL / SLIDE / SURVEY / F/ 9,114' T/ 9,440' TD = 326' @ 54.3 FPH WOB 22,000 - 28,000 TOP DRIVE RPM 65 MUD MOTOR RPM 70 PUMPS 142 SPM = 500 GPM PUMP PRESSURE ON/OFF BTM 2,480 / 2,345 TORQUE ON/OFF BTM 13,300 / 10,200 PICK UP WT 258,000 SLACK OFF WT 152,000 ROT WT 190,000 SLIDE 0' = 0% @ 0 HRS 3.1' SOUTH, 1.82' EAST OF CENTER LINE MUD WT 12.0 VIS 36 ZECO OFF LINE - MUD CLEANER RUNNING HOLE ISSUES: SEEPAGE STARTING @ 9,209' - 120 BBL MUD - BUILD VOLUME MIXING LCM
	6:00 - 7:00	1.00	DRLPRV	05	C	P	9440	CIRCULATE AND CONDITION HOLE FOR TRIP
	7:00 - 8:00	1.00	DRLPRV	06	E	P	9440	10 STAND WIPER TRIP
	8:00 - 10:00	2.00	DRLPRV	05	C	P	9440	CIRCULATE AND CONDITION @ 500 GPM, MUD WT 12 VIS 40
	10:00 - 14:00	4.00	DRLPRV	06	D	P	9440	TRIP OUT OF HOLE FOR CASING / LAY DOWN MWD,BIT, AND MOTOR
	14:00 - 14:30	0.50	DRLPRV	24	B	P		PULL WEAR BUSHING
	14:30 - 22:00	7.50	CSGPRO	12	C	P	9440	HOLD PRE-JOB SAFETY MEETING WITH FRANKS CASING AND RIG CREW / RIG UP FRANKS CASING CREW, TORQUE TURN AND LAY DOWN MACHINE, DUMP TEST TORQUE TURN / RUN 4.5"PRODUCTION CASING, 99 JTS OF 4.5" 11.6# I-80 LT&C AND 113 JTS OF 4.5" 11.6# I-80 DQX CASING / DQX/LT&C CROSSOVER @ 5,024' / MESAVERDA MARKER @ 7,254' / FLOAT COLLAR @ 9,373' / LANDED CASING SHOE @ 9,421' ON CAMERON HANGER SET IN WELL HEAD. CIRCULATE THROUGH SHOE TRACK @ 91' / BREAK CIRCULATION EVERY 2000' / RIG DOWN CASING CREW.
	22:00 - 23:00	1.00	CSGPRO	05	D	P	9440	CIRCULATE CASING / WORK ON MUD PRPERTIES

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	23:00 - 0:00	1.00	CSGPRO	12	E	P	9440	HOLD SAFETY MEETING WITH BAKER HUGHES AND RIG CREW TEST LINES TO 7,000 PSI DROP BOTTOM PLUG PUMP 30 BBLS FRESH WATER FLUSH AHEAD OF CEMENT MIX & PUMP 196 BBLS/ 640 SX OF PREMIUM LITE LEAD CEMENT WITH 0.05 #/SX STATIC FREE, 0.4% R-3, 0.25 #/SX CELLO FLAKE, 5#/SX KOL SEAL, 0.3% CD-32, 0.4% FL-57, 3% BENTONITE / MIXED CEMENT AT 13.0 PPG WITH YIELD OF 1.72 CF/SX. MIX & PUMP 266 BBLS / 1,115 SX 50:50 POZ TAIL CEMENT WITH 0.005 #/SX STATIC FREE, 10% SODIUM CHLORIDE, 0.55% R-3, 0.25 #/SX CELLO FLAKE, 5 #/SX KOL-SEAL, 0.002 GPS FP-6L, 0.75% SODIUM METASILICATE, AND 2% BENTONITE / MIXED CEMENT AT 14.3 PPG WITH YIELD OF 1.34 CF/SX. WASH UP LINES & DROP THE TOP PLUG DISPLACE WITH 145.7 BBLS FRESH WATER WITH CLAY CARE AND 4 GALLON MAGNACIDE BUMP PLUG TO 3744 PSI CHECK FLOATS - FLOATS HELD GOOD RETURNS THROUGH OUT JOB, 5 BBL GOOD CEMENT TO SURFACE FINAL LIFT PRESSURE OF 3216 PSI PUMPED 30% EXCESS ON LEAD CEMENT PUMPED 25% EXCESS ON TAIL CEMENT RIG DOWN CEMENTING EQUIPMENT & WASH OUT BOP

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.: PROPETRO 12/12, SST 54/54
Event: DRILLING	Start date: 10/21/2013	End date: 4/27/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
4/27/2014	0:00 - 4:00	4.00	CSGPRO	12	E	P	9440	HOLD SAFETY MEETING WITH BAKER HUGHES AND RIG CREW TEST LINES TO 7,000 PSI DROP BOTTOM PLUG PUMP 30 BBLS FRESH WATER FLUSH AHEAD OF CEMENT MIX & PUMP 196 BBLS/ 640 SX OF PREMIUM LITE LEAD CEMENT WITH 0.05 #/SX STATIC FREE, 0.4% R-3, 0.25 #/SX CELLO FLAKE, 5#/SX KOL SEAL, 0.3% CD-32, 0.4% FL-57, 3% BENTONITE / MIXED CEMENT AT 13.0 PPG WITH YIELD OF 1.72 CF/SX. MIX & PUMP 266 BBLS / 1,115 SX 50:50 POZ TAIL CEMENT WITH 0.005 #/SX STATIC FREE, 10% SODIUM CHLORIDE, 0.55% R-3, 0.25 #/SX CELLO FLAKE, 5 #/SX KOL-SEAL, 0.002 GPS FP-6L, 0.75% SODIUM METASILICATE, AND 2% BENTONITE / MIXED CEMENT AT 14.3 PPG WITH YIELD OF 1.34 CF/SX. WASH UP LINES & DROP THE TOP PLUG DISPLACE WITH 145.7 BBLS FRESH WATER WITH CLAY CARE AND 4 GALLON MAGNACIDE BUMP PLUG TO 3744 PSI CHECK FLOATS - FLOATS HELD GOOD RETURNS THROUGH OUT JOB, 5 BBL GOOD CEMENT TO SURFACE FINAL LIFT PRESSURE OF 3216 PSI PUMPED 30% EXCESS ON LEAD CEMENT PUMPED 25% EXCESS ON TAIL CEMENT RIG DOWN CEMENTING EQUIPMENT & WASH OUT BOP
	4:00 - 5:00	1.00	CSGPRO	24	B	P	9440	PULL LANDING JOINT & SET PACK OFF
	5:00 - 6:00	1.00	RDMO	14	A	P	9440	NIPPLE DOWN BOPE / RELEASE RIG @ 06:00, 4/27/2014

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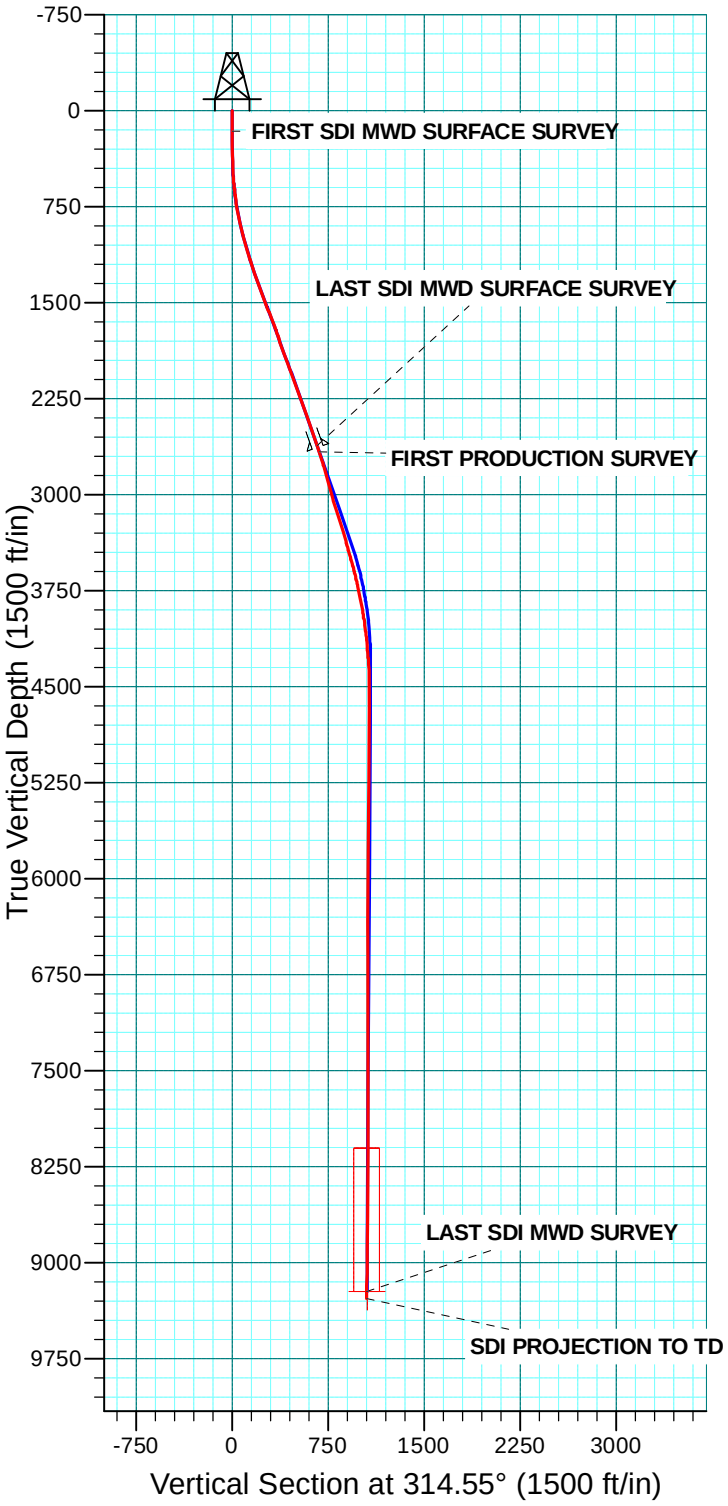
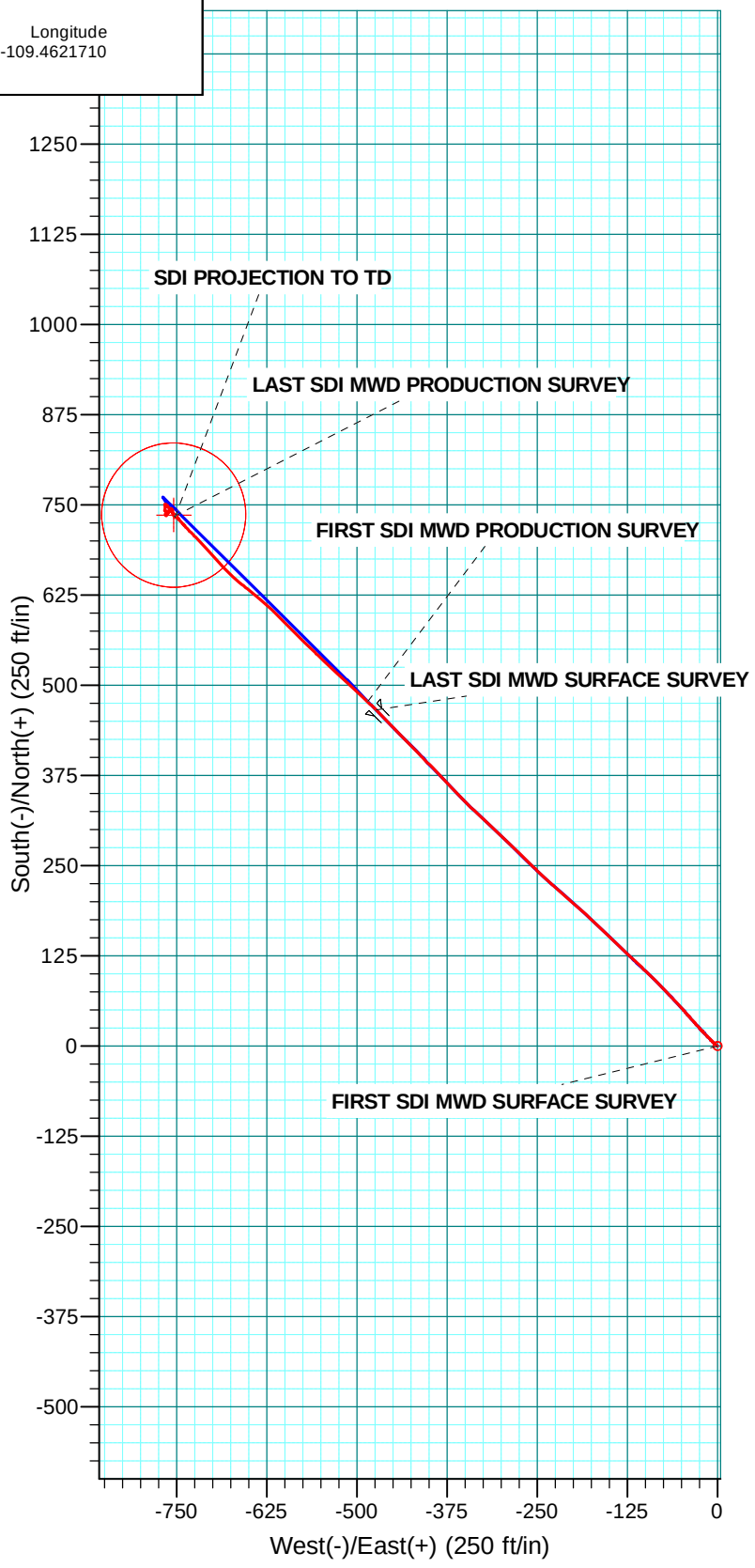
Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-5J PAD
Well: NBU 1022-5F4CS
Wellbore: OH

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-5F4CS					
GL 5229 & KB 24 @ 5253.00ft (SST 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14521228.66	2071254.73	39.9765720	-109.4621710





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Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 1022-5J PAD
NBU 1022-5F4CS

OH

Design: OH

Standard Survey Report

28 April, 2014

Anadarko Petroleum Corporation

RECEIVED: Dec. 31, 2014

Scientific Drilling

Scientific Drilling
Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Site:	NBU 1022-5J PAD	**MD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Well:	NBU 1022-5F4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

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

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 1022-5J PAD, SECTION 5 T10N R22E

Site Position:		**Northing:**	14,521,228.67 usft	**Latitude:**	39.9765720
From:	Lat/Long	**Easting:**	2,071,254.73 usft	**Longitude:**	-109.4621710
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.99 °

Well NBU 1022-5F4CS, 2115 FSL 2408 FEL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,521,228.67 usft	**Latitude:**	39.9765720
	+E/-W	0.00 ft	**Easting:**	2,071,254.73 usft	**Longitude:**	-109.4621710
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,229.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/31/2013	10.83	65.78	52,002

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	314.55

Survey Program **Date** 4/28/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
161.00	2,725.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
2,775.00	9,440.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161.00	0.00	6.96	161.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRST SDI MWD SURFACE SURVEY									
217.00	0.18	270.55	217.00	0.00	-0.09	0.06	0.32	0.32	0.00
299.00	1.14	309.75	298.99	0.52	-0.84	0.97	1.23	1.17	47.80
380.00	2.02	311.77	379.96	1.99	-2.53	3.20	1.09	1.09	2.49
473.00	3.17	316.87	472.87	4.96	-5.51	7.40	1.26	1.24	5.48
563.00	4.84	314.58	562.64	9.44	-9.91	13.69	1.86	1.86	-2.54
653.00	7.30	316.08	652.13	16.22	-16.59	23.20	2.74	2.73	1.67
743.00	9.32	317.48	741.18	25.72	-25.48	36.20	2.26	2.24	1.56

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Scientific Drilling

Scientific Drilling

Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Site:	NBU 1022-5J PAD	**MD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Well:	NBU 1022-5F4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
833.00	11.34	318.71	829.72	37.74	-36.24	52.30	2.26	2.24	1.37
923.00	13.28	317.48	917.64	52.01	-49.07	71.45	2.18	2.16	-1.37
1,013.00	15.12	316.69	1,004.89	68.17	-64.11	93.51	2.06	2.04	-0.88
1,103.00	16.62	315.46	1,091.46	85.88	-81.19	118.11	1.71	1.67	-1.37
1,193.00	17.76	313.53	1,177.44	104.51	-100.17	144.70	1.42	1.27	-2.14
1,283.00	18.91	313.13	1,262.87	123.94	-120.77	173.01	1.29	1.28	-0.44
1,373.00	20.07	314.16	1,347.71	144.67	-142.49	203.03	1.34	1.29	1.14
1,463.00	20.05	313.53	1,432.25	166.05	-164.75	233.90	0.24	-0.02	-0.70
1,553.00	20.66	311.77	1,516.63	187.25	-187.78	265.18	0.96	0.68	-1.96
1,643.00	22.07	311.68	1,600.44	209.07	-212.25	297.93	1.57	1.57	-0.10
1,733.00	20.66	312.21	1,684.26	230.98	-236.64	330.68	1.58	-1.57	0.59
1,823.00	18.73	313.97	1,768.99	251.69	-258.80	361.00	2.24	-2.14	1.96
1,912.00	19.61	314.14	1,853.05	272.01	-279.80	390.22	0.99	0.99	0.19
2,002.00	20.84	313.26	1,937.50	293.50	-302.30	421.33	1.41	1.37	-0.98
2,092.00	20.37	313.30	2,021.74	315.21	-325.36	453.00	0.52	-0.52	0.04
2,182.00	19.87	314.76	2,106.25	336.72	-347.62	483.95	0.79	-0.56	1.62
2,272.00	19.79	316.69	2,190.92	358.58	-368.93	514.47	0.73	-0.09	2.14
2,362.00	19.70	316.34	2,275.62	380.64	-389.86	544.86	0.17	-0.10	-0.39
2,452.00	19.17	315.11	2,360.50	402.08	-410.76	574.80	0.74	-0.59	-1.37
2,542.00	19.43	314.67	2,445.44	423.08	-431.83	604.54	0.33	0.29	-0.49
2,632.00	18.73	316.34	2,530.49	444.05	-452.45	633.95	0.99	-0.78	1.86
2,725.00	19.35	316.25	2,618.41	465.99	-473.42	664.28	0.67	0.67	-0.10
LAST SDI MWD SURFACE SURVEY									
2,743.00	19.13	315.67	2,635.40	470.25	-477.54	670.21	1.63	-1.25	-3.19
8 5/8"									
2,775.00	18.73	314.62	2,665.67	477.61	-484.86	680.59	1.63	-1.23	-3.30
FIRST SDI MWD PRODUCTION SURVEY									
2,871.00	16.53	311.81	2,757.16	497.54	-506.01	709.65	2.46	-2.29	-2.93
2,966.00	14.77	312.77	2,848.63	514.78	-524.98	735.25	1.87	-1.85	1.01
3,062.00	15.48	313.04	2,941.31	531.83	-543.32	760.29	0.74	0.74	0.28
3,157.00	17.54	314.00	3,032.38	550.43	-562.89	787.28	2.19	2.17	1.01
3,252.00	17.06	314.27	3,123.09	570.10	-583.16	815.53	0.51	-0.51	0.28
3,348.00	17.32	316.64	3,214.80	590.32	-603.06	843.89	0.78	0.27	2.47
3,443.00	16.75	311.20	3,305.64	609.62	-623.07	871.69	1.78	-0.60	-5.73
3,537.00	15.12	308.29	3,396.02	626.14	-642.89	897.40	1.93	-1.73	-3.10
3,633.00	16.36	311.72	3,488.42	642.90	-662.81	923.35	1.61	1.29	3.57
3,728.00	14.95	314.27	3,579.90	660.36	-681.57	948.97	1.65	-1.48	2.68
3,824.00	12.40	318.40	3,673.17	676.71	-697.28	971.64	2.84	-2.66	4.30
3,919.00	11.61	318.13	3,766.09	691.46	-710.43	991.36	0.83	-0.83	-0.28
4,014.00	10.82	315.50	3,859.28	704.94	-723.06	1,009.82	0.99	-0.83	-2.77
4,109.00	9.76	316.29	3,952.75	717.12	-734.88	1,026.78	1.13	-1.12	0.83
4,204.00	8.00	318.49	4,046.61	727.89	-744.82	1,041.43	1.89	-1.85	2.32
4,300.00	5.01	313.65	4,141.98	735.79	-752.29	1,052.29	3.16	-3.11	-5.04
4,395.00	5.14	323.99	4,236.61	742.09	-757.79	1,060.63	0.97	0.14	10.88

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Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Site:	NBU 1022-5J PAD	**MD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Well:	NBU 1022-5F4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,490.00	3.08	323.32	4,331.36	747.58	-761.82	1,067.35	2.17	-2.17	-0.71
4,584.00	1.49	310.14	4,425.28	750.39	-764.26	1,071.07	1.77	-1.69	-14.02
4,680.00	0.35	277.44	4,521.27	751.24	-765.51	1,072.55	1.26	-1.19	-34.06
4,775.00	0.44	237.98	4,616.27	751.08	-766.10	1,072.86	0.29	0.09	-41.54
4,869.00	0.53	164.32	4,710.26	750.47	-766.29	1,072.57	0.62	0.10	-78.36
4,965.00	0.86	182.32	4,806.26	749.32	-766.20	1,071.70	0.41	0.34	18.75
5,060.00	0.97	181.82	4,901.24	747.81	-766.25	1,070.67	0.12	0.12	-0.53
5,156.00	1.06	176.54	4,997.23	746.11	-766.23	1,069.46	0.14	0.09	-5.50
5,251.00	0.44	196.23	5,092.22	744.88	-766.28	1,068.64	0.70	-0.65	20.73
5,347.00	0.78	185.85	5,188.22	743.88	-766.44	1,068.05	0.37	0.35	-10.81
5,442.00	1.06	183.22	5,283.20	742.36	-766.56	1,067.07	0.30	0.29	-2.77
5,537.00	0.44	84.87	5,378.20	741.51	-766.25	1,066.25	1.27	-0.65	-103.53
5,632.00	0.24	67.86	5,473.20	741.62	-765.70	1,065.94	0.23	-0.21	-17.91
5,728.00	0.44	99.29	5,569.19	741.64	-765.15	1,065.56	0.28	0.21	32.74
5,823.00	0.26	77.40	5,664.19	741.63	-764.58	1,065.14	0.23	-0.19	-23.04
5,919.00	0.21	126.14	5,760.19	741.57	-764.22	1,064.85	0.21	-0.05	50.77
6,013.00	0.35	129.34	5,854.19	741.29	-763.86	1,064.39	0.15	0.15	3.40
6,108.00	0.79	132.07	5,949.18	740.66	-763.15	1,063.45	0.46	0.46	2.87
6,204.00	0.97	148.68	6,045.17	739.52	-762.24	1,062.00	0.32	0.19	17.30
6,298.00	0.44	287.90	6,139.17	738.96	-762.17	1,061.55	1.42	-0.56	148.11
6,394.00	0.62	274.10	6,235.17	739.11	-763.04	1,062.28	0.23	0.19	-14.38
6,489.00	0.44	272.25	6,330.16	739.16	-763.91	1,062.94	0.19	-0.19	-1.95
6,585.00	0.34	246.17	6,426.16	739.06	-764.54	1,063.31	0.21	-0.10	-27.17
6,680.00	0.51	209.94	6,521.16	738.58	-765.01	1,063.31	0.33	0.18	-38.14
6,774.00	0.59	198.42	6,615.15	737.75	-765.37	1,062.99	0.14	0.09	-12.26
6,869.00	0.44	172.67	6,710.15	736.93	-765.48	1,062.49	0.29	-0.16	-27.11
6,964.00	0.35	161.95	6,805.15	736.29	-765.35	1,061.95	0.12	-0.09	-11.28
7,059.00	0.62	153.87	6,900.14	735.55	-765.03	1,061.20	0.29	0.28	-8.51
7,154.00	0.97	70.81	6,995.14	735.36	-764.04	1,060.36	1.14	0.37	-87.43
7,249.00	1.32	19.83	7,090.12	736.65	-762.91	1,060.46	1.09	0.37	-53.66
7,344.00	1.32	43.30	7,185.10	738.48	-761.79	1,060.95	0.57	0.00	24.71
7,439.00	1.49	10.96	7,280.07	740.49	-760.81	1,061.65	0.84	0.18	-34.04
7,534.00	0.89	8.64	7,375.05	742.43	-760.46	1,062.77	0.63	-0.63	-2.44
7,630.00	0.44	20.62	7,471.04	743.51	-760.22	1,063.36	0.49	-0.47	12.48
7,725.00	0.44	74.06	7,566.04	743.95	-759.74	1,063.32	0.42	0.00	56.25
7,821.00	0.53	50.68	7,662.03	744.33	-759.04	1,063.10	0.22	0.09	-24.35
7,916.00	0.18	49.01	7,757.03	744.71	-758.59	1,063.04	0.37	-0.37	-1.76
8,012.00	0.53	205.55	7,853.03	744.41	-758.67	1,062.88	0.73	0.36	163.06
8,106.00	0.70	182.25	7,947.03	743.44	-758.88	1,062.35	0.32	0.18	-24.79
8,201.00	0.62	16.84	8,042.02	743.35	-758.75	1,062.20	1.38	-0.08	-174.12
8,296.00	0.70	45.76	8,137.02	744.25	-758.19	1,062.43	0.36	0.08	30.44
8,391.00	0.35	75.29	8,232.01	744.73	-757.49	1,062.27	0.45	-0.37	31.08
8,487.00	0.35	84.87	8,328.01	744.83	-756.91	1,061.93	0.06	0.00	9.98

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Survey Report

Anadarko Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well NBU 1022-5F4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Site:	NBU 1022-5J PAD	**MD Reference:**	GL 5229 & KB 24 @ 5253.00ft (SST 54)
Well:	NBU 1022-5F4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Denver Sales Office

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,582.00	0.53	139.80	8,423.01	744.52	-756.34	1,061.30	0.46	0.19	57.82
8,678.00	0.53	136.29	8,519.01	743.86	-755.75	1,060.42	0.03	0.00	-3.66
8,773.00	0.44	186.12	8,614.00	743.18	-755.48	1,059.75	0.44	-0.09	52.45
8,868.00	0.79	210.82	8,709.00	742.26	-755.86	1,059.37	0.45	0.37	26.00
8,963.00	1.06	178.91	8,803.99	740.81	-756.18	1,058.58	0.60	0.28	-33.59
9,059.00	0.88	160.85	8,899.97	739.23	-755.92	1,057.29	0.37	-0.19	-18.81
9,154.00	0.97	149.47	8,994.96	737.85	-755.27	1,055.86	0.21	0.09	-11.98
9,247.00	0.97	149.91	9,087.95	736.49	-754.47	1,054.34	0.01	0.00	0.47
9,343.00	1.29	142.94	9,183.93	734.92	-753.42	1,052.49	0.36	0.33	-7.26
9,385.00	1.49	151.23	9,225.92	734.07	-752.87	1,051.49	0.67	0.48	19.74
LAST SDI MWD PRODUCTION SURVEY									
9,440.00	1.49	151.23	9,280.90	732.81	-752.18	1,050.12	0.00	0.00	0.00
SDI PROJECTION TO TD									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 1022-5F4CS	0.00	0.00	9,228.00	736.34	-753.92	14,521,951.89	2,070,488.22	39.9785937	-109.4648616

- actual wellpath misses target center by 3.26ft at 9385.00ft MD (9225.91 TVD, 734.07 N, -752.87 E)
- Circle (radius 100.00)

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,743.00	2,635.40	8 5/8"	8.625	11.000

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
161.00	161.00	0.00	0.00	FIRST SDI MWD SURFACE SURVEY
2,725.00	2,618.41	465.99	-473.42	LAST SDI MWD SURFACE SURVEY
2,775.00	2,665.67	477.61	-484.86	FIRST SDI MWD PRODUCTION SURVEY
9,385.00	9,225.92	734.07	-752.87	LAST SDI MWD PRODUCTION SURVEY
9,440.00	9,280.90	732.81	-752.18	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.:
Event: COMPLETION	Start date: 8/25/2014	End date: 12/17/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
5/29/2014	-							
8/25/2014	10:00 - 11:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -69 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 547 PSI HELD FOR 5 MIN LOST -171 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 2 BBLS H2O
11/3/2014	7:00 - 7:30	0.50	SUBSPR	48		P		HSM, RIGGING DOWN & RIGGING UP.
	7:30 - 9:00	1.50	SUBSPR	30	A	P		RIGGED DOWN OFF 3 OF 6, MOVED OVER & RIGGED UP ON 4 OF 6, ND FV NU BOPS, RU FLOOR & TBG EQUIP.
	9:00 - 17:00	8.00	SUBSPR	31	I	P		PU 37/8 BIT & 296 JTS 23/8 L-80, GOT WTR SAMPELS F/ SURF, 4687', 9371', TAG PBTD @ 9387' L/D 1 JT,CIRC WELL W/ CLEAN T-MAC W/ CHEMICALS & EXTRA BIOCIDE.L/D 160 JTS 23/8 L-80 SWI SDFN
11/4/2014	7:00 - 7:30	0.50	SUBSPR	48		P		HSM, LAYING DOWN TBG ON FLOAT, & PINCH POINTS
	7:30 - 9:00	1.50	SUBSPR	31	I	P		4 OF 6, L/D REM 135 JTS 23/8 L-80 & BIT, FILL HOLE. ND BOPS NU FV SWI.
	9:00 - 10:00	1.00	SUBSPR	30	C	P		RIGGED DOWN.
11/7/2014	8:00 - 8:30	0.50	SUBSPR	52	B	P		MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -62 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.
11/26/2014	0:00 -		FRAC	37	E	P		FIRST SHOOT, MIRU CASEDHOLE RIH & PERF 1ST STAGE AS PER DESIGN
12/1/2014	6:45 - 7:00	0.25	FRAC	48		P		HSM-JSA
	7:00 - 17:30	10.50	FRAC	36	H	P		FRAC STG #1) WHP 1588 PSI, BRK 3012 PSI @ 4.8 BPM. ISIP 2121 PSI, FG. 0.66 ISIP 2596 PSI, FG. 0.72, NPI 475 PSI, X/O TO WL. SET CBP & PERF STG #2 AS DESIGNED, SWI, SDFN.
12/2/2014	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.:
Event: COMPLETION	Start date: 8/25/2014	End date: 12/17/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	6:45 - 17:00	10.25	FRAC	36	H	P		FRAC STG #2) WHP 1101 PSI, BRK 3416 PSI @ 4.7 BPM. ISIP 2250 PSI, FG. 0.69 ISIP 2700 PSI, FG. 0.74, NPI 450 PSI, X/O TO WL. SET CBP & PERF STG #3 AS DESIGNED, WHP 1965 PSI, BRK 3254 PSI @ 4.7 BPM. ISIP 2329 PSI, FG. 0.7 ISIP 2781 PSI, FG. 0.76, NPI 452 PSI, X/O TO WL. SET CBP & PERF STG #4 AS DESIGNED, SWI, SDFN.
12/3/2014	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 17:30	10.75	FRAC	36	H	P		FRAC STG #4) WHP 1488 PSI, BRK 2689 PSI @ 4.6 BPM. ISIP 1952 PSI, FG. 0.67 ISIP 2630 PSI, FG. 0.75, NPI 678 PSI, X/O TO WL. SET CBP & PERF STG #5 AS DESIGNED, X/O TO FRAC. FRAC STG #5) WHP 1451 PSI, BRK 3612 PSI @ 3.7 BPM. ISIP 1728 PSI, FG. 0.65 ISIP 2045 PSI, FG. 0.69, NPI 317 PSI, SWI, SDFN.
12/4/2014	6:45 - 7:00	0.25	FRAC	48		P		HSM-JSA
	7:00 - 18:00	11.00	FRAC	36	H	P		SET CBP & PERF STG #6 AS DESIGNED,X/O TO FRAC. FRAC STG #6) WHP 1529 PSI, BRK 3067 PSI @ 4.8 BPM. ISIP 1977 PSI, FG. 0.68 ISIP 2334 PSI, FG. 0.73, NPI 357 PSI, X/O TO WL. SET CBP & PERF STG #7 AS DESIGNED, X/O TO FRAC. FRAC STG #7) WHP 1090 PSI, BRK 3404 PSI @ 4.7 BPM. ISIP 1756 PSI, FG. 0.66 ISIP 2420 PSI, FG. 0.75, NPI 664 PSI, X/O TO WL. SET CBP & PERF STG #8 AS DESIGNED, SWI, SDFN.
12/5/2014	7:00 - 7:15	0.25	FRAC	48		P		HSM-JSA
	7:15 - 14:00	6.75	FRAC	36	H	P		FRAC STG #8) WHP 1024 PSI, BRK 1933 PSI @ 4.1 BPM. ISIP 1297 PSI, FG. 0.61 ISIP 1950 PSI, FG. 0.7, NPI 653 PSI, X/O TO WL. SET CBP & PERF STG #9 AS DESIGNED, X/O TO FRAC. FRAC STG #9) WHP 402 PSI, BRK 2146 PSI @ 4.1 BPM. ISIP 1195 PSI, FG. 0.61 ISIP 2265 PSI, FG. 0.76, NPI 1070 PSI, X/O TO WL SET KILL PLUG. RDMO WL & FRAC EQUIP. TOTAL FLUID= 13049 BBLS TOTAL SAND= 282105 LBS
12/16/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, COLD WEATHER

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN		Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD		Rig name no.:
Event: COMPLETION	Start date: 8/25/2014		End date: 12/17/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 10:00	2.75	DRLOUT	30	A	P		MIRU, N/D FRAC VALVES, N/U BOPS, R/U TBG EQUIP, AND P/U MACHINE
	10:00 - 16:00	6.00	DRLOUT	31	I	P		P/U 3-7/8 BIT W/ POBS PKG, TALLEY AND P/U 222 JNTS 2-3/8 L-80 TBG TAG @=7,026', P/U PWER SWIVEL, PRESSURE TEST BOPS TO 3,000#, READY TO DRILL IN AM SWIFN.
12/17/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, P/U POWER SWIVEL

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US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-5F4CS GREEN	Spud date: 11/12/2013	
Project: UTAH-UINTAH	Site: NBU 1022-5J PAD	Rig name no.:
Event: COMPLETION	Start date: 8/25/2014	End date: 12/17/2014
Active datum: RKB @5,253.00usft (above Mean Sea Level)	UWI: NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:15 - 17:30	10.25	DRLOUT	44	C	P		P/U POWER SWIVEL, C/O 10' SAND OFF KILL PLUG AND DRILL THROUGH HALIBURTON PLUG @=7,041' IN 6 MIN W/ 225# PRESSURE INCREASE PLUG #2] CONT TO RIH, TAG SAND @=7,234' [25'] C/O & DRILL THROUGH HALIBURTON PLUG @=7,259' IN 5 MIN W/ 225# PRESSURE INCREASE. [SOMETHING IN DARTS LETTING TBG FLOW WORKED FOR 2 HRS FINALLY GOT TBG TO SHUT OFF CONT. TO DRILL] PLUG #3] CONT TO RIH, TAG SAND @=7,632' [30'] C/O & DRILL THROUGH HALIBURTON PLUG @=7,662' IN 10 MIN W/ 725# PRESSURE INCREASE. PLUG #4] CONT TO RIH, TAG SAND @=7,912' [45'] C/O & DRILL THROUGH HALIBURTON PLUG @=7,957' IN 5 MIN MIN W/ 425# PRESSURE INCREASE. PLUG #5] CONT TO RIH, TAG SAND @=8,159' [25'] C/O & DRILL THROUGH HALIBURTON PLUG @=8,184' IN 5 MIN W/ 700# PRESSURE INCREASE. PLUG #6] CONT TO RIH, TAG SAND @=8,383' [50'] C/O & DRILL THROUGH HALIBURTON PLUG @=8,433' IN 10 MIN W/ 600# PRESSURE INCREASE. PLUG #7] CONT TO RIH, TAG SAND @=8,633' [25'] C/O & DRILL THROUGH HALIBURTON PLUG @=8,658' IN 5 MIN W/ 400# PRESSURE INCREASE. PLUG #8] CONT TO RIH, TAG SAND @=8,834' [25'] C/O & DRILL THROUGH HALIBURTON PLUG @=8,859' IN 5 MIN W/ 500# PRESSURE INCREASE. PLUG #9] CONT TO RIH, TAG SAND @=9,040' [50'] C/O & DRILL THROUGH HALIBURTON PLUG @=9,090' IN 4 MIN W/ 475# PRESSURE INCREASE. CONT TO RIH TAG @=9,274C/O TO 9,374' [PBTD] CIRC WELL L/D 17 JNTS, P/U HANGER LAND WELL W/ 279 JNTS 2-3/8 L-80 TBG [EOT@=8,856.93'] R/D TBG EQUIP, N/D BOPS, N/U WELL HEAD, DROP BALL PUMP OFF BIT W/ 2,100# PRESSURE TURN OVER TO F/B CREW KB 24.00 4-1/2 HANGER .83 279 JNTS 2-3/8 L-80 8,826.90 X-N NIPPLE 2.20 EOT @= 8,853.93'

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1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-5F4CS GREEN	**Wellbore No.**	00
Well Name	NBU 1022-5F4CS	**Wellbore Name**	NBU 1022-5F4CS
Report no.	1	**Report date**	11/17/2014
Project	UTAH-UINTAH	**Site**	NBU 1022-5J PAD
Rig Name/No.		**Event**	COMPLETION
Start date	8/25/2014	**End date**	12/17/2014
Spud date	11/12/2013	**Active datum**	RKB @5,253.00usft (above Mean Sea Level)
UWI	NW/SE/0/10/S/22/E/5/0/0/26/PM/S/2115/E/0/2408/0/0		

1.3 General

Contractor		**Job method**		**Supervisor**	
Perforated Assembly		**Conveyed method**			

1.4 Initial Conditions

Fluid type		**Fluid density**	
Surface press.		**Estimate res press**	
TVD fluid top		**Fluid head**	
Hydrostatic press.		**Press. difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,091.0 (usft)-9,269.0 (usft	**Start Date/Time**	11/17/2014 12:00AM
No. of intervals	70	**End Date/Time**	11/17/2014 12:00AM
Total shots	216	**Net perforation interval**	72.00 (usft)
Avg. shot density	3.00 (shot/ft)	**Final surface pressure**	
		Final press. date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			7,091.0	7,092.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			7,143.0	7,144.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,156.0	7,157.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,172.0	7,173.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,182.0	7,183.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,192.0	7,193.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,198.0	7,199.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,228.0	7,229.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,404.0	7,405.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,418.0	7,419.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,450.0	7,451.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,472.0	7,473.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,545.0	7,546.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,592.0	7,593.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,630.0	7,632.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,767.0	7,768.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			7,800.0	7,801.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,816.0	7,817.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,870.0	7,871.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,881.0	7,882.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,890.0	7,891.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,926.0	7,927.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,941.0	7,942.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,975.0	7,976.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			7,984.0	7,985.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,046.0	8,047.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,130.0	8,131.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,138.0	8,139.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,144.0	8,145.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,160.0	8,161.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,168.0	8,169.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			8,196.0	8,197.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,217.0	8,218.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,236.0	8,237.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,266.0	8,267.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,320.0	8,321.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,346.0	8,347.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,372.0	8,373.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,402.0	8,403.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,510.0	8,511.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,523.0	8,524.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,534.0	8,535.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,579.0	8,580.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,596.0	8,597.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,606.0	8,607.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,628.0	8,629.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			8,642.0	8,643.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,695.0	8,696.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,710.0	8,711.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,727.0	8,728.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,760.0	8,761.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,774.0	8,775.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,812.0	8,813.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,844.0	8,846.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,877.0	8,878.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,880.0	8,881.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,894.0	8,895.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,928.0	8,929.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,966.0	8,967.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			8,988.0	8,989.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,002.0	9,003.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

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2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD top (usft)	MD base (usft)	Shot density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr size (in)	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun	How Guns Conveyed
11/17/2014 12:00AM	M E S A V E RDE/			9,074.0	9,075.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,114.0	9,115.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,132.0	9,133.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,153.0	9,154.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,198.0	9,199.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,219.0	9,220.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,244.0	9,245.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,256.0	9,257.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		
11/17/2014 12:00AM	M E S A V E RDE/			9,268.0	9,269.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTION		

3 Plots

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