API Well Number: 43047527720000

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 Bonanza 1023-16B4CS	
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** PONDEROSA
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.	**7. OPERATOR PHONE** 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217	**9. OPERATOR E-MAIL** julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22186 A / **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	2057 FSL 2372 FEL	NWSE	16	10.0 S	23.0 E	S
Top of Uppermost Producing Zone	1156 FNL 1818 FEL	NWNE	16	10.0 S	23.0 E	S
At Total Depth	1156 FNL 1818 FEL	NWNE	16	10.0 S	23.0 E	S

21. COUNTY UINTAH	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 1818	**23. NUMBER OF ACRES IN DRILLING UNIT** 320
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1565	**26. PROPOSED DEPTH** MD: 8586 TVD: 8092
27. ELEVATION - GROUND LEVEL 5494	**28. BOND NUMBER** 22013542	**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 - 2290	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 - 8586	11.6	I-80 LT&C	12.5	Premium Lite High Strength	280	3.38	12.0
							50/50 Poz	1190	1.31	14.3

ATTACHMENTS

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

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

NAME Danielle Piernot	**TITLE** Regulatory Analyst	**PHONE** 720 929-6156
SIGNATURE	**DATE** 05/30/2012	**EMAIL** danielle.piernot@anadarko.com

API NUMBER ASSIGNED
43047527720000

APPROVAL

Permit Manager

RECEIVED: September 19, 2012

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

BONANZA 1023-16B4CS

Surface: 2057 FSL / 2372 FEL NWSE
BHL: 1156 FNL / 1818 FEL NWNE

Section 16 T10S R23E

Uintah County, Utah
Mineral Lease: ML-22186 A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,108'	
Birds Nest	1,336'	Water
Mahogany	1,839'	Water
Wasatch	4,036'	Gas
Mesaverde	5,967'	Gas
Sego	8,092'	Gas
TVD	8,092'	
TD	8,586'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

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7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8092' TVD, approximately equals 5,179 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,387 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

8. Anticipated Starting Dates:

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

9. Variances:

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

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

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

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

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

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

Background

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

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

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

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

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

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

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

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

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

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

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

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

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

10. Other Information:

Please refer to the attached Drilling Program.

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KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	May 30, 2012
WELL NAME	**BONANZA 1023-16B4CS**	TD	8,092' TVD 8,586' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah
FINISHED ELEVATION	5493.5		
SURFACE LOCATION	NWSE 2057 FSL 2372 FEL Sec 16 T 10S R 23E		
	Latitude: 39.947572 Longitude: -109.330268 NAD 27		
BTM HOLE LOCATION	NWNE 1156 FNL 1818 FEL Sec 16 T 10S R 23E		
	Latitude: 39.953154 Longitude: -109.328302 NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (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
			11'	8-5/8", 28#, IJ-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# I-80 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @ 1,108'
Top of Birds Nest @ 1,336'
Mahogany @ 1,839'

Preset f/ GL @ 2,290' 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 @ 4,036'

Mud logging program TBD
Cased hole logging program from TD - surf csg

Mverde @ 5,967' TVD

Sego @ 8,092' TVD

Max anticipated Mud required 12.5 ppg

TD @ 8,092' TVD
8,586' MD

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KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	COLLAPSE LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,290	28.00	IJ-55	LTC	2.36	1.75	6.20	N/A
								7,780	6,350	223,000	267,000
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.21		3.31
	4-1/2"	5,000	to	8,586'	11.60	I-80	LTC	1.11	1.21	6.63	

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 @ 7000 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	1,790'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,536'	Premium Lite II +0.25 pps	280	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,050'	50/50 Poz/G + 10% salt + 2% gel	1,190	35%	14.30		1.31
			+ 0.1% R-3					

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

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

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 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.

DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

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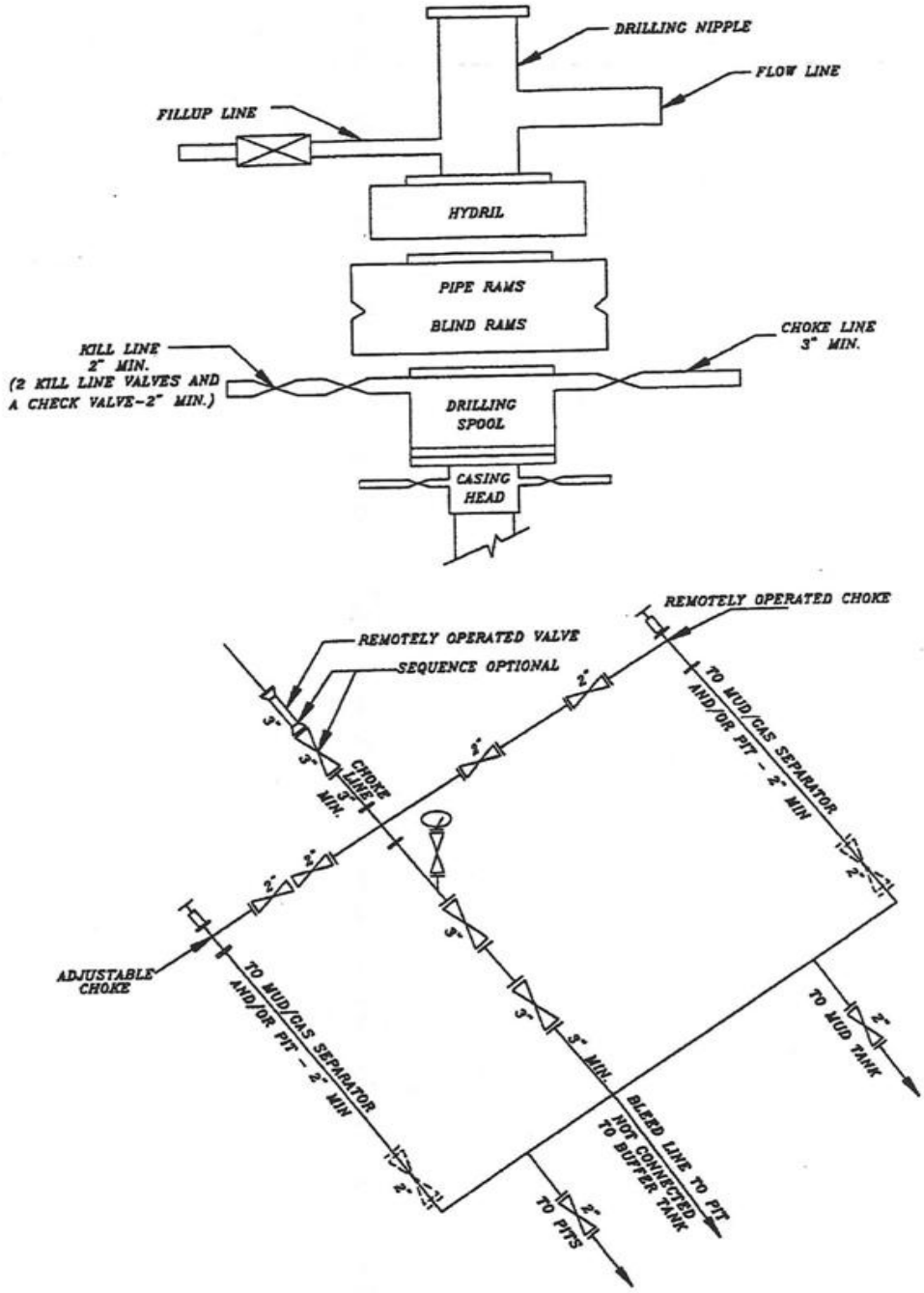
EXHIBIT A
BONANZA 1023-16B4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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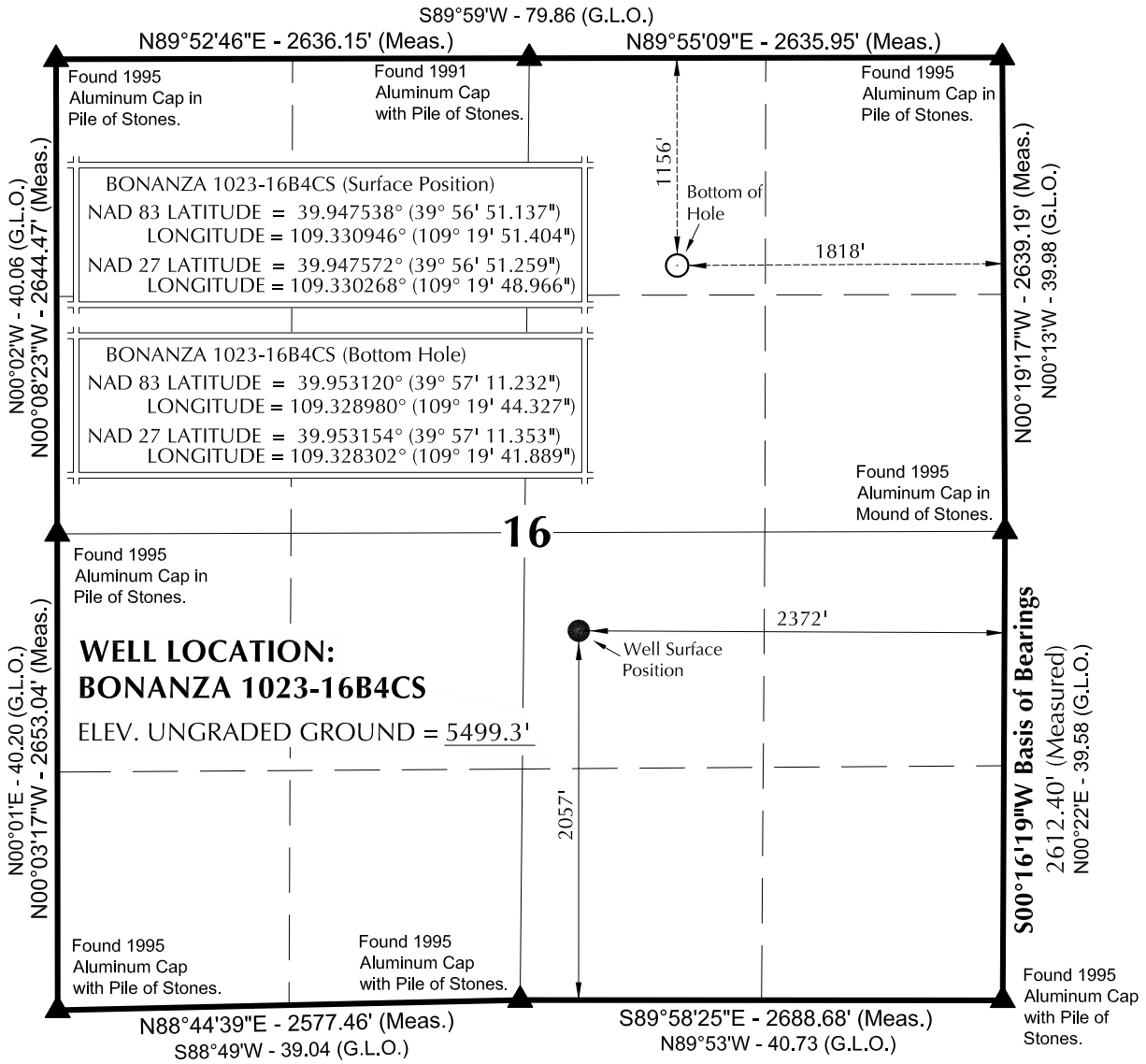
T10S, R23E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. The Bottom of hole bears N15°04'46"E 2107.27' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW $\frac{1}{4}$ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

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.

1-24-12

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: BONANZA 1023-16J

BONANZA 1023-16B4CS
WELL PLAT
1156' FNL, 1818' FEL (Bottom Hole)
NW $\frac{1}{4}$ NE $\frac{1}{4}$ OF SECTION 16, T10S, R23E, 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: 1-5-12	SURVEYED BY: W.W.	SHEET NO: 17
DATE DRAWN: 1-10-12	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'	Date Last Revised:	17 OF 33

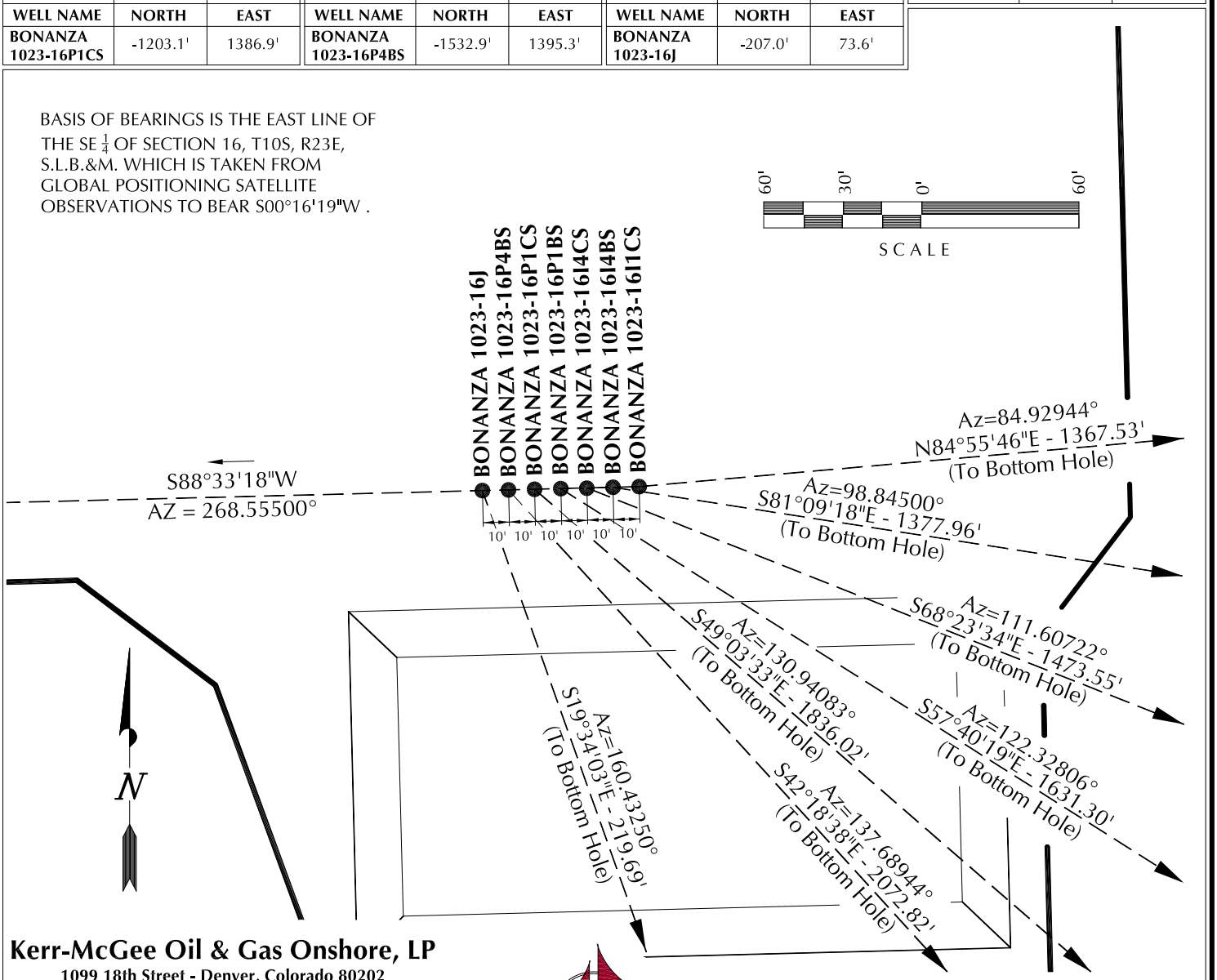
RECEIVED: May 30, 2012

API Well Number: 43047527720000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
BONANZA 1023-16I1CS	39°56'50.854" 39.947459°	109°19'44.689" 109.329080°	39°56'50.975" 39.947493°	109°19'42.250" 109.328403°	2030' FSL 1849' FEL	39°56'52.027" 39.947785°	109°19'27.201" 109.324222°	39°56'52.149" 39.947819°	109°19'24.763" 109.323545°	2151' FSL 487' FEL
BONANZA 1023-16I4BS	39°56'50.852" 39.947459°	109°19'44.817" 109.329116°	39°56'50.973" 39.947492°	109°19'42.378" 109.328438°	2029' FSL 1859' FEL	39°56'48.738" 39.946872°	109°19'27.343" 109.324262°	39°56'48.859" 39.946905°	109°19'24.906" 109.323585°	1818' FSL 496' FEL
BONANZA 1023-16I4CS	39°56'50.849" 39.947458°	109°19'44.945" 109.329151°	39°56'50.971" 39.947492°	109°19'42.507" 109.328474°	2029' FSL 1869' FEL	39°56'45.467" 39.945963°	109°19'27.370" 109.324269°	39°56'45.589" 39.945997°	109°19'24.933" 109.323592°	1487' FSL 496' FEL
BONANZA 1023-16P1BS	39°56'50.847" 39.947457°	109°19'45.074" 109.329187°	39°56'50.968" 39.947491°	109°19'42.635" 109.328510°	2029' FSL 1879' FEL	39°56'42.207" 39.945058°	109°19'27.397" 109.324277°	39°56'42.328" 39.945091°	109°19'24.959" 109.323600°	1157' FSL 496' FEL
BONANZA 1023-16P1CS	39°56'50.844" 39.947457°	109°19'45.202" 109.329223°	39°56'50.966" 39.947490°	109°19'42.764" 109.328546°	2028' FSL 1889' FEL	39°56'38.937" 39.944149°	109°19'27.423" 109.324284°	39°56'39.058" 39.944183°	109°19'24.986" 109.323607°	826' FSL 496' FEL
BONANZA 1023-16P4BS	39°56'50.842" 39.947456°	109°19'45.330" 109.329258°	39°56'50.963" 39.947490°	109°19'42.892" 109.328581°	2028' FSL 1899' FEL	39°56'35.676" 39.943243°	109°19'27.450" 109.324292°	39°56'35.798" 39.943277°	109°19'25.013" 109.323615°	496' FSL 496' FEL
BONANZA 1023-16J	39°56'50.840" 39.947456°	109°19'45.459" 109.329294°	39°56'50.961" 39.947489°	109°19'43.020" 109.328617°	2028' FSL 1909' FEL	39°56'48.794" 39.946887°	109°19'44.518" 109.329033°	39°56'48.915" 39.946921°	109°19'42.080" 109.328356°	1821' FSL 1834' 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
BONANZA 1023-16I1CS	120.9'	1362.2'	**BONANZA 1023-16I4BS**	-211.9'	1361.6'	**BONANZA 1023-16I4CS**	-542.6'	1370.0'	**BONANZA 1023-16P1BS**	-872.4'	1378.4'
WELL NAME	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**			
BONANZA 1023-16P1CS	-1203.1'	1386.9'	**BONANZA 1023-16P4BS**	-1532.9'	1395.3'	**BONANZA 1023-16J**	-207.0'	73.6'			



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

WELL PAD - BONANZA 1023-16J

WELL PAD INTERFERENCE PLAT
WELLS - BONANZA 1023-16I1CS, BONANZA 1023-16I4BS, BONANZA 1023-16I4CS, BONANZA 1023-16P1BS, BONANZA 1023-16P1CS BONANZA 1023-16P4BS & BONANZA 1023-16J
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH.

609
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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 1-5-12	SURVEYED BY: W.W.	SHEET NO:
DATE DRAWN: 1-9-12	DRAWN BY: T.J.R.	**22A**
SCALE: 1" = 60'	Date Last Revised:	22A OF 33

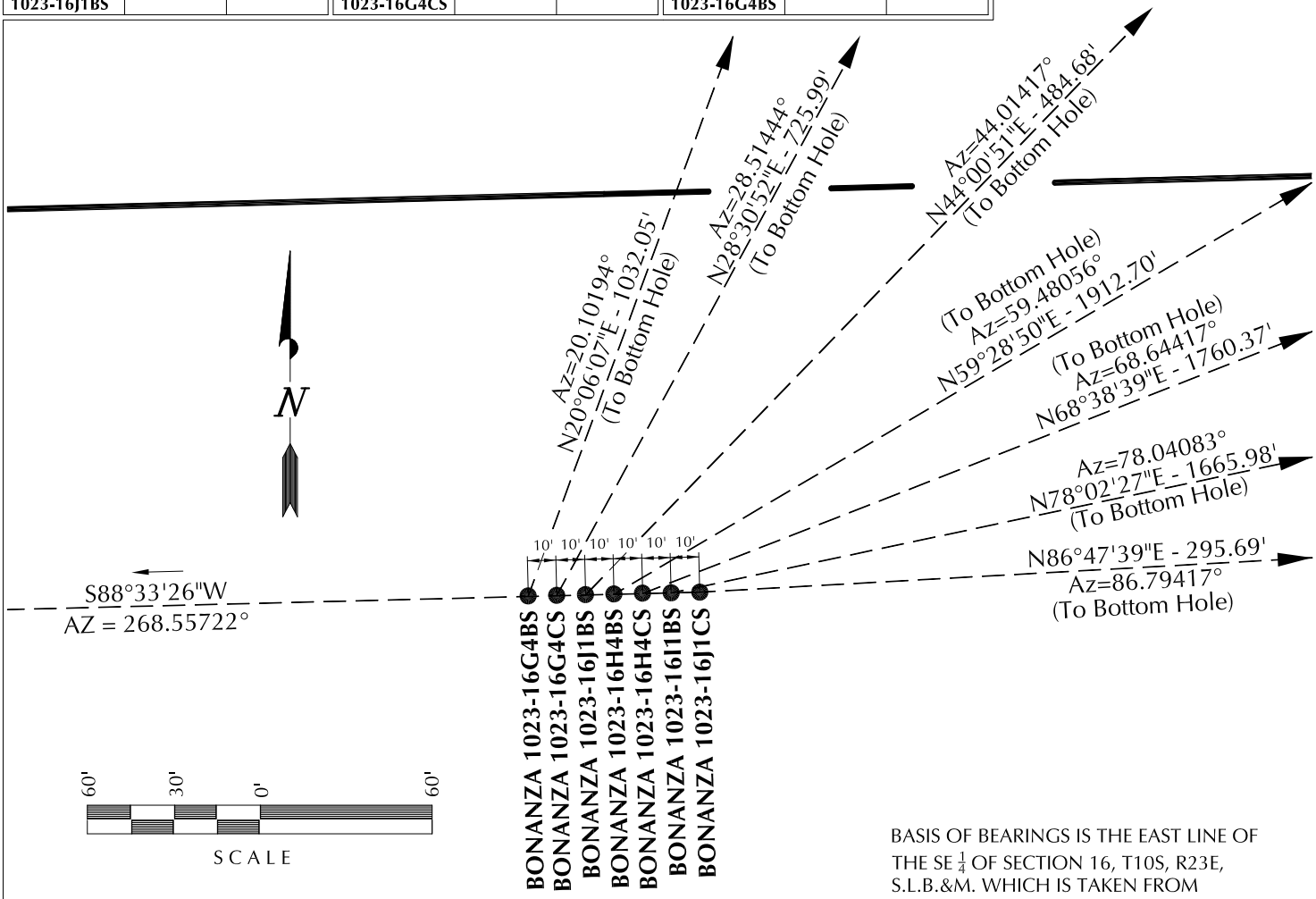
RECEIVED: May 30, 2012

API Well Number: 43047527720000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
BONANZA 1023-16J1CS	39°56'51.875" 39.947743°	109°19'48.089" 109.330025°	39°56'51.996" 39.947777°	109°19'45.651" 109.329347°	2132' FSL 2114' FEL	39°56'52.034" 39.947787°	109°19'44.299" 109.328972°	39°56'52.155" 39.947821°	109°19'41.861" 109.328295°	2149' FSL 1819' FEL
BONANZA 1023-16I1BS	39°56'51.872" 39.947742°	109°19'48.218" 109.330061°	39°56'51.994" 39.947776°	109°19'45.779" 109.329383°	2132' FSL 2124' FEL	39°56'55.258" 39.948683°	109°19'27.290" 109.324247°	39°56'55.379" 39.948717°	109°19'24.852" 109.323570°	2478' FSL 496' FEL
BONANZA 1023-16H4CS	39°56'51.870" 39.947742°	109°19'48.346" 109.330096°	39°56'51.991" 39.947775°	109°19'45.907" 109.329419°	2132' FSL 2134' FEL	39°56'58.179" 39.949494°	109°19'27.287" 109.324246°	39°56'58.300" 39.949528°	109°19'24.850" 109.323569°	2477' FNL 496' FEL
BONANZA 1023-16H4BS	39°56'51.868" 39.947741°	109°19'48.475" 109.330132°	39°56'51.989" 39.947775°	109°19'46.036" 109.329455°	2132' FSL 2144' FEL	39°57'01.439" 39.950400°	109°19'27.304" 109.324251°	39°57'01.561" 39.950433°	109°19'24.867" 109.323574°	2147' FNL 496' FEL
BONANZA 1023-16J1BS	39°56'51.865" 39.947740°	109°19'48.602" 109.330167°	39°56'51.987" 39.947774°	109°19'46.164" 109.329490°	2131' FSL 2154' FEL	39°56'55.304" 39.948696°	109°19'44.273" 109.328965°	39°56'55.425" 39.948729°	109°19'41.834" 109.328287°	2480' FSL 1819' FEL
BONANZA 1023-16G4CS	39°56'51.863" 39.947740°	109°19'48.732" 109.330203°	39°56'51.985" 39.947773°	109°19'46.293" 109.329526°	2131' FSL 2164' FEL	39°56'58.161" 39.949489°	109°19'44.270" 109.328964°	39°56'58.282" 39.949523°	109°19'41.832" 109.328287°	2479' FNL 1819' FEL
BONANZA 1023-16G4BS	39°56'51.861" 39.947739°	109°19'48.860" 109.330239°	39°56'51.982" 39.947773°	109°19'46.422" 109.329562°	2131' FSL 2174' FEL	39°57'01.431" 39.950397°	109°19'44.288" 109.328969°	39°57'01.552" 39.950431°	109°19'41.850" 109.328292°	2148' FNL 1819' 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
BONANZA 1023-16J1CS	16.5'	295.2'	BONANZA 1023-16I1BS	345.2'	1629.8'	BONANZA 1023-16H4CS	641.1'	1639.5'	BONANZA 1023-16H4BS	971.3'	1647.7'
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST			
BONANZA 1023-16J1BS	348.6'	336.8'	BONANZA 1023-16G4CS	637.9'	346.6'	BONANZA 1023-16G4BS	969.2'	354.7'			



BASIS OF BEARINGS IS THE EAST LINE OF THE SE $\frac{1}{4}$ OF SECTION 16, T10S, R23E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR S00°16'19"W.

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

WELL PAD: BONANZA 1023-16J

WELL PAD INTERFERENCE PLAT
WELLS - BONANZA 1023-16J1CS, BONANZA 1023-16I1BS, BONANZA 1023-16H4CS, BONANZA 1023-16H4BS, BONANZA 1023-16J1BS, BONANZA 1023-16G4CS & BONANZA 1023-16G4BS
LOCATED IN SECTION 16, T10S, R23E, 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: 1-5-12	SURVEYED BY: W.W.	SHEET NO:
DATE DRAWN: 1-10-12	DRAWN BY: T.J.R.	22B
SCALE: 1" = 60'	Date Last Revised:	22B OF 33

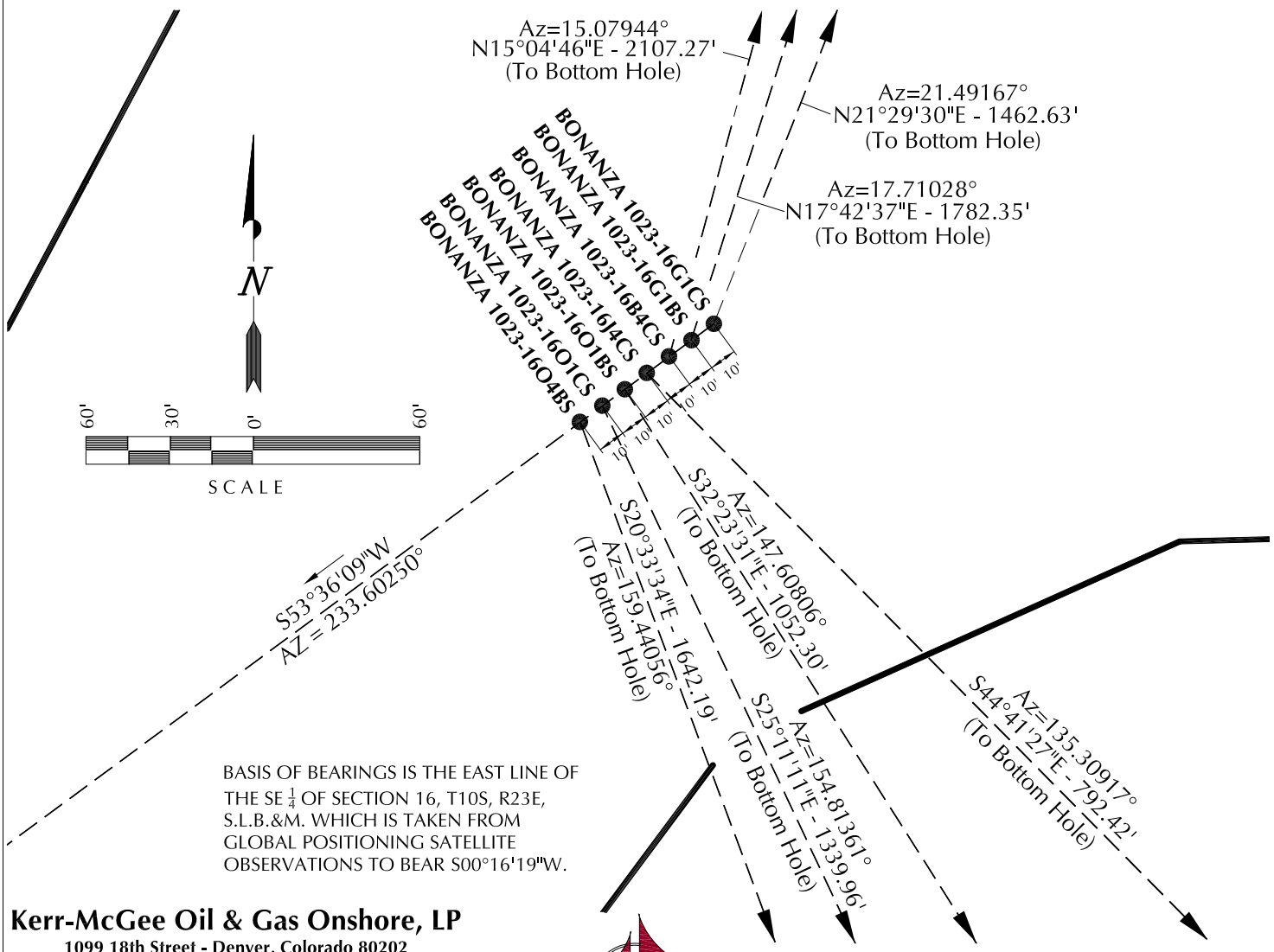
RECEIVED: May 30, 2012

API Well Number: 43047527720000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
BONANZA 1023-16G1CS	39°56'51.253" 39.947570°	109°19'51.197" 109.330888°	39°56'51.375" 39.947604°	109°19'48.759" 109.330211°	2069' FSL 2356' FEL	39°57'04.691" 39.951303°	109°19'44.292" 109.328970°	39°57'04.813" 39.951337°	109°19'41.854" 109.328293°	1818' FNL 1818' FEL
BONANZA 1023-16G1BS	39°56'51.195" 39.947554°	109°19'51.303" 109.330917°	39°56'51.316" 39.947588°	109°19'48.864" 109.330240°	2063' FSL 2364' FEL	39°57'07.962" 39.952212°	109°19'44.310" 109.328975°	39°57'08.083" 39.952245°	109°19'41.871" 109.328298°	1487' FNL 1818' FEL
BONANZA 1023-16B4CS	39°56'51.137" 39.947538°	109°19'51.404" 109.330946°	39°56'51.259" 39.947572°	109°19'48.966" 109.330268°	2057' FSL 2372' FEL	39°57'11.232" 39.953120°	109°19'44.327" 109.328980°	39°57'11.353" 39.953154°	109°19'41.889" 109.328302°	1156' FNL 1818' FEL
BONANZA 1023-16J4CS	39°56'51.077" 39.947521°	109°19'51.508" 109.330974°	39°56'51.199" 39.947555°	109°19'49.069" 109.330297°	2051' FSL 2380' FEL	39°56'45.503" 39.945973°	109°19'44.365" 109.328990°	39°56'45.625" 39.946007°	109°19'41.927" 109.328313°	1488' FSL 1820' FEL
BONANZA 1023-16O1BS	39°56'51.020" 39.947506°	109°19'51.611" 109.331003°	39°56'51.142" 39.947539°	109°19'49.172" 109.330326°	2045' FSL 2388' FEL	39°56'42.233" 39.945065°	109°19'44.392" 109.328998°	39°56'42.354" 39.945098°	109°19'41.954" 109.328320°	1157' FSL 1820' FEL
BONANZA 1023-16O1CS	39°56'50.961" 39.947489°	109°19'51.715" 109.331032°	39°56'51.083" 39.947523°	109°19'49.276" 109.330354°	2039' FSL 2396' FEL	39°56'38.973" 39.944159°	109°19'44.418" 109.329005°	39°56'39.094" 39.944193°	109°19'41.980" 109.328328°	827' FSL 1820' FEL
BONANZA 1023-16O4BS	39°56'50.902" 39.947473°	109°19'51.818" 109.331061°	39°56'51.024" 39.947507°	109°19'49.379" 109.330383°	2033' FSL 2404' FEL	39°56'35.703" 39.943251°	109°19'44.445" 109.329012°	39°56'35.824" 39.943284°	109°19'42.007" 109.328335°	496' FSL 1820' 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
BONANZA 1023-16G1CS	1360.9'	535.9'	**BONANZA 1023-16G1BS**	1697.9'	542.2'	**BONANZA 1023-16B4CS**	2034.7'	548.2'	**BONANZA 1023-16J4CS**	-563.3'	557.3'
WELL NAME	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**	**WELL NAME**	**NORTH**	**EAST**			
BONANZA 1023-16O1BS	-888.6'	563.7'	**BONANZA 1023-16O1CS**	-1212.6'	570.2'	**BONANZA 1023-16O4BS**	-1537.6'	576.7'			



BASIS OF BEARINGS IS THE EAST LINE OF THE SE $\frac{1}{4}$ OF SECTION 16, T10S, R23E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR S00°16'19"W.

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

WELL PAD: BONANZA 1023-16J

WELL PAD INTERFERENCE PLAT
WELLS - BONANZA 1023-16G1CS, BONANZA 1023-16G1BS, BONANZA 1023-16B4CS, BONANZA 1023-16J4CS, BONANZA 1023-16O1BS, BONANZA 1023-16O1CS & BONANZA 1023-16O4BS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH.

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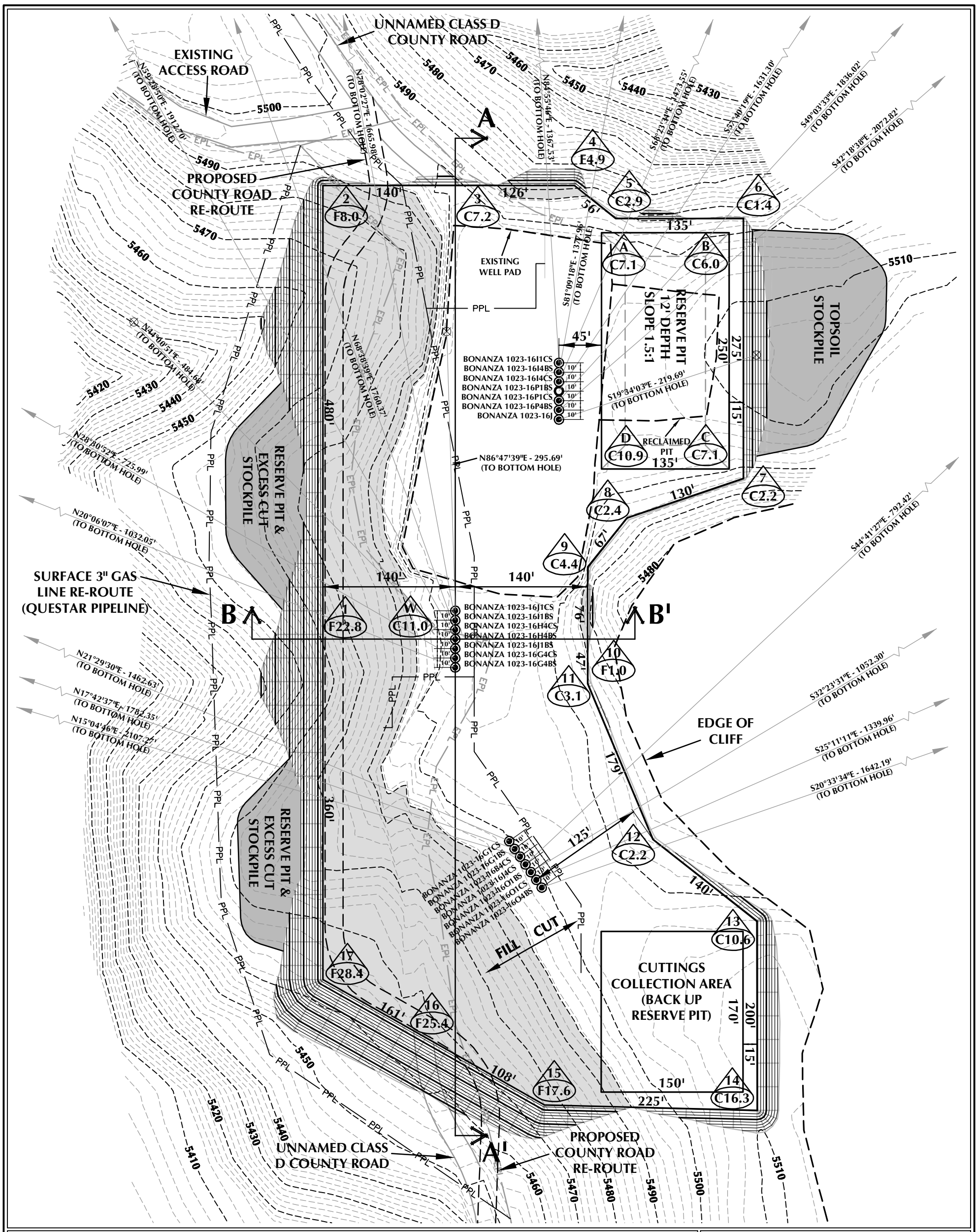
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 1-5-12	SURVEYED BY: W.W.	SHEET NO:
DATE DRAWN: 1-10-12	DRAWN BY: T.J.R.	**22C**
SCALE: 1" = 60'	Date Last Revised:	22C OF 33

RECEIVED: May 30, 2012



WELL PAD - BONANZA 1023-16J DESIGN SUMMARY

EXISTING GRADE @ BONANZA 1023-16H4BS = 5504.5'
FINISHED GRADE ELEVATION = 5493.5'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 9.81 ACRES
TOTAL DISTURBANCE AREA = 10.90 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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WELL PAD - BONANZA 1023-16J

WELL PAD - LOCATION LAYOUT
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 85,163 C.Y.
TOTAL FILL FOR WELL PAD = 84,484 C.Y.
TOPSOIL @ 6" DEPTH = 6,671 C.Y.
EXCESS MATERIAL = 679 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 12,110 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 46,640 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 50' 100' 1" = 100'
2' CONTOURS

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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=100' | DATE: 3/30/12 | SHEET NO: 23 23 OF 33
REVISED:

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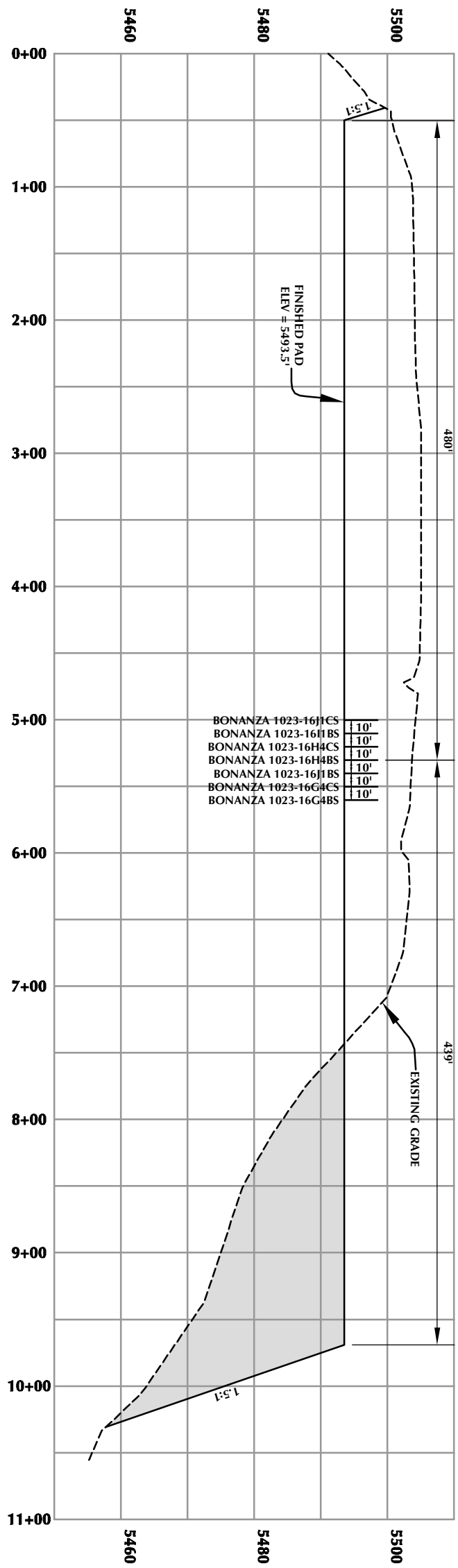
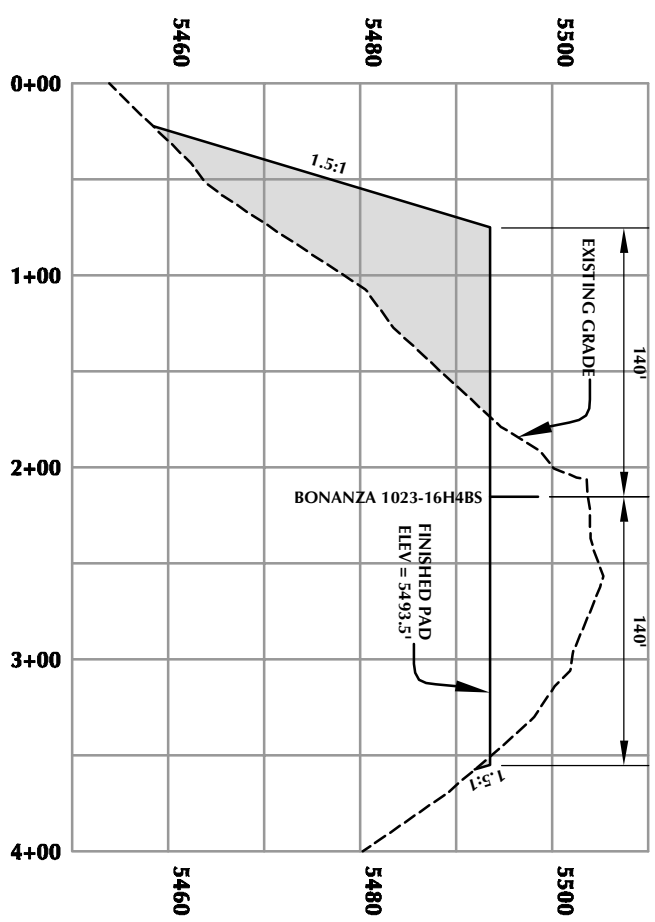
RECEIVED: May 30, 2012



CROSS SECTION A-A'



CROSS SECTION B-B'

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

WELL PAD - BONANZA 1023-16J

WELL PAD - CROSS SECTIONS
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

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

Scale: 1"=100' | Date: 3/30/12 | SHEET NO: 24
REVISED: | 24 OF 33

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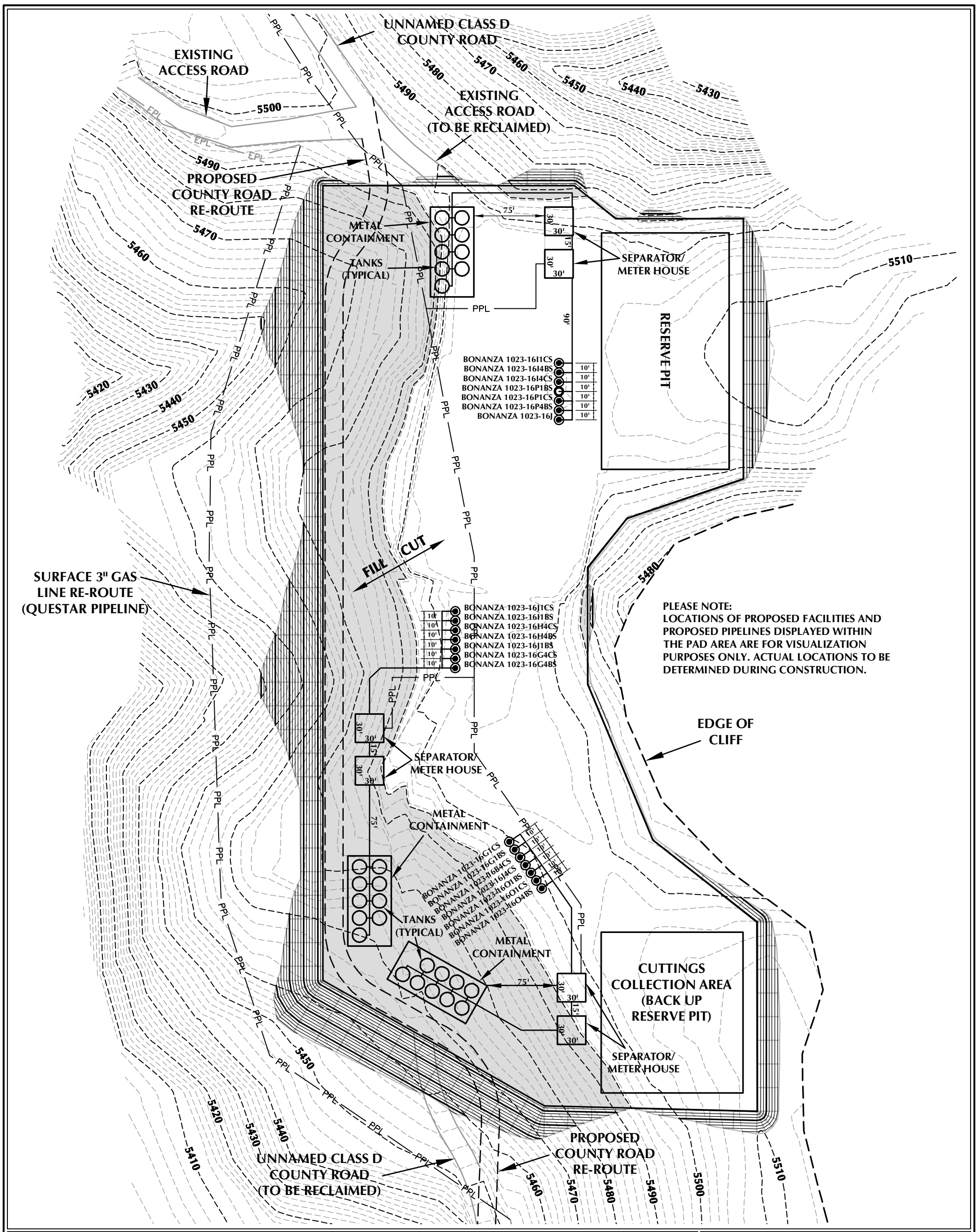
RECEIVED: May 30, 2012



WELL PAD - BONANZA 1023-16J DESIGN SUMMARY

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 50' 100' 1" = 100'

2' CONTOURS

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

WELL PAD - BONANZA 1023-16J

WELL PAD - FACILITIES DIAGRAM
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH

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209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=100' | DATE: 3/30/12 | SHEET NO: 25 25 OF 33
REVISED:

RECEIVED: May 30, 2012

API Well Number: 43047527720000

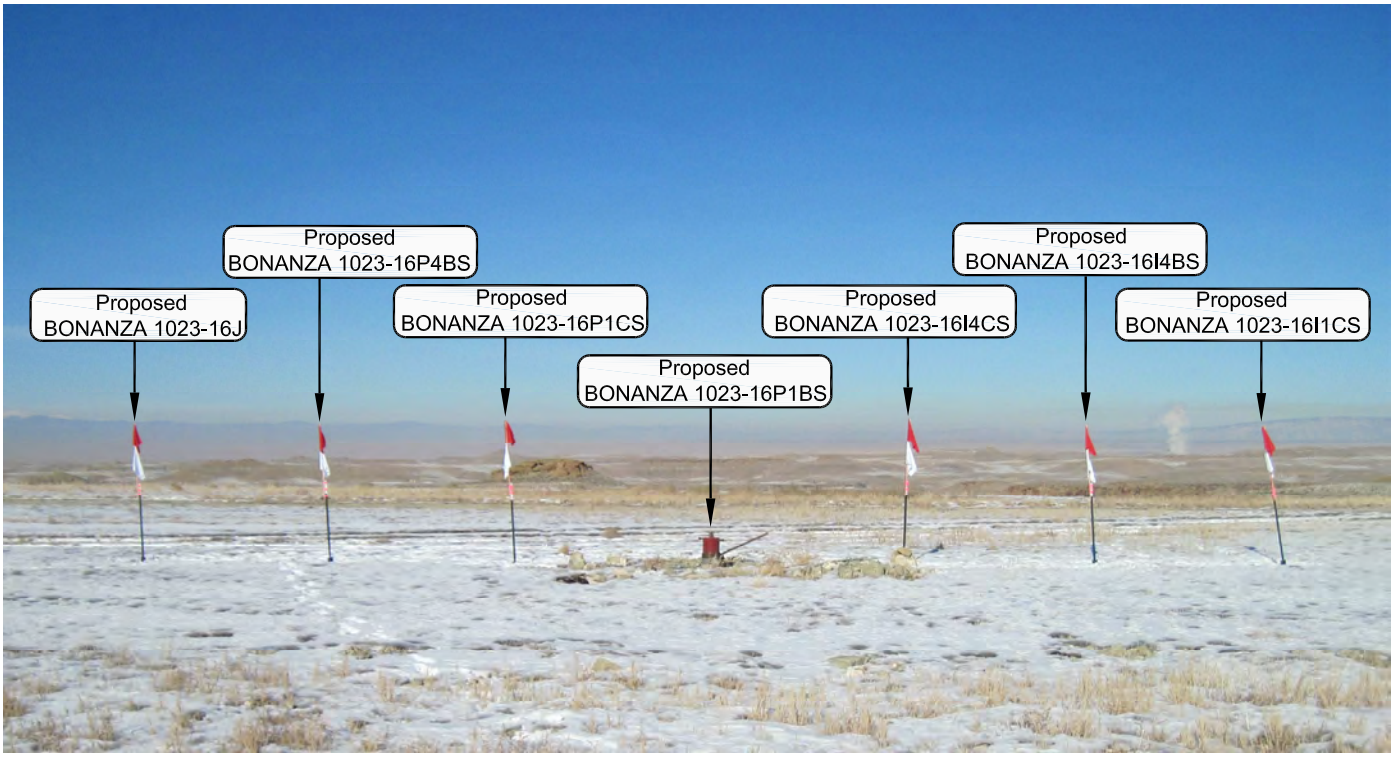

PHOTO VIEW: FROM PIT AREA TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY

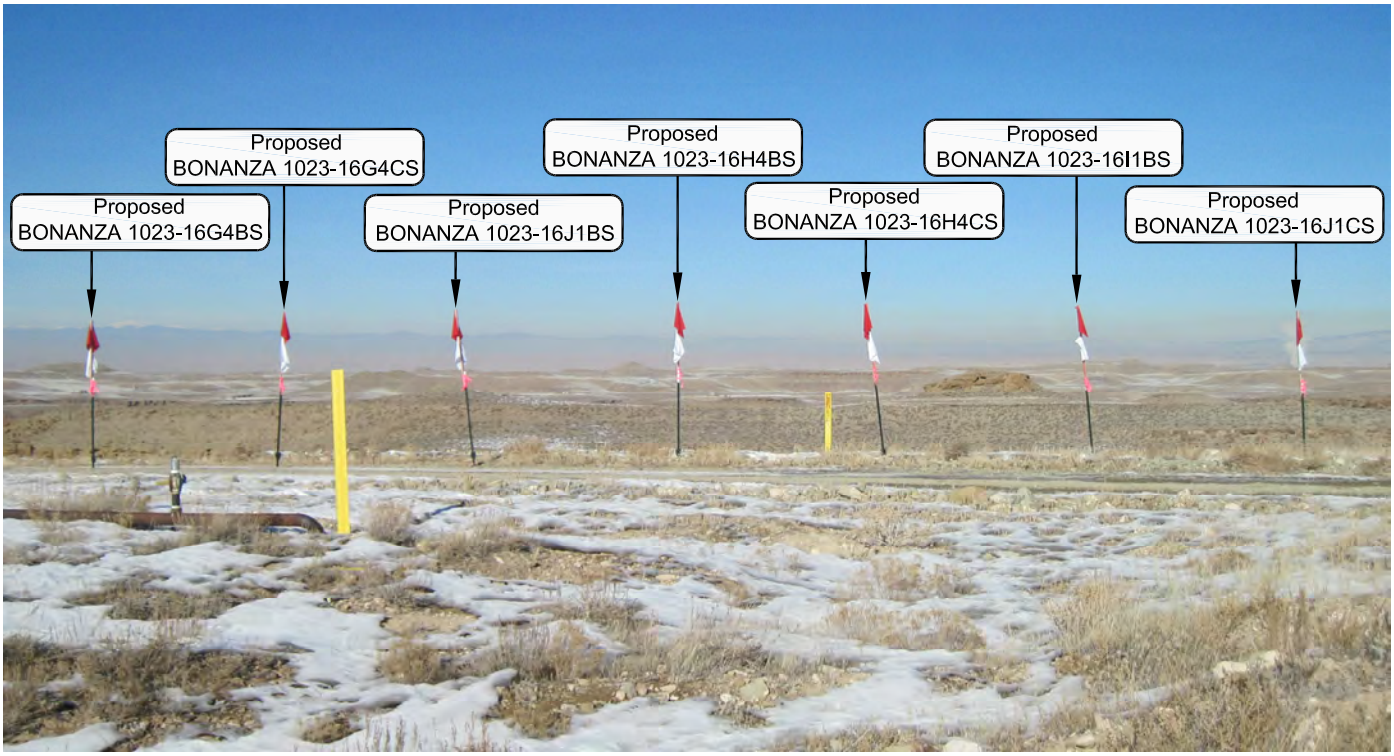

PHOTO VIEW: FROM CORNER 10 TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY

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

WELL PAD - BONANZA 1023-16J

LOCATION PHOTOS
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 1-5-12	PHOTOS TAKEN BY: W.W.	SHEET NO:
DATE DRAWN: 1-9-12	DRAWN BY: T.J.R.	26A
Date Last Revised:		26A OF 33

RECEIVED: May 30, 2012

API Well Number: 43047527720000

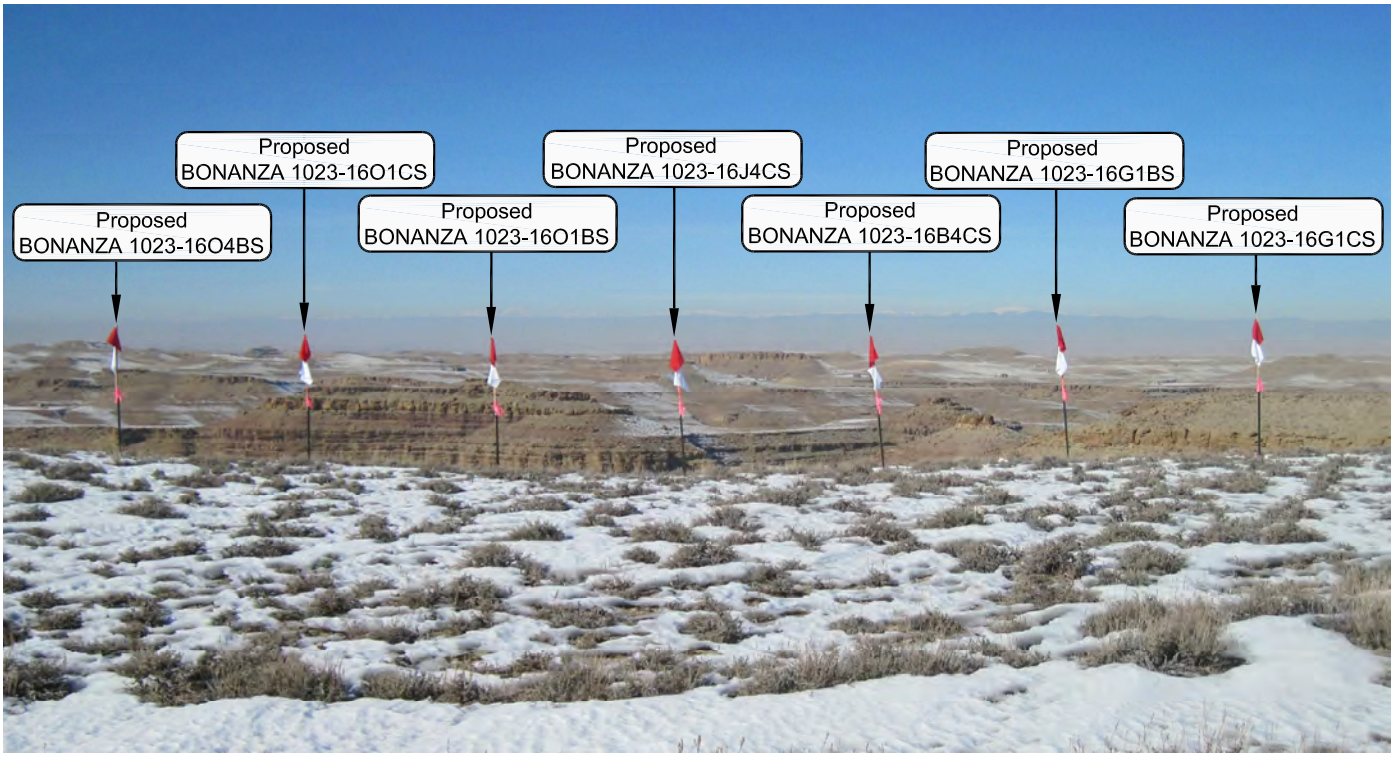

PHOTO VIEW: FROM LOCATION STAKE TO CORNER 12 CAMERA ANGLE: NORTHWESTERLY

PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD CAMERA ANGLE: WESTERLY

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

WELL PAD - BONANZA 1023-16J

LOCATION PHOTOS
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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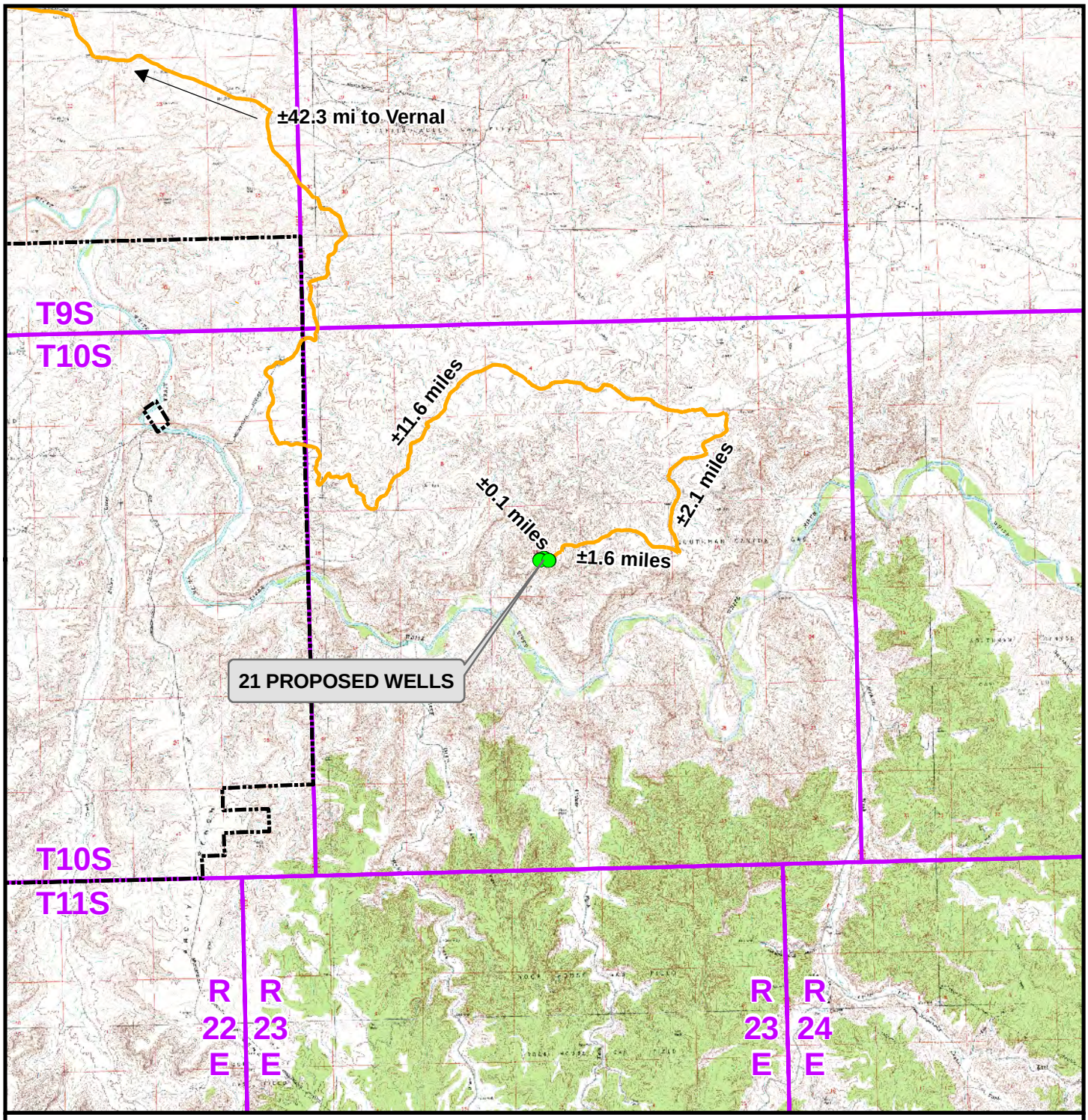
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 1-5-12	PHOTOS TAKEN BY: W.W.	SHEET NO:
DATE DRAWN: 1-10-12	DRAWN BY: T.J.R.	26B
Date Last Revised:		26B OF 33

RECEIVED: May 30, 2012

API Well Number: 43047527720000



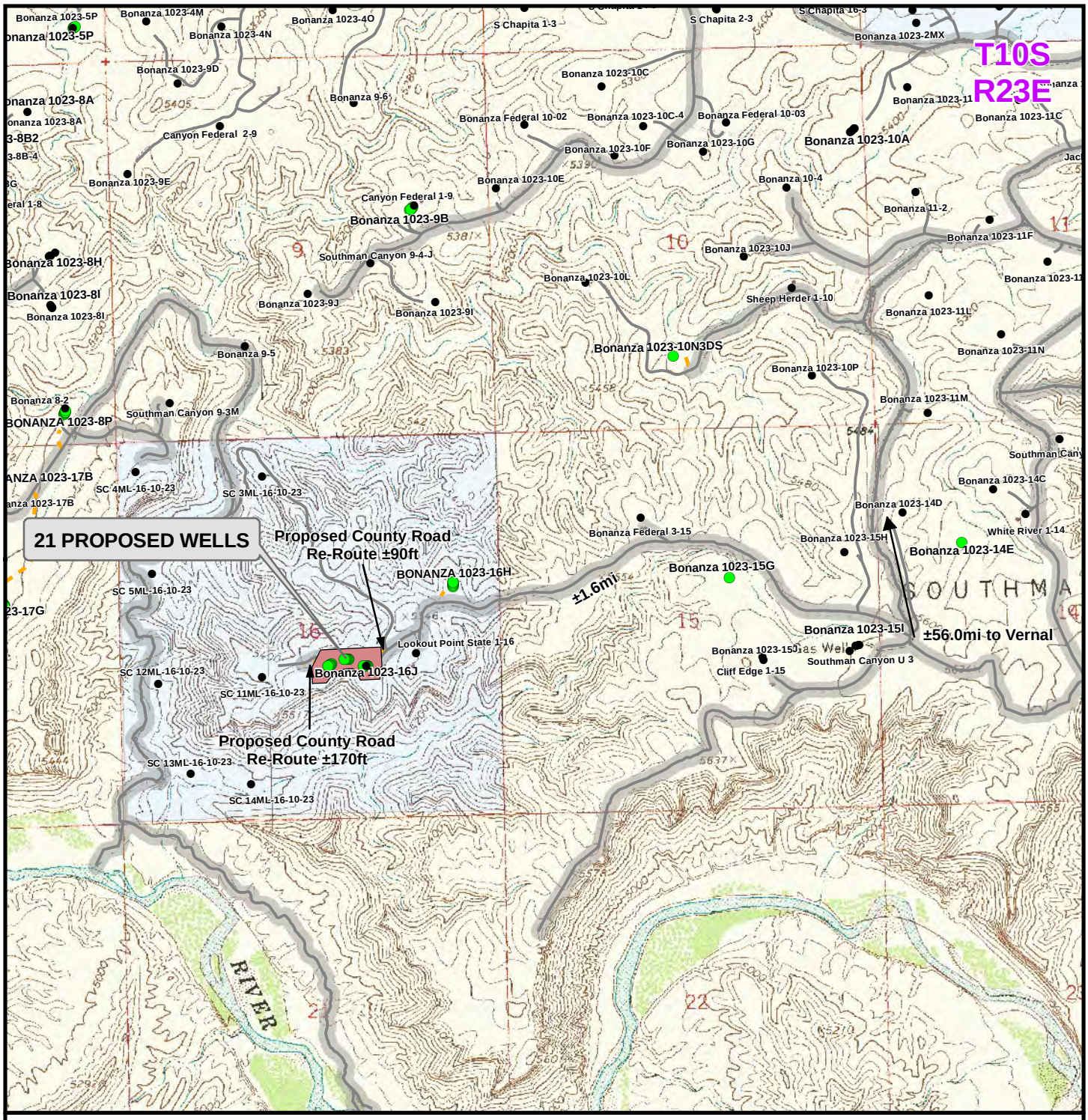
Legend

Distance From Well Pad - BONANZA 1023-16J To Unit Boundary: ±13,411ft

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

WELL PAD - BONANZA 1023-16J	**Kerr-McGee Oil & Gas Onshore L.P.**	CONSULTING, LLC 2155 North Main Street Sheridan, Wyoming 82801 Phone 307-674-0609 Fax 307-674-0182
TOPO A **21 PROPOSED WELLS** **LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH**	**1099 18th Street** **Denver, Colorado 80202**	SCALE: 1:100,000 / NAD83 USP Central / SHEET NO: 27 DRAWN: TL / DATE: 23 Feb 2012 REVISED: / DATE: / 27 OF 33

RECEIVED: May 30, 2012



Legend

Total Proposed County Road Re-Route Length: ±260ft

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

WELL PAD - BONANZA 1023-16J

TOPO B
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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Sheridan, Wyoming 82801
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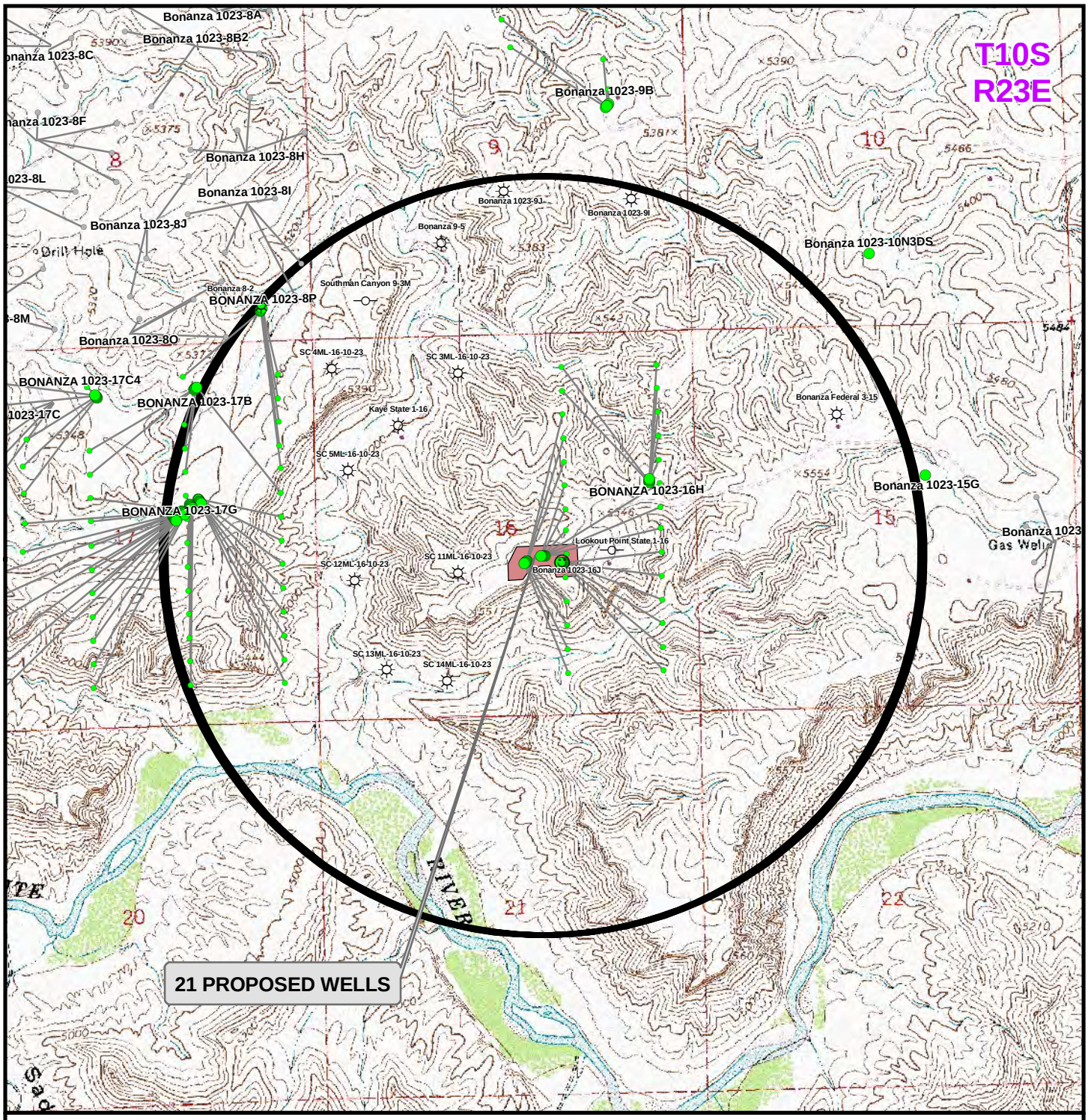
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 28
DRAWN: TL	DATE: 23 Feb 2012	28 OF 33
REVISED:	DATE:	

RECEIVED: May 30, 2012

API Well Number: 43047527720000



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 - BONANZA 1023-16J

TOPO C
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

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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" = 2,000ft	NAD83 USP Central	SHEET NO: 29A
DRAWN: TL	DATE: 23 Feb 2012	
REVISED:	DATE:	29A OF 33

RECEIVED: May 30, 2012

Proposed Well	Nearest Well Bore	Footage
BONANZA 1023-16I1CS	Lookout Point State 1-16	695ft
BONANZA 1023-16I4BS	Lookout Point State 1-16	779ft
BONANZA 1023-16I4CS	Lookout Point State 1-16	980ft
BONANZA 1023-16P1BS	Lookout Point State 1-16	1,238ft
BONANZA 1023-16P1CS	Lookout Point State 1-16	1,525ft
BONANZA 1023-16P4BS	Lookout Point State 1-16	1,825ft
BONANZA 1023-16J	Bonanza 1023-16J	213ft
BONANZA 1023-16J1CS	Bonanza 1023-16J	134ft
BONANZA 1023-16I1BS	Lookout Point State 1-16	744ft
BONANZA 1023-16H4CS	Lookout Point State 1-16	900ft
BONANZA 1023-16H4BS	Lookout Point State 1-16	1,140ft
BONANZA 1023-16J1BS	Bonanza 1023-16J	456ft
BONANZA 1023-16G4CS	Bonanza 1023-16J	743ft
BONANZA 1023-16G4BS	Bonanza 1023-16J	1,073ft
BONANZA 1023-16G1CS	Lookout Point State 1-16	1,394ft
BONANZA 1023-16G1BS	Lookout Point State 1-16	1,695ft
BONANZA 1023-16B4CS	SC 3ML-16-10-23	1,565ft
BONANZA 1023-16J4CS	Bonanza 1023-16J	543ft
BONANZA 1023-16O1BS	Bonanza 1023-16J	873ft
BONANZA 1023-16O1CS	Bonanza 1023-16J	1,202ft
BONANZA 1023-16O4BS	Bonanza 1023-16J	1,533ft

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.

WELL PAD - BONANZA 1023-16J

TOPO C
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

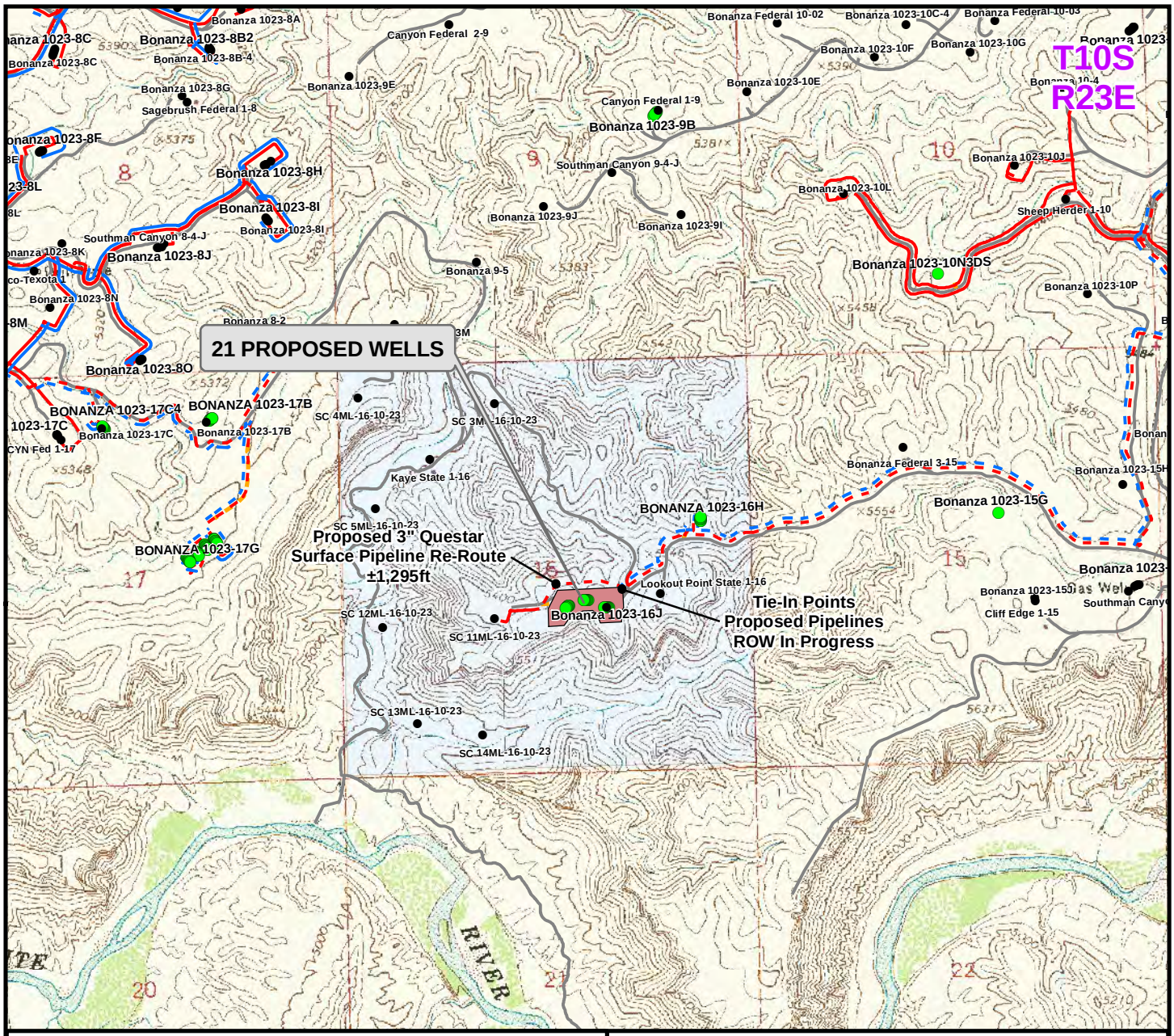
1099 18th Street
Denver, Colorado 80202

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

SCALE: N/A	NAD83 USP Central	SHEET NO:	
DRAWN: TL	DATE: 23 Feb 2012	29B	
REVISED:	DATE:	29B OF 33	

RECEIVED: May 30, 2012

API Well Number: 43047527720000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad and Liquid ROW In Progress)	±1,200ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,200ft

Proposed Gas Pipeline	Length
Buried 16" (Meter House to Edge of Pad and Gas ROW In Progress)	±1,200ft
Surface 3" (Questar Pipeline Re-Route)	±1,295ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,200ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±1,295ft

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 - BONANZA 1023-16J

TOPO D
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH

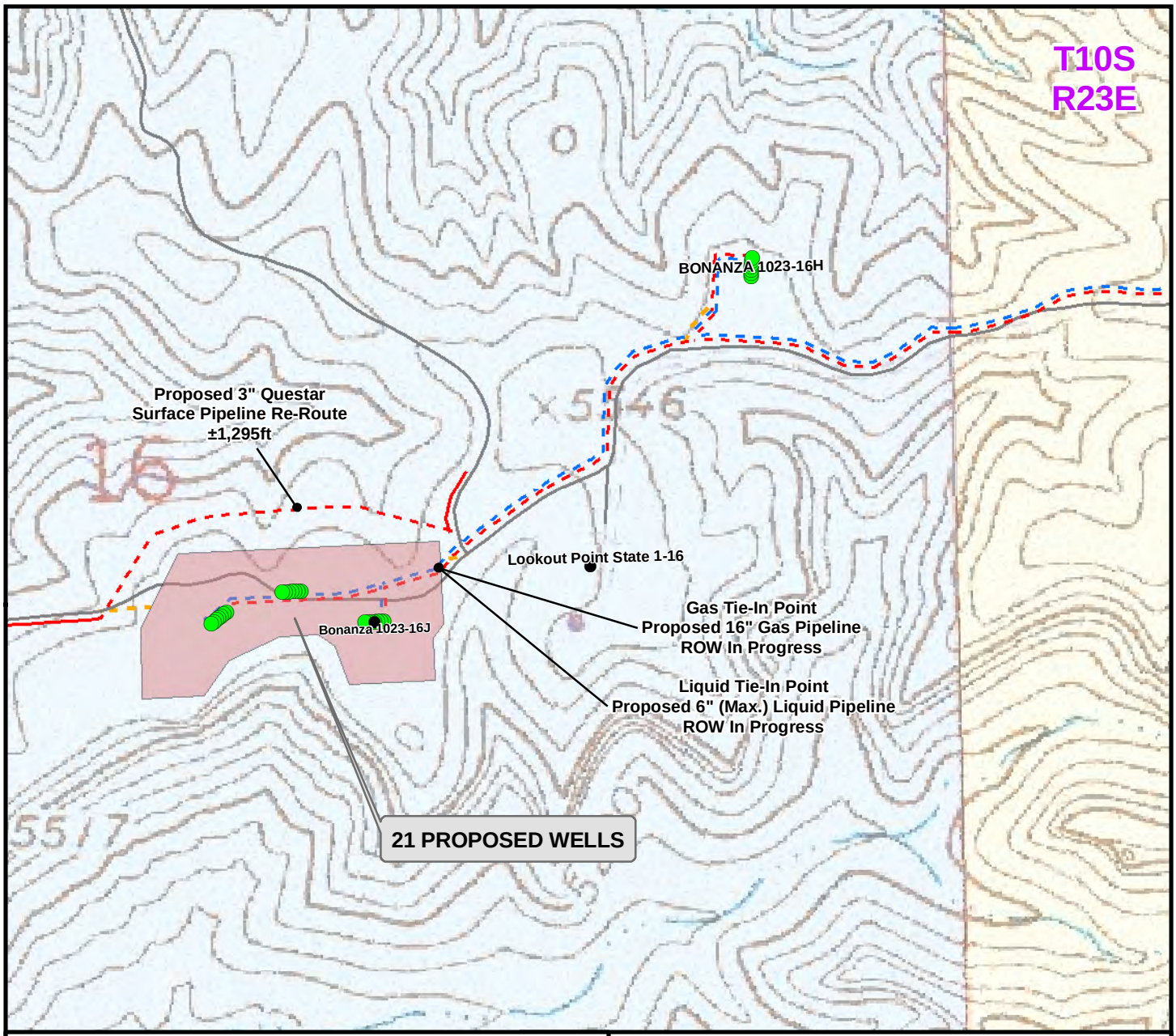
Kerr-McGee Oil & Gas Onshore L.P.
1099 18th Street
Denver, Colorado 80202

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: 30
DRAWN: TL	DATE: 23 Feb 2012	30 OF 33
REVISED:	DATE:	

RECEIVED: May 30, 2012



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad and Liquid ROW In Progress)	±1,200ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,200ft

Proposed Gas Pipeline	Length
Buried 16" (Meter House to Edge of Pad and Gas ROW In Progress)	±1,200ft
Surface 3" (Questar Pipeline Re-Route)	±1,295ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,200ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±1,295ft

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 - BONANZA 1023-16J

TOPO D2 (PAD & PIPELINE DETAIL)
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH

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

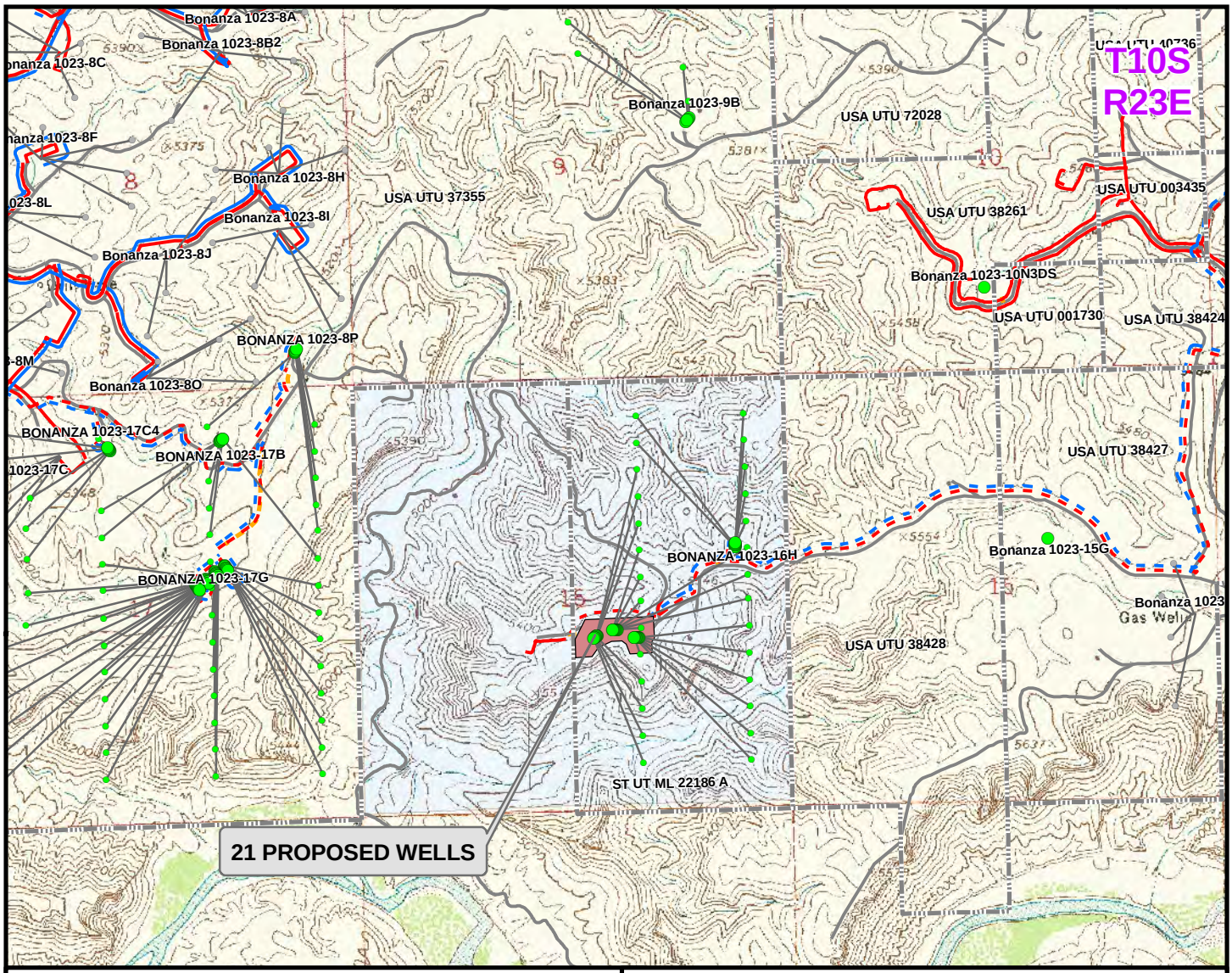
609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 750ft	NAD83 USP Central	SHEET NO: 31
DRAWN: TL	DATE: 23 Feb 2012	31 OF 33
REVISED:	DATE:	

RECEIVED: May 30, 2012

API Well Number: 43047527720000



Proposed Well	Distance To Nearest Lease Boundary
BONANZA 1023-16I1CS	487ft
BONANZA 1023-16I4BS	496ft
BONANZA 1023-16I4CS	496ft
BONANZA 1023-16P1BS	496ft
BONANZA 1023-16P1CS	496ft
BONANZA 1023-16P4BS	496ft
BONANZA 1023-16J	846ft
BONANZA 1023-16J1CS	859ft
BONANZA 1023-16I1BS	496ft
BONANZA 1023-16H4CS	496ft
BONANZA 1023-16H4BS	496ft

Proposed Well	Distance To Nearest Lease Boundary
BONANZA 1023-16J1BS	857ft
BONANZA 1023-16G4CS	854ft
BONANZA 1023-16G4BS	849ft
BONANZA 1023-16G1CS	845ft
BONANZA 1023-16G1BS	840ft
BONANZA 1023-16B4CS	835ft
BONANZA 1023-16J4CS	862ft
BONANZA 1023-16O1BS	863ft
BONANZA 1023-16O1CS	827ft
BONANZA 1023-16O4BS	496ft

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 - BONANZA 1023-16J

TOPO E
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E,
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: 32
DRAWN: TL	DATE: 23 Feb 2012	32 OF 33
REVISED:	DATE:	

RECEIVED: May 30, 2012

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – BONANZA 1023-16J
WELLS – 21 PROPOSED WELLS
Section 16, T10S, R23E, 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 14.4 miles to the intersection of the Fidlar Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidlar Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southeasterly, then southerly, then southeasterly, then northeasterly, then southeasterly direction along the Seven Sisters Road approximately 11.6 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly, then southerly direction along the Class D County Road approximately 2.1 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly, then southwesterly direction along the second Class D County Road approximately 1.6 miles to the proposed County Road re-route to the west. Follow road flags in a westerly direction approximately 90 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 57.6 miles in a southerly direction.

RECEIVED: May 30, 2012

API Well Number: 43047527720000

Scientific Drilling
Rocky Mountain Operations

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: BONANZA 1023-16
Well: BONANZA 1023-16B4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

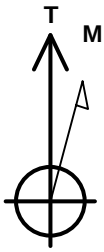
WELL DETAILS: BONANZA 1023-16B4CS

GL 5494 & KB 4 @ 5498.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14511332.83	2108408.17	39.947572	-109.330268

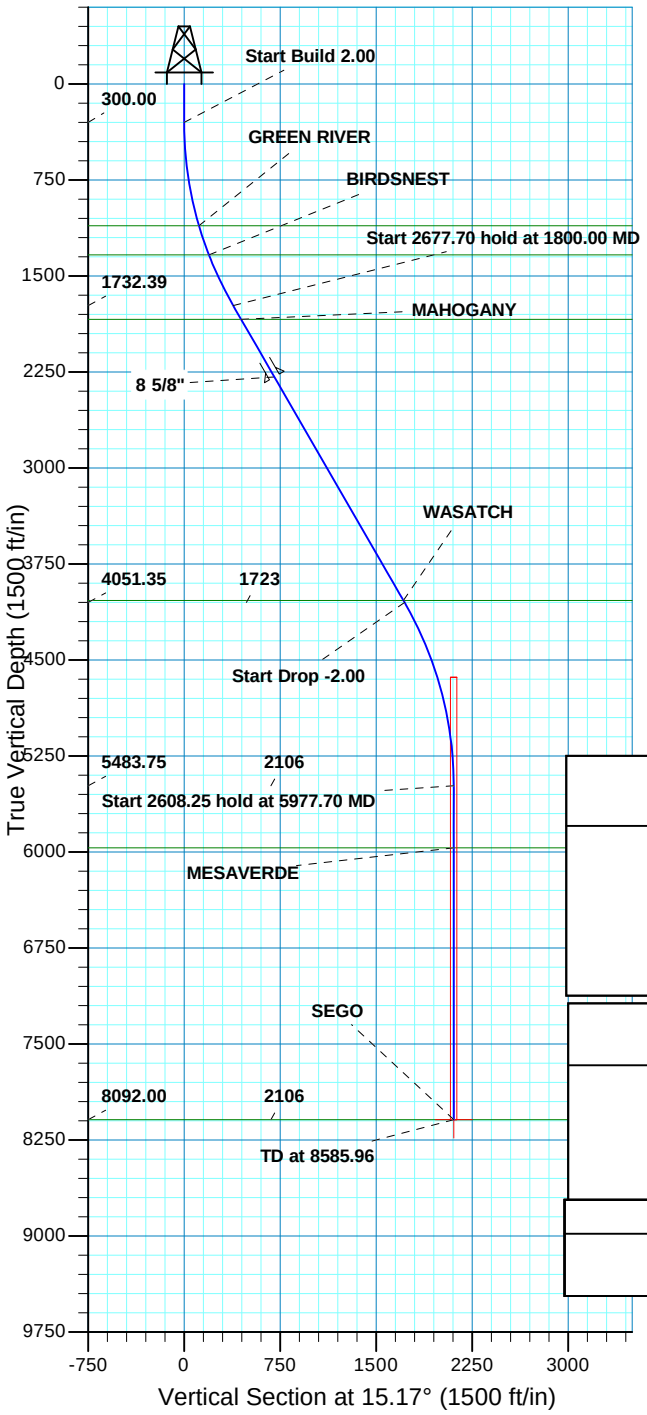
DESIGN TARGET DETAILS

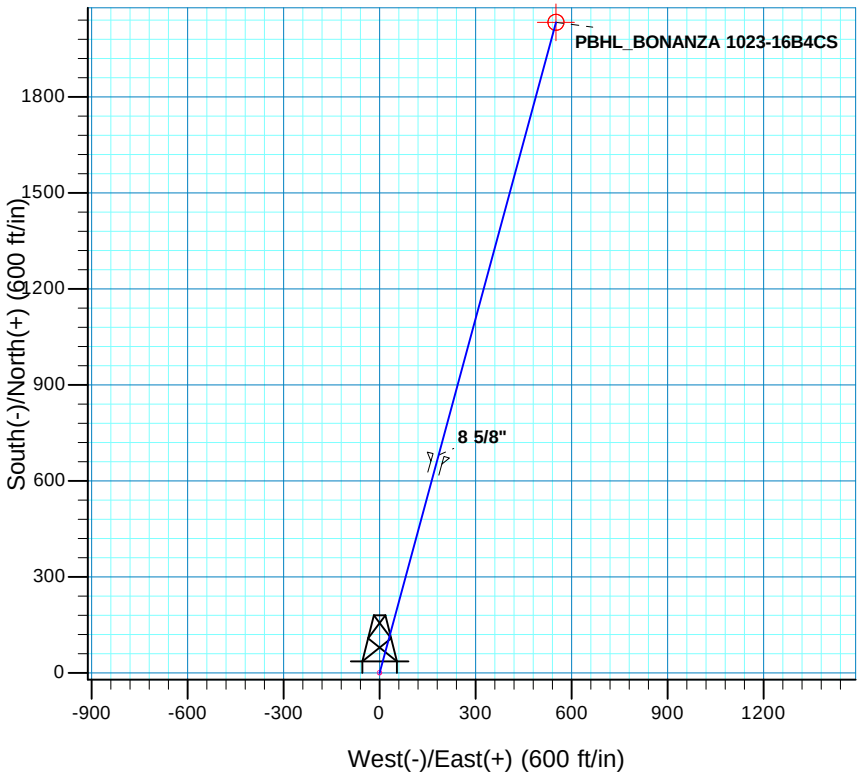
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8092.00	2033.10	551.11	14513375.88	2108921.13	39.953154	-109.328302	Circle (Radius: 25.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52238.1snT
Dip Angle: 65.84°
Date: 04/10/2012
Model: IGRF2010





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	
1800.00	30.00	15.17	1732.39	370.44	100.41	2.00	15.17	383.81	
4477.70	30.00	15.17	4051.35	1662.66	450.70	0.00	0.00	1722.66	
5977.70	0.00	0.00	5483.75	2033.10	551.11	2.00	180.00	2106.47	
8585.96	0.00	0.00	8092.00	2033.10	551.11	0.00	0.00	2106.47	PBHL_BONANZA 1023-16B4CS

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 16 T10S R23E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1108.00	1119.12	GREEN RIVER
1336.00	1360.02	BIRDSNEST
1839.00	1923.10	MAHOGANY
4036.00	4459.97	WASATCH
5967.00	6460.96	MESAVERDE
8092.00	8585.96	SEGO

CASING DETAILS

TVD	MD	Name	Size
2289.00	2442.71	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (BONANZA 1023-16B4CS/OH)

Created By: RobertScott Date: 9:15, April 11 2012

RECEI

API Well Number: 43047527720000

Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
BONANZA 1023-16
BONANZA 1023-16B4CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

11 April, 2012

Anadarko
Petroleum Corporation

RECEIVED: May 30, 2012

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well BONANZA 1023-16B4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Site:	BONANZA 1023-16	**North Reference:**	True
Well:	BONANZA 1023-16B4CS	**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 BONANZA 1023-16, SECTION 16 T10S R23E

Site Position:		**Northing:**	14,511,313.85 usft	**Latitude:**	39.947493
From:	Lat/Long	**Easting:**	2,108,931.45 usft	**Longitude:**	-109.328403
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.07 °

Well BONANZA 1023-16B4CS, 1156 FNL 1818 FEL

Well Position	**+N/-S**	28.78 ft	**Northing:**	14,511,332.83 usft	**Latitude:**	39.947572
	+E/-W	-522.84 ft	**Easting:**	2,108,408.16 usft	**Longitude:**	-109.330268
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,494.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/10/12	10.89	65.84	52,238

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	15.17

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	
1,800.00	30.00	15.17	1,732.39	370.44	100.41	2.00	2.00	0.00	15.17	
4,477.70	30.00	15.17	4,051.35	1,662.66	450.70	0.00	0.00	0.00	0.00	
5,977.70	0.00	0.00	5,483.75	2,033.10	551.11	2.00	-2.00	0.00	180.00	
8,585.96	0.00	0.00	8,092.00	2,033.10	551.11	0.00	0.00	0.00	0.00	PBHL_BONANZA 10

RECEIVED: May 30, 2012

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well BONANZA 1023-16B4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Site:	BONANZA 1023-16	**North Reference:**	True
Well:	BONANZA 1023-16B4CS	**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	15.17	399.98	1.68	0.46	1.75	2.00	2.00	0.00
500.00	4.00	15.17	499.84	6.74	1.83	6.98	2.00	2.00	0.00
600.00	6.00	15.17	599.45	15.15	4.11	15.69	2.00	2.00	0.00
700.00	8.00	15.17	698.70	26.91	7.29	27.88	2.00	2.00	0.00
800.00	10.00	15.17	797.47	42.01	11.39	43.52	2.00	2.00	0.00
900.00	12.00	15.17	895.62	60.42	16.38	62.60	2.00	2.00	0.00
1,000.00	14.00	15.17	993.06	82.13	22.26	85.10	2.00	2.00	0.00
1,100.00	16.00	15.17	1,089.64	107.11	29.03	110.98	2.00	2.00	0.00
1,119.12	16.38	15.17	1,108.00	112.26	30.43	116.31	2.00	2.00	0.00
GREEN RIVER									
1,200.00	18.00	15.17	1,185.27	135.33	36.68	140.21	2.00	2.00	0.00
1,300.00	20.00	15.17	1,279.82	166.75	45.20	172.77	2.00	2.00	0.00
1,360.02	21.20	15.17	1,336.00	187.13	50.73	193.89	2.00	2.00	0.00
BIRDSNEST									
1,400.00	22.00	15.17	1,373.17	201.34	54.58	208.60	2.00	2.00	0.00
1,500.00	24.00	15.17	1,465.21	239.05	64.80	247.67	2.00	2.00	0.00
1,600.00	26.00	15.17	1,555.84	279.84	75.85	289.93	2.00	2.00	0.00
1,700.00	28.00	15.17	1,644.94	323.65	87.73	335.33	2.00	2.00	0.00
1,800.00	30.00	15.17	1,732.39	370.44	100.41	383.81	2.00	2.00	0.00
Start 2677.70 hold at 1800.00 MD									
1,900.00	30.00	15.17	1,819.00	418.70	113.50	433.81	0.00	0.00	0.00
1,923.10	30.00	15.17	1,839.00	429.85	116.52	445.36	0.00	0.00	0.00
MAHOGANY									
2,000.00	30.00	15.17	1,905.60	466.96	126.58	483.81	0.00	0.00	0.00
2,100.00	30.00	15.17	1,992.20	515.22	139.66	533.81	0.00	0.00	0.00
2,200.00	30.00	15.17	2,078.80	563.47	152.74	583.81	0.00	0.00	0.00
2,300.00	30.00	15.17	2,165.41	611.73	165.82	633.81	0.00	0.00	0.00
2,400.00	30.00	15.17	2,252.01	659.99	178.90	683.81	0.00	0.00	0.00
2,442.71	30.00	15.17	2,289.00	680.60	184.49	705.17	0.00	0.00	0.00
8 5/8"									
2,500.00	30.00	15.17	2,338.61	708.25	191.98	733.81	0.00	0.00	0.00
2,600.00	30.00	15.17	2,425.21	756.51	205.07	783.81	0.00	0.00	0.00
2,700.00	30.00	15.17	2,511.82	804.77	218.15	833.81	0.00	0.00	0.00
2,800.00	30.00	15.17	2,598.42	853.02	231.23	883.81	0.00	0.00	0.00
2,900.00	30.00	15.17	2,685.02	901.28	244.31	933.81	0.00	0.00	0.00
3,000.00	30.00	15.17	2,771.63	949.54	257.39	983.81	0.00	0.00	0.00
3,100.00	30.00	15.17	2,858.23	997.80	270.47	1,033.81	0.00	0.00	0.00
3,200.00	30.00	15.17	2,944.83	1,046.06	283.55	1,083.81	0.00	0.00	0.00
3,300.00	30.00	15.17	3,031.43	1,094.32	296.64	1,133.81	0.00	0.00	0.00
3,400.00	30.00	15.17	3,118.04	1,142.58	309.72	1,183.81	0.00	0.00	0.00
3,500.00	30.00	15.17	3,204.64	1,190.83	322.80	1,233.81	0.00	0.00	0.00
3,600.00	30.00	15.17	3,291.24	1,239.09	335.88	1,283.81	0.00	0.00	0.00
3,700.00	30.00	15.17	3,377.84	1,287.35	348.96	1,333.81	0.00	0.00	0.00
3,800.00	30.00	15.17	3,464.45	1,335.61	362.04	1,383.81	0.00	0.00	0.00
3,900.00	30.00	15.17	3,551.05	1,383.87	375.12	1,433.81	0.00	0.00	0.00
4,000.00	30.00	15.17	3,637.65	1,432.13	388.21	1,483.81	0.00	0.00	0.00
4,100.00	30.00	15.17	3,724.25	1,480.38	401.29	1,533.81	0.00	0.00	0.00
4,200.00	30.00	15.17	3,810.86	1,528.64	414.37	1,583.81	0.00	0.00	0.00

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Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well BONANZA 1023-16B4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Site:	BONANZA 1023-16	**North Reference:**	True
Well:	BONANZA 1023-16B4CS	**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)
4,300.00	30.00	15.17	3,897.46	1,576.90	427.45	1,633.81	0.00	0.00	0.00
4,400.00	30.00	15.17	3,984.06	1,625.16	440.53	1,683.81	0.00	0.00	0.00
4,459.97	30.00	15.17	4,036.00	1,654.10	448.38	1,713.80	0.00	0.00	0.00
WASATCH									
4,477.70	30.00	15.17	4,051.35	1,662.66	450.70	1,722.66	0.00	0.00	0.00
Start Drop -2.00									
4,500.00	29.55	15.17	4,070.71	1,673.35	453.59	1,733.73	2.00	-2.00	0.00
4,600.00	27.55	15.17	4,158.54	1,719.48	466.10	1,781.53	2.00	-2.00	0.00
4,700.00	25.55	15.17	4,247.99	1,762.62	477.79	1,826.23	2.00	-2.00	0.00
4,800.00	23.55	15.17	4,338.94	1,802.73	488.66	1,867.78	2.00	-2.00	0.00
4,900.00	21.55	15.17	4,431.28	1,839.75	498.70	1,906.14	2.00	-2.00	0.00
5,000.00	19.55	15.17	4,524.91	1,873.63	507.88	1,941.25	2.00	-2.00	0.00
5,100.00	17.55	15.17	4,619.71	1,904.34	516.21	1,973.06	2.00	-2.00	0.00
5,200.00	15.55	15.17	4,715.56	1,931.84	523.66	2,001.55	2.00	-2.00	0.00
5,300.00	13.55	15.17	4,812.35	1,956.09	530.24	2,026.68	2.00	-2.00	0.00
5,400.00	11.55	15.17	4,909.95	1,977.07	535.92	2,048.42	2.00	-2.00	0.00
5,500.00	9.55	15.17	5,008.26	1,994.75	540.71	2,066.73	2.00	-2.00	0.00
5,600.00	7.55	15.17	5,107.14	2,009.10	544.61	2,081.61	2.00	-2.00	0.00
5,700.00	5.55	15.17	5,206.48	2,020.12	547.59	2,093.02	2.00	-2.00	0.00
5,800.00	3.55	15.17	5,306.16	2,027.78	549.67	2,100.96	2.00	-2.00	0.00
5,900.00	1.55	15.17	5,406.05	2,032.08	550.83	2,105.42	2.00	-2.00	0.00
5,977.70	0.00	0.00	5,483.75	2,033.10	551.11	2,106.47	2.00	-2.00	0.00
Start 2608.25 hold at 5977.70 MD									
6,000.00	0.00	0.00	5,506.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,100.00	0.00	0.00	5,606.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,200.00	0.00	0.00	5,706.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,300.00	0.00	0.00	5,806.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,400.00	0.00	0.00	5,906.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,460.96	0.00	0.00	5,967.00	2,033.10	551.11	2,106.47	0.00	0.00	0.00
MESAVERDE									
6,500.00	0.00	0.00	6,006.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,600.00	0.00	0.00	6,106.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,700.00	0.00	0.00	6,206.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,800.00	0.00	0.00	6,306.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
6,900.00	0.00	0.00	6,406.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,000.00	0.00	0.00	6,506.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,100.00	0.00	0.00	6,606.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,200.00	0.00	0.00	6,706.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,300.00	0.00	0.00	6,806.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,400.00	0.00	0.00	6,906.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,500.00	0.00	0.00	7,006.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,600.00	0.00	0.00	7,106.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,700.00	0.00	0.00	7,206.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,800.00	0.00	0.00	7,306.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
7,900.00	0.00	0.00	7,406.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,000.00	0.00	0.00	7,506.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,100.00	0.00	0.00	7,606.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,200.00	0.00	0.00	7,706.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,300.00	0.00	0.00	7,806.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,400.00	0.00	0.00	7,906.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,500.00	0.00	0.00	8,006.05	2,033.10	551.11	2,106.47	0.00	0.00	0.00
8,585.96	0.00	0.00	8,092.00	2,033.10	551.11	2,106.47	0.00	0.00	0.00
SEGO - PBHL_BONANZA 1023-16B4CS									

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Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well BONANZA 1023-16B4CS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5494 & KB 4 @ 5498.00ft (ASSUMED)
Site:	BONANZA 1023-16	**North Reference:**	True
Well:	BONANZA 1023-16B4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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_BONANZA 1023- - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,092.00	2,033.10	551.11	14,513,375.88	2,108,921.13	39.953154	-109.328302

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,442.71	2,289.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,119.12	1,108.00	GREEN RIVER			
1,360.02	1,336.00	BIRDSNEST			
1,923.10	1,839.00	MAHOGANY			
4,459.97	4,036.00	WASATCH			
6,460.96	5,967.00	MESAVERDE			
8,585.96	8,092.00	SEGO			

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
1,800.00	1,732.39	370.44	100.41	Start 2677.70 hold at 1800.00 MD
4,477.70	4,051.35	1,662.66	450.70	Start Drop -2.00
5,977.70	5,483.75	2,033.10	551.11	Start 2608.25 hold at 5977.70 MD
8,585.96	8,092.00	2,033.10	551.11	TD at 8585.96

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Pad: BONANZA 1023-16J PAD
Section 16 T10S R23E
Mineral Lease: ML-22186A

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

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

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

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

A. Existing Roads:

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

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

B. Planned Access Roads:

Approximately ±260' (0.05 miles) of county road re-route is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

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

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

C. Location of Existing and Proposed Facilities:

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

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

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Gathering Facilities:

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

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is ±1,200' and the individual segments are broken up as follows:

±1,200' (0.2 miles) –New 16" buried gas pipeline from the meter to the edge of the pad. The proposed pipeline will then tie into a previously proposed 16" buried gas pipeline submitted under separate cover. Please refer to Topo D2 - Pad and Pipeline Detail.
±1,295' (0.02 miles) – Re-Route 3" surface gas pipeline. This portion of pipeline is owned and operated by Questar. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,200'and the individual segments are broken up as follows:

±1,200' (0.2 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. The proposed pipeline will then tie into a previously proposed 6" buried liquid pipeline submitted under separate cover. Please refer to Topo D2 - Pad and Pipeline Detail.

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

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

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

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

D. Location and Type of Water Supply:

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

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

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

No water well is to be drilled on this lease.

E. Source of Construction Materials:

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

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F. Methods for Handling Waste Materials:

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

RNI in Sec. 5 T9S R22E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

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

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

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

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

Any additional pits necessary for subsequent operations, such as temporary flare pits, or workover pits, will contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of the work.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

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

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

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

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

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

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

G. Ancillary Facilities:

None are anticipated.

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

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

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

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

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

Interim Reclamation

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

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Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

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

Final Reclamation

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

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

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

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

Seeding and Measures Common to Interim and Final Reclamation

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

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

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

J. Surface/Mineral Ownership:

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

L. Other Information:

None

RECEIVED: May 30, 2012

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

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

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

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

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

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

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

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

Danielle Piernot

May 30, 2012
Date

API Well Number: 43047527720000

KerrMcGee

Kerr-McGee Oil & Gas Onshore LP
1099 18th Street, Suite 1800
Denver, CO 80202-1918

April 9, 2012

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

Re: Exception Location R649-3-3 and Directional Drilling R649-3-11
Bonanza 1023-16B4CS
T10S-R23E
Section 16: NWSE/NWNE
2057' FSL, 2372' FEL (surface)
1156' FNL, 1818' FEL (bottom hole)
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's Bonanza 1023-16B4CS is located within the area covered by Docket No. 2008-011 authorizing the equivalent of an approximate 10-acre well density pattern, and requiring approval for wells drilled at an exception location and wells drilled directionally in accordance with the referenced rules.

- Kerr-McGee is permitting this well at this location for geological reasons. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to minimize surface disturbance.

- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to Rule R6493-3 and Rule R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joseph D. Johnson
Landman II

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)

June 5, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Ponderosa 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 2012 within the Ponderosa Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
WELL PAD – 1023-16J		
43-047-52772	Bonanza 1023-16B4CS	Sec 16 T10S R23E 2057 FSL 2372 FEL
		BHL Sec 16 T10S R23E 1156 FNL 1818 FEL
WELL PAD – 1023-16H		
43-047-52773	Bonanza 1023-16A1CS	Sec 16 T10S R23E 2078 FNL 0638 FEL
		BHL Sec 16 T10S R23E 0495 FNL 0496 FEL

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

Michael L. Coulthard

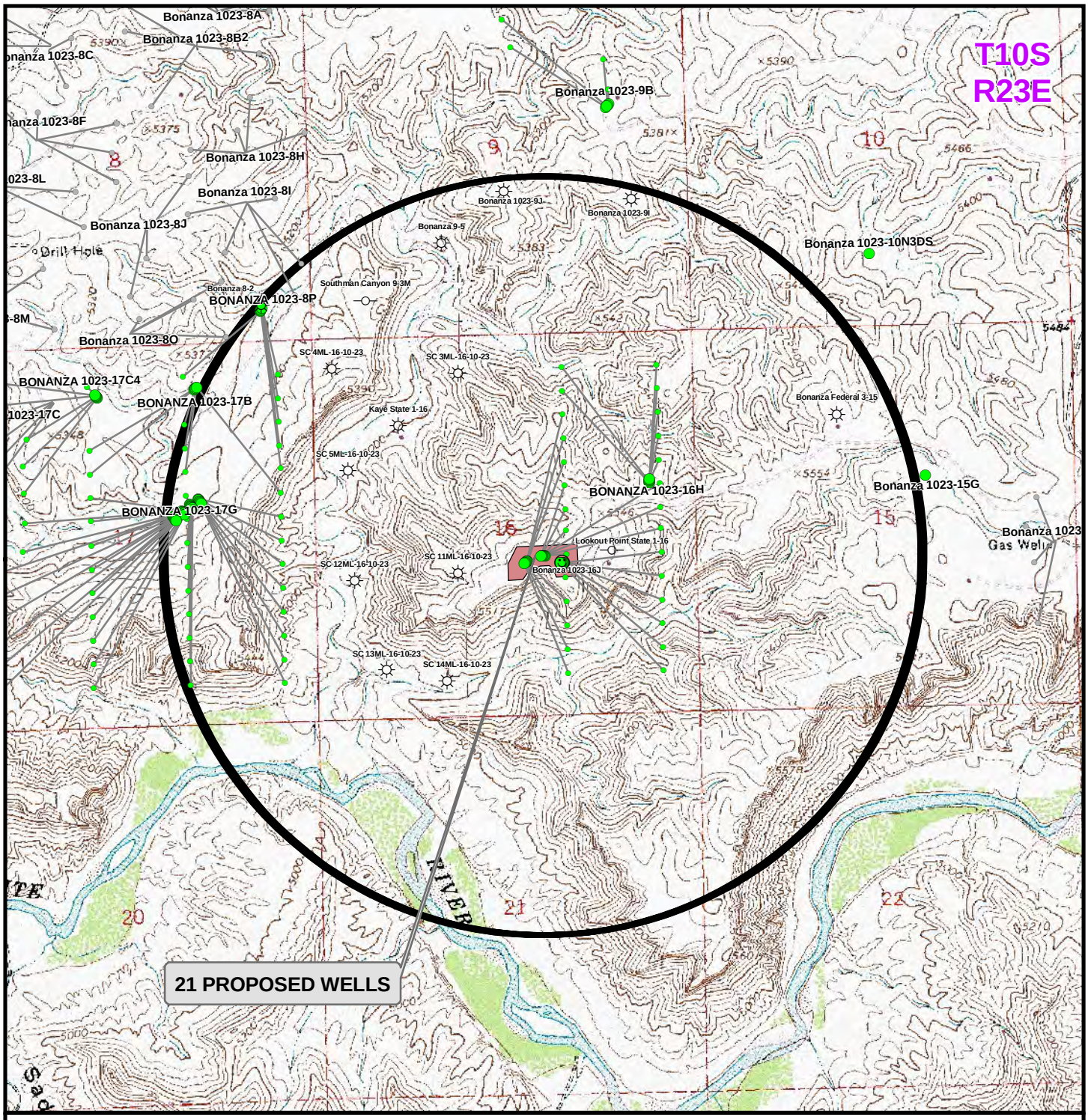
Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2012.06.05 06:59:05 -06'00'

bcc: File – Ponderosa Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:6-5-12

RECEIVED: June 05, 2012

API Well Number: 43047527720000



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 - BONANZA 1023-16J

TOPO C
21 PROPOSED WELLS
LOCATED IN SECTION 16, T10S, R23E, 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: 29A
DRAWN: TL	DATE: 23 Feb 2012	
REVISED:	DATE:	29A OF 33

RECEIVED: May 30, 2012

API Well Number: 43047527720000

Scientific Drilling
Rocky Mountain Operations

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: BONANZA 1023-16
Well: BONANZA 1023-16B4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

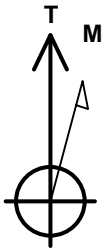
WELL DETAILS: BONANZA 1023-16B4CS

GL 5494 & KB 4 @ 5498.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14511332.83	2108408.17	39.947572	-109.330268

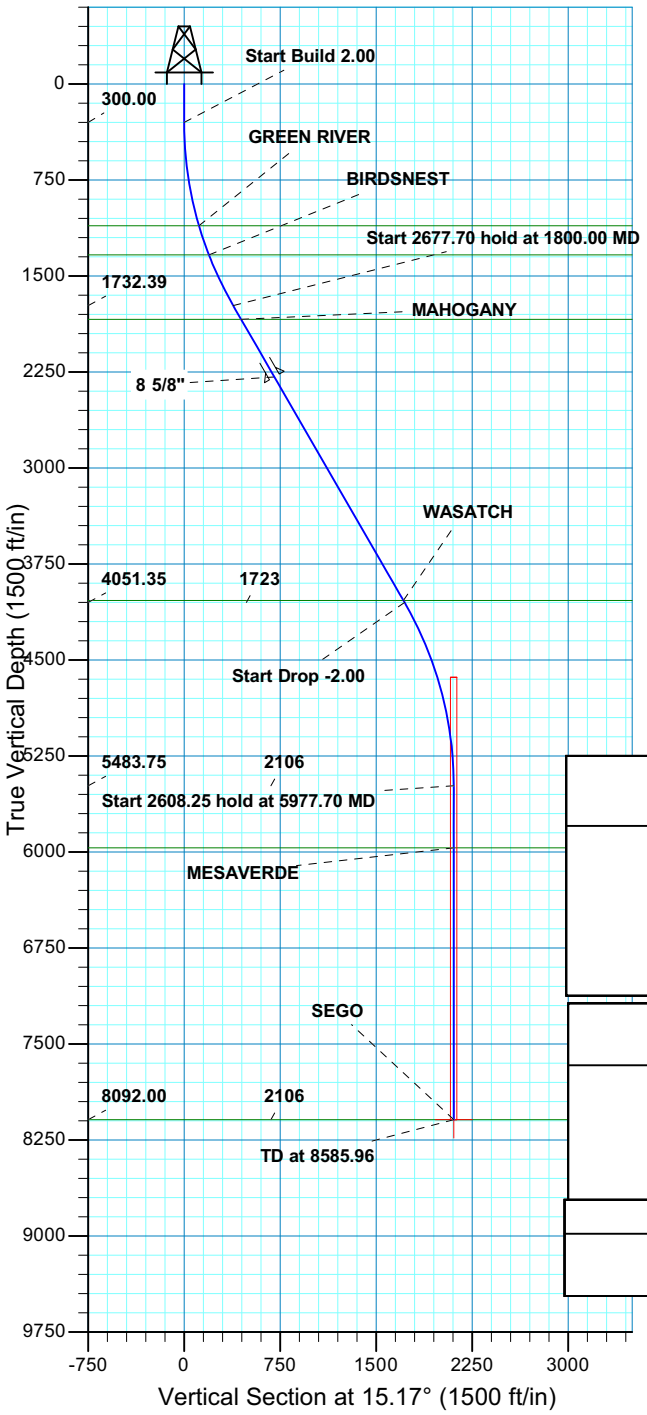
DESIGN TARGET DETAILS

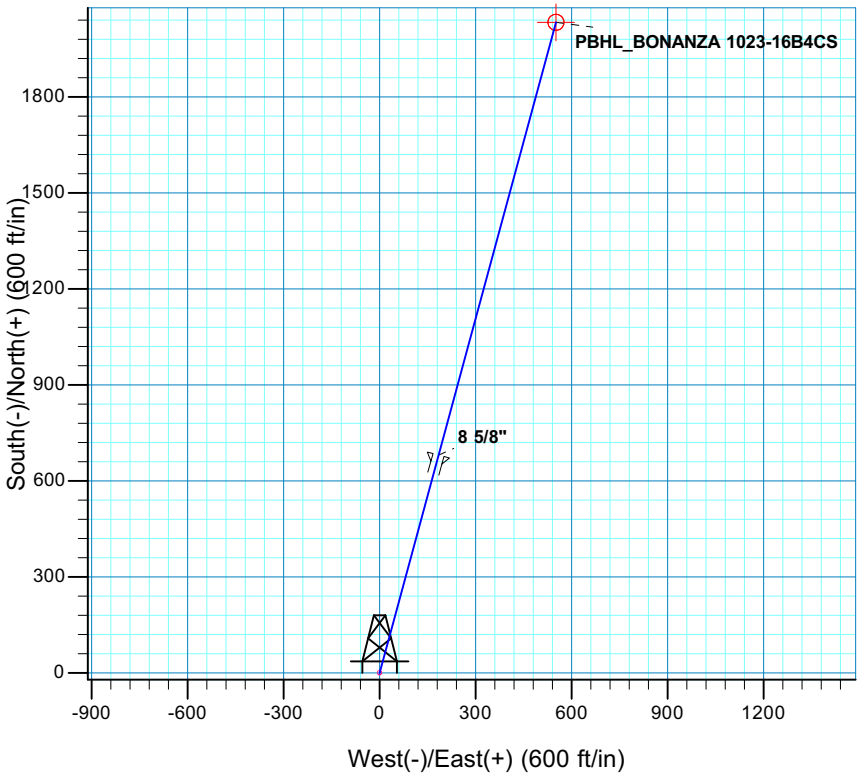
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8092.00	2033.10	551.11	14513375.88	2108921.13	39.953154	-109.328302	Circle (Radius: 25.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52238.1snT
Dip Angle: 65.84°
Date: 04/10/2012
Model: IGRF2010





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	
1800.00	30.00	15.17	1732.39	370.44	100.41	2.00	15.17	383.81	
4477.70	30.00	15.17	4051.35	1662.66	450.70	0.00	0.00	1722.66	
5977.70	0.00	0.00	5483.75	2033.10	551.11	2.00	180.00	2106.47	
8585.96	0.00	0.00	8092.00	2033.10	551.11	0.00	0.00	2106.47	PBHL_BONANZA 1023-16B4CS

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 16 T10S R23E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

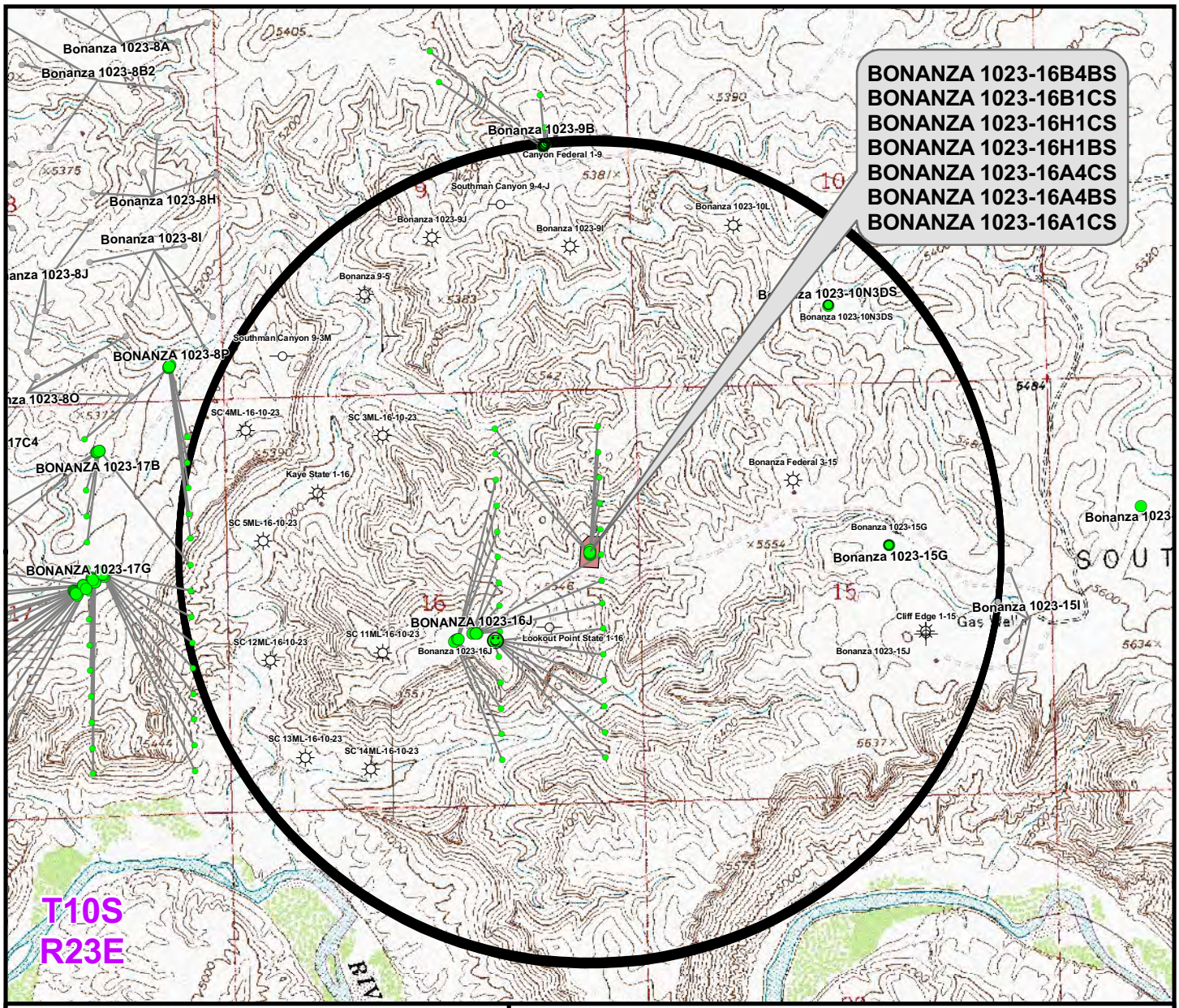
TVDPath	MDPath	Formation
1108.00	1119.12	GREEN RIVER
1336.00	1360.02	BIRDSNEST
1839.00	1923.10	MAHOGANY
4036.00	4459.97	WASATCH
5967.00	6460.96	MESAVERDE
8092.00	8585.96	SEGO

CASING DETAILS

TVD	MD	Name	Size
2289.00	2442.71	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (BONANZA 1023-16B4CS/OH)
Created By: Robert Scott Date: 9:21, April 12 2012

RECEIVED: May 30, 2012



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
BONANZA 1023-16B4BS	SC 3ML-16-10-23	1,468ft
BONANZA 1023-16B1CS	SC 3ML-16-10-23	1,441ft
BONANZA 1023-16H1CS	Lookout Point State 1-16	1,416ft
BONANZA 1023-16H1BS	Lookout Point State 1-16	1,713ft
BONANZA 1023-16A4CS	Lookout Point State 1-16	2,020ft
BONANZA 1023-16A4BS	Lookout Point State 1-16	2,332ft
BONANZA 1023-16A1CS	Bonanza 1023-9I	2,337ft

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 - BONANZA 1023-16H

TOPO C
BONANZA 1023-16B4BS,
BONANZA 1023-16B1CS, BONANZA 1023-16H1CS,
BONANZA 1023-16H1BS, BONANZA 1023-16A4CS,
BONANZA 1023-16A4BS & BONANZA 1023-16A1CS
LOCATED IN SECTION 16, T10S, R23E,
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: 15
DRAWN: TL	DATE: 27 Jan 2012	15 OF 19
REVISED:	DATE:	

RECEIVED: May 30, 2012

API Well Number: 43047527720000

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: BONANZA 1023-16H PAD
Well: BONANZA 1023-16A1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

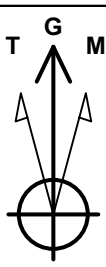
Scientific Drilling

Anadarko Petroleum Corporation

WELL DETAILS: BONANZA 1023-16A1CS					
GL 5473 & KB 4 @ 5477.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14512476.76	2110121.74	39.950624	-109.324080

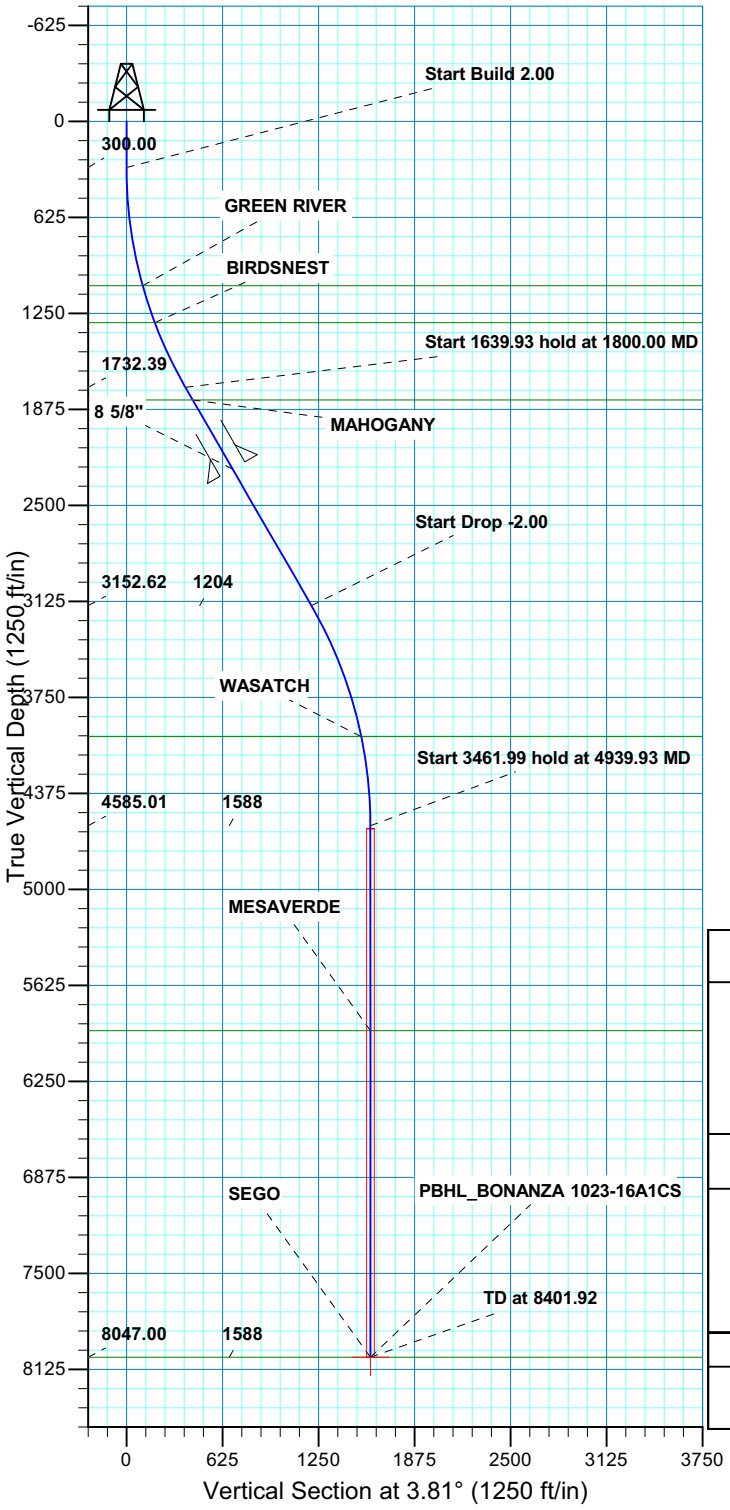
DESIGN TARGET DETAILS

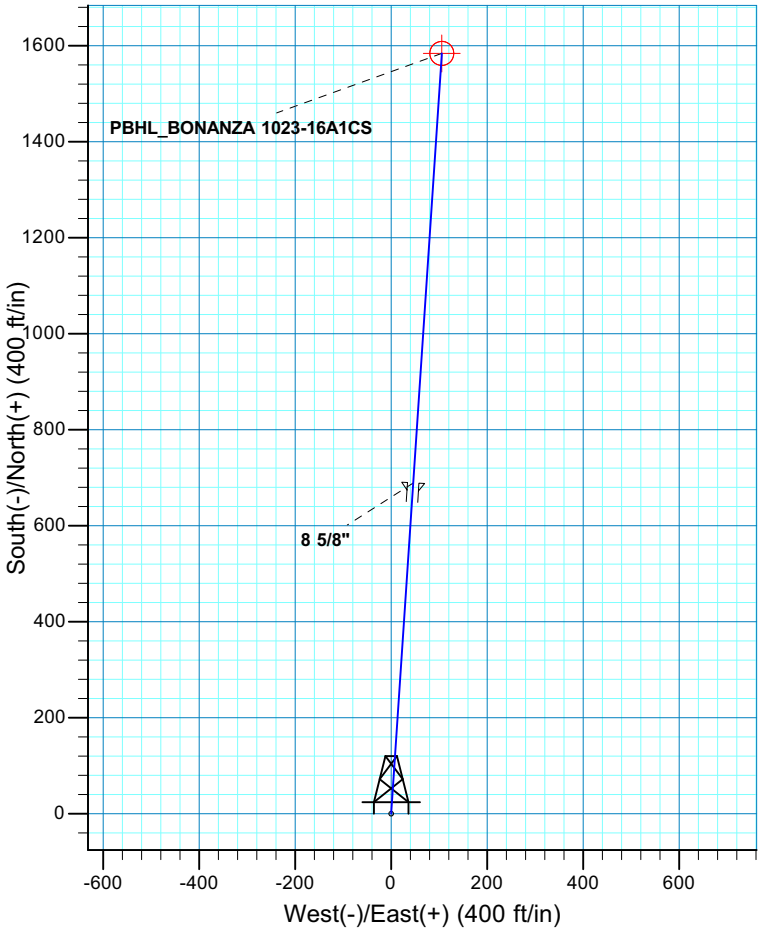
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8047.00	1584.08	105.37	14514060.84	2110227.12	39.954967	-109.323598	Circle (Radius: 25.00)
- plan hits target center								



Azimuths to Grid North
True North: -1.08°
Magnetic North: 9.80°

Magnetic Field
Strength: 52234.5snT
Dip Angle: 65.84°
Date: 05/03/2012
Model: IGRF2010





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
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	
1800.00	30.00	3.81	1732.39	382.96	25.47	2.00	3.81	383.81	
3439.93	30.00	3.81	3152.62	1201.12	79.90	0.00	0.00	1203.77	
4939.93	0.00	0.00	4585.01	1584.08	105.37	2.00	180.00	1587.58	
8401.92	0.00	0.00	8047.00	1584.08	105.37	0.00	0.00	1587.58	PBHL_BONANZA 1023-16A1CS

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: SECTION16 T10S R23E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1070.00	1079.59	GREEN RIVER
1311.00	1333.26	BIRDSNEST
1814.00	1894.23	MAHOGANY
4006.00	4356.90	WASATCH
5921.00	6275.92	MESAVERDE
8047.00	8401.92	SEGO

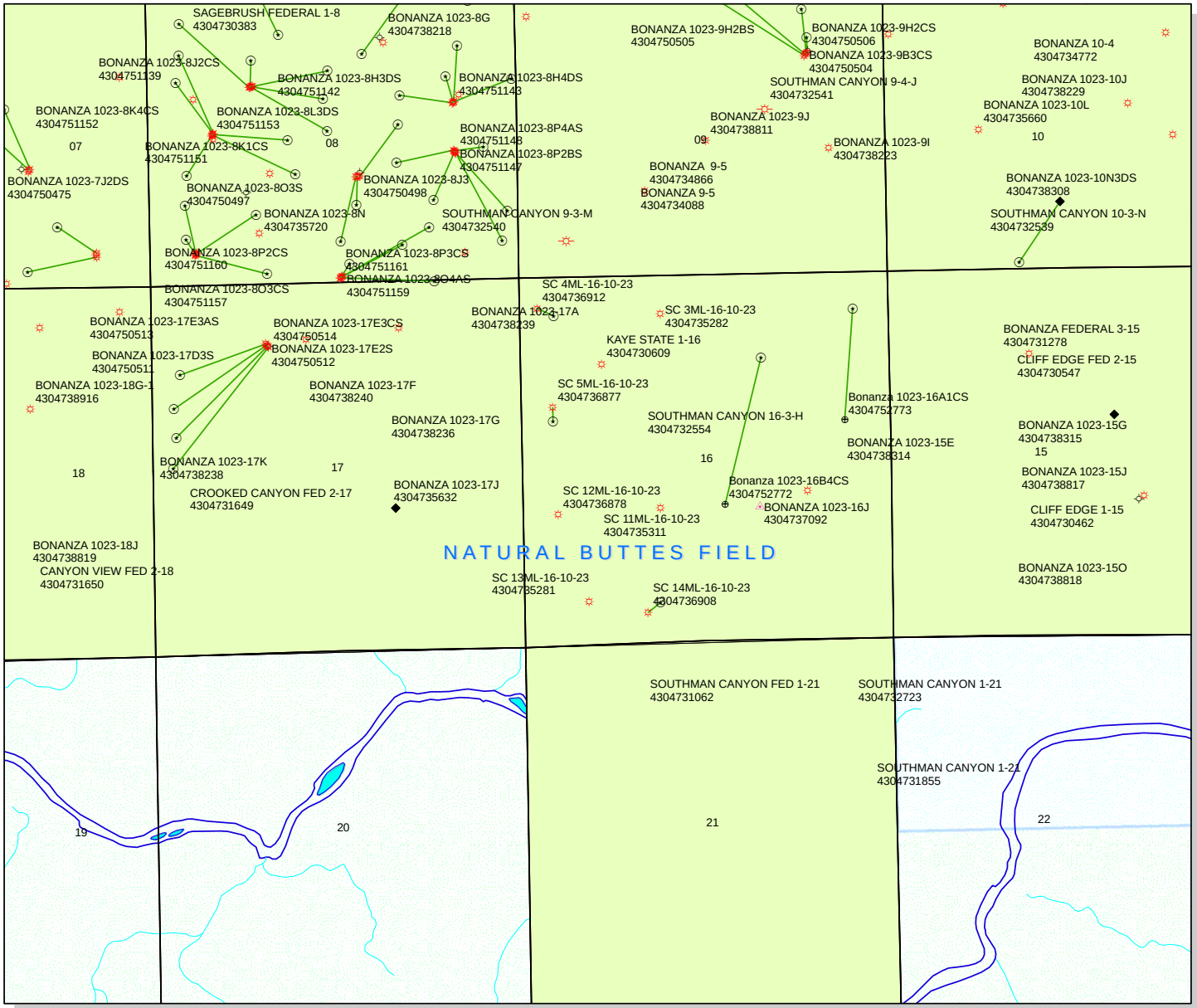
CASING DETAILS

TVD	MD	Name	Size
2264.00	2413.85	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (BONANZA 1023-16A1CS/OH)
Created By: Gary Mansfield Date: 16:01, May 23 2012

RECEIVED
Received: May 30, 2012

API Well Number: 43047527720000



API Number:

Well Name: Bonanza 1023-16B4CS

Township T1.0 . Range R2.3 . Section 16

Meridian: SLBM

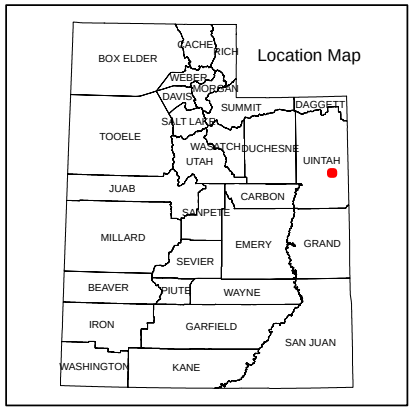
Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

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

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



1,900 950 0 1,900 Feet

1:17,710

RECEIVED: June 05, 2012

API Well Number: 43047527720000

BOPE REVIEW **KERR-MCGEE OIL & GAS ONSHORE, L.P. Bonanza 1023-16B4CS 43047527720000**

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Bonanza 1023-16B4CS 430			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2157	8092		
Previous Shoe Setting Depth (TVD)	0	2157		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5179	12.3		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	931	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	672	NO air/mist system
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	456	YES OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	456	NO Reasonable depth
Required Casing/BOPE Test Pressure=		2157	psi
***Max Pressure Allowed @ Previous Casing Shoe=**		0	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	5260	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4289	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3480	YES OK
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3954	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
***Max Pressure Allowed @ Previous Casing Shoe=**		2157	psi *Assumes 1psi/ft frac gradient

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

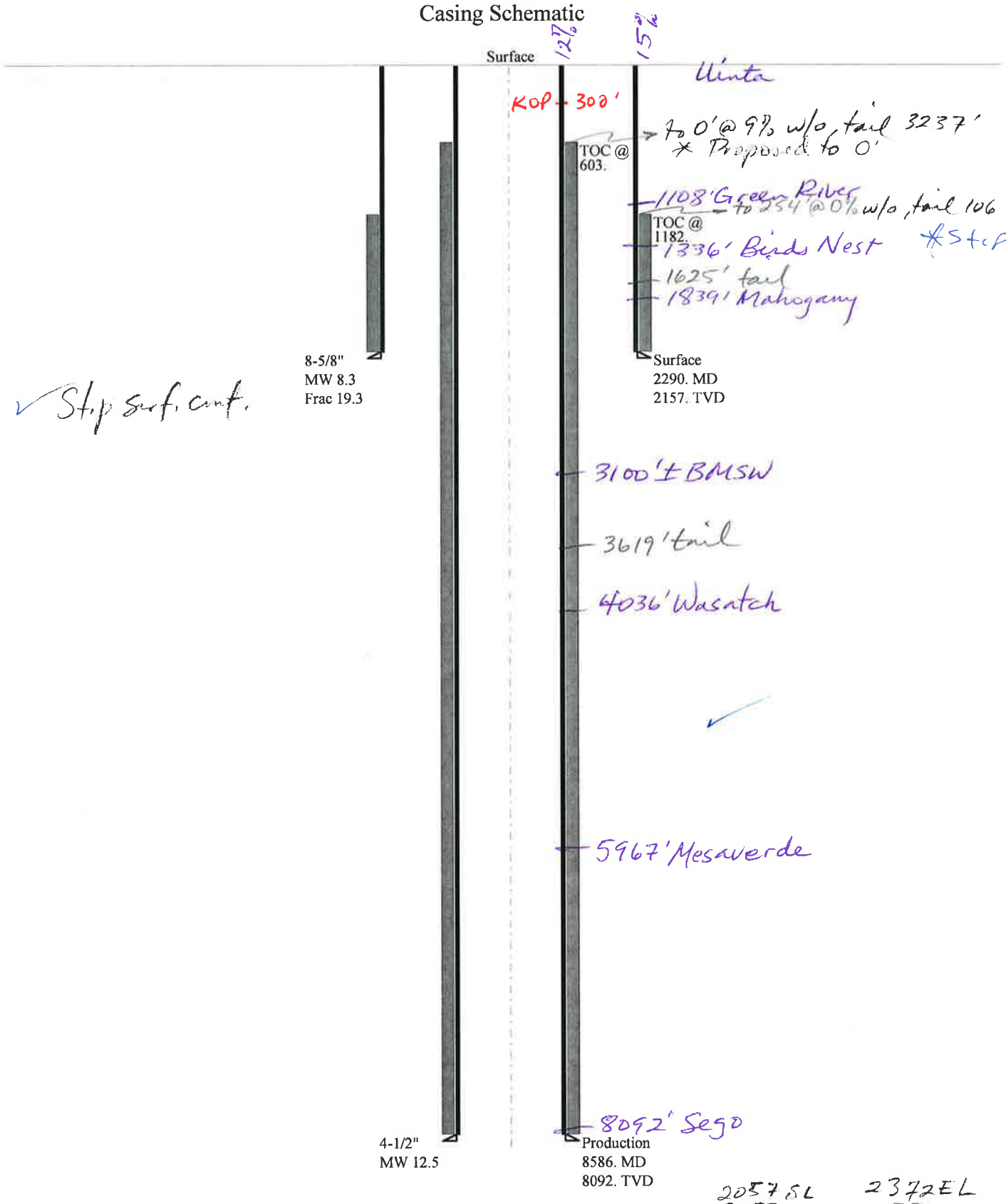
Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous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

RECEIVED: August 28, 2012

API Well Number: 43047527720000

43047527720000 Bonanza 1023-16B4CS

Casing Schematic



2057 SL
2033
4090
5252
1162 FNL

2372 EL
551
1821 FEL

OK.

NW NE Sec 16-10S-23E

API Well Number: 43047527720000

Well name:	**43047527720000 Bonanza 1023-16B4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-52772
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight:	8.300 ppg
Internal fluid density:	1.000 ppg

Burst

Max anticipated surface pressure:	1,682 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	2,157 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

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

Tension is based on air weight.
Neutral point: 1,985 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	104 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	1,182 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	629 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	30 °

Re subsequent strings:

Next setting depth:	8,092 ft
Next mud weight:	12.500 ppg
Next setting BHP:	5,255 psi
Fracture mud wt:	19.250 ppg
Fracture depth:	2,157 ft
Injection pressure:	2,157 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	2290	8.625	28.00	I-55	LT&C	2157	2290	7.892	90684

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	818	1880	2.299	2157	3390	1.57	60.4	348	5.76 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: August 17,2012
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2157 ft, a mud weight of 8.3 ppg An internal gradient of .052 psi/ft was used for collapse from TD to
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

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

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

API Well Number: 43047527720000

Well name:	**43047527720000 Bonanza 1023-16B4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-52772
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight: 12.500 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 3,474 psi

Internal gradient: 0.220 psi/ft

Calculated BHP 5,255 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

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

Tension is based on air weight.

Neutral point: 7,074 ft

Estimated cost: 179,335 ($)

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	187 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,000 ft
Cement top:	603 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	2107 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
2	5000	4.5	11.60	I-80	DQX	4525	5000	3.875	132000
1	3586	4.5	11.60	I-80	LT&C	8092	8586	3.875	47335

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2938	5958	2.028	4470	7780	1.74	93.9	267	2.84 J
1	5255	6360	1.210	5255	7780	1.48	41.4	212	5.12 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940

Date: August 17,2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8092 ft, a mud weight of 12.5 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

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

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

From: Jeff Conley
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Davis, Jim; Garrison, LaVonne; danielle.piernot@anadarko.com
Date: 9/18/2012 3:31 PM
Subject: APD Approvals

Hi all,

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

Bonanza 1023-16A1CS (4304752773)
Bonanza 1023-16B4BS (4304752781)
Bonanza 1023-16H1BS (4304752780)
Bonanza 1023-16B1CS (4304752779)
Bonanza 1023-16A4CS (4304752778)
Bonanza 1023-16H1CS (4304752859)
Bonanza 1023-16A4BS (4304752776)
Bonanza 1023-16B4CS (4304752772)
Bonanza 1023-16G1CS (4304752774)
Bonanza 1023-16G4CS (4304752845)
Bonanza 1023-16I4CS (4304752846)
Bonanza 1023-16P1BS (4304752847)
Bonanza 1023-16O4BS (4304752848)
Bonanza 1023-16P4BS (4304752849)
Bonanza 1023-16P1CS (4304752850)
Bonanza 1023-16J1BS (4304752851)
Bonanza 1023-16J4CS (4304752852)
Bonanza 1023-16I1BS (4304752853)
Bonanza 1023-16H4BS (4304752854)
Bonanza 1023-16I4BS (4304752855)
Bonanza 1023-16J1CS (4304752856)
Bonanza 1023-16O1CS (4304752857)
Bonanza 1023-16H4CS (4304752782)
Bonanza 1023-16I1CS (4304752858)
Bonanza 1023-16G4BS (4304752784)
Bonanza 1023-16O1BS (4304752783)
Bonanza 1023-16G1BS (4304752777)

Thank you,

Jeff Conley
SITLA Resource Specialist
(801)-538-5157
jconley@utah.gov

RECEIVED: September 18, 2012

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

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name Bonanza 1023-16B4CS
API Number 43047527720000 **APD No** 6112 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NWSE **Sec** 16 **Tw** 10.0S **Rng** 23.0E 2057 FSL 2372 FEL
GPS Coord (UTM) 642579 4423260 **Surface Owner**

Participants

Charles Chase (Kerr McGee), David Hackford (DOGM).

Regional/Local Setting & Topography

The general area is within the north edge of the White River Drainage southwest of Bonanza, Utah. This drainage is a major drainage beginning in Colorado to the east and joining the Green River approximately 18 miles to the northwest. The drainage consists of many significant side drainages. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. The topography is characterized by rolling hills, frequently divided by gentle to deep draws, which flow into the White River. The draws are often rimmed with steep side hills with exposed sand stone bedrock cliffs. Ouray, Utah is approximately 18 miles to the northwest with Vernal, Utah approximately 57 miles to the north. The White River is 3/4 mile to the southwest. This location will be for this well and twenty others, including the Bonanza 1023-16J which is a OS with surface pipe set.

Surface Use Plan

Current Surface Use
Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	**Width** 395 **Length** 820	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation includes black sagebrush, bud sage, horsebrush, halogeton, curly mesquite, shadscale, cheatgrass, broom snakeweed, rabbit brush, juniper and spring annuals.

Antelope, coyote, small mammals and birds. Endangered fish species exist in the White River. Domestic sheep graze the area in the winter.

Soil Type and Characteristics

RECEIVED: September 19, 2012

Rocky sandy clay loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	40	1 Sensitivity Level

Characteristics / Requirements

Reserve pit will measure 135' by 250' and 12' deep. It will be constructed on the south side of the location in an area of cut. This pit will be lined with a 30 mil plastic liner and a double felt sub-liner. A cuttings collection area will be located to the west of this pit.

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

Other Observations / Comments

David Hackford	6/21/2012
Evaluator	**Date / Time**

RECEIVED: September 19, 2012

Application for Permit to Drill
Statement of Basis
Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
6112	43047527720000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	Bonanza 1023-16B4CS		**Unit**	PONDEROSA	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NWSE 16 10S 23E S 2057 FSL 2372 FEL GPS Coord (UTM) 642579E 4423237N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,290’ of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,100'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 16 . The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters up hole. The proposed casing and cement should adequately protect any usable ground water in the area.

Brad Hill	6/28/2012
APD Evaluator	**Date / Time**

Surface Statement of Basis

This well, along with twenty others will be directionally drilled from the same drilling pad. One of these wells, the Bonanza 1023-16J is an OS with surface pipe set. The existing 16J pad will be part of the proposed 21 well pad. A reserve pit was constructed for the 16J well but it was later reclaimed without being used. The new reserve pit will be constructed in the same place. Because of the steep cliff-like slopes falling off to the north, south and west a double felt liner will be required along with a 30 mil plastic liner in the reserve pit. If a closed loop mud system is used, drilled cuttings will be dried and stored in a cuttings collection area measuring 170 feet by 150 feet located on the southwest corner of the pad. If these cuttings are free of hydrocarbons they will be mixed into the location soil and left in place. If hydrocarbons are present, it will be necessary to dispose of them in an approved disposal facility.

Jim Davis of SITLA and Ben Williams of DWR were invited to this presite investigation, but both had visited this site with Kerr MCGee personell at an earlier date and neither were present.

The White river is approx. 3/4 mile to the southwest. This location appears to be the best site for a drilling pad in the immediate area.

David Hackford	6/21/2012
Onsite Evaluator	**Date / Time**

RECEIVED: September 19, 2012

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the north side of the location.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.

RECEIVED: September 19, 2012

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/30/2012
API NO. ASSIGNED: 43047527720000
WELL NAME: Bonanza 1023-16B4CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)
PHONE NUMBER: 720 929-6156
CONTACT: Danielle Piernot

PROPOSED LOCATION: NWSE 16 100S 230E
Permit Tech Review: ✔

SURFACE: 2057 FSL 2372 FEL
Engineering Review: ✔

BOTTOM: 1156 FNL 1818 FEL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 39.94726
LONGITUDE: -109.33100
UTM SURF EASTINGS: 642579.00
NORTHINGS: 4423237.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 3 - State
LEASE NUMBER: ML 22186 A
PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE
SURFACE OWNER: 3 - State
COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

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

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: PONDEROSA

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

Board Cause No: Cause 179-14
Effective Date: 6/12/2008
Siting: 460' Fr Ext Drilling Unit Boundary

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
25 - Surface Casing - hmacdonald

RECEIVED: September 19, 2012

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: Bonanza 1023-16B4CS
API Well Number: 43047527720000
Lease Number: ML 22186 A
Surface Owner: STATE
Approval Date: 9/19/2012

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 179-14. 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. 179-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

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

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

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

Surface casing shall be cemented to the surface.

Additional Approvals:

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

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

Notification Requirements:

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

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

Contact Information:

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

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-231-8956 - after office hours

Reporting Requirements:

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

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

Approved By:

Approved By:

For John Rogers
Associate Director, Oil & Gas

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22186 A

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: PONDEROSA

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: Bonanza 1023-16B4CS

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

9. API NUMBER: 43047527720000

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: 2057 FSL 2372 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 16 Township: 10.0S Range: 23.0E 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: 9/19/2013	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: September 12, 2013

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Teena Paulo	720 929-6236	Staff Regulatory Specialist
SIGNATURE N/A		**DATE** 9/4/2013

RECEIVED: Sep. 04, 2013

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047527720000

API: 43047527720000
Well Name: Bonanza 1023-16B4CS
Location: 2057 FSL 2372 FEL QTR NWSE SEC 16 TWNP 100S RNG 230E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 9/19/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Teena Paulo **Date:** 9/4/2013
Title: Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Sep. 04, 2013

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22186 A

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: PONDEROSA

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: Bonanza 1023-16B4CS

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

9. API NUMBER: 43047527720000

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: 2057 FSL 2372 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 16 Township: 10.0S Range: 23.0E 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: 9/19/2014	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining
August 11, 2014
Date:
By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Teena Paulo	720 929-6236	Staff Regulatory Specialist

SIGNATURE	DATE
N/A	8/7/2014

RECEIVED: Aug. 07, 2014

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047527720000

API: 43047527720000
Well Name: Bonanza 1023-16B4CS
Location: 2057 FSL 2372 FEL QTR NWSE SEC 16 TWNP 100S RNG 230E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 9/19/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Teena Paulo **Date:** 8/7/2014
Title: Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Aug. 07, 2014

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

September 24, 2015

Kerr-McGee Oil & Gas Onshore, LP.
1099 18th Street, Suite 600
Denver, CO 80217

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

Ladies and Gentlemen:

Enclosed find the list of APDs that is being rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded as of September 24, 2015.

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

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

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Vernal

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

UTAH DNR OIL, GAS & MINING

43-047-52757	NBU 921-23L GR
43-047-52772	BONANZA 1023-16B4CS
43-047-52773	BONANZA 1023-16A1CS
43-047-52776	BONANZA 1023-16A4BS
43-047-52777	BONANZA 1023-16G1BS
43-047-52778	BONANZA 1023-16A4CS
43-047-52779	BONANZA 1023-16B1CS
43-047-52780	BONANZA 1023-16H1BS
43-047-52781	BONANZA 1023-16B4BS
43-047-52782	BONANZA 1023-16H4CS
43-047-52783	BONANZA 1023-16O1BS
43-047-52784	BONANZA 1023-16G4BS
43-047-52845	BONANZA 1023-16G4CS
43-047-52846	BONANZA 1023-1614CS
43-047-52847	BONANZA 1023-16P1BS
43-047-52848	BONANZA 1023-16O4BS
43-047-52849	BONANZA 1023-16P4BS
43-047-52850	BONANZA 1023-16P1CS
43-047-52851	BONANZA 1023-16J1BS
43-047-52852	BONANZA 1023-16J4CS
43-047-52853	BONANZA 1023-16I1BS
43-047-52854	BONANZA 1023-16H4BS
43-047-52855	BONANZA 1023-16I4BS
43-047-52856	BONANZA 1023-16J1CS
43-047-52857	BONANZA 1023-16O1CS
43-047-52858	BONANZA 1023-16I1CS
43-047-52859	BONANZA 1023-16H1CS