

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

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>		<b>1. WELL NAME and NUMBER</b> NBU 922-30C1CS
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. OPERATOR PHONE</b> 720 929-6515
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217		<b>9. OPERATOR E-MAIL</b> julie.jacobson@anadarko.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU463	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>12. SURFACE OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>
<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	680 FNL 1982 FWL	NENW	30	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	405 FNL 1988 FWL	NENW	30	9.0 S	22.0 E	S
At Total Depth	405 FNL 1988 FWL	NENW	30	9.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 405	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 551
<b>24. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 300	<b>25. PROPOSED DEPTH</b> MD: 9637 TVD: 9622	
<b>26. ELEVATION - GROUND LEVEL</b> 4950	<b>27. BOND NUMBER</b> WYB000291	<b>28. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8496

**Hole, Casing, and Cement Information**

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
SURF	11	8.625	0 - 2630	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 - 9637	11.6	I-80 LT&C	12.5	Premium Lite High Strength	320	3.38	11.0
							50/50 Poz	1270	1.31	14.3

**ATTACHMENTS**

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

<b>NAME</b> Laura Abrams	<b>TITLE</b> Regulatory Analyst II	<b>PHONE</b> 720 929-6356
<b>SIGNATURE</b>	<b>DATE</b> 06/16/2011	<b>EMAIL</b> Laura.Abrams@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047516750000	<b>APPROVAL</b>   Permit Manager	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 922-30C1CS**

Surface: 680 FNL / 1982 FWL NENW  
 BHL: 405 FNL / 1988 FWL NENW

Section 30 T9S R22E

Unitah County, Utah  
 Mineral Lease: USA UTU 0463

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1520	
Birds Nest	1807	Water
Mahogany	2182	Water
Wasatch	4778	Gas
Mesaverde	7411	Gas
MVU2	8350	Gas
MVL1	8823	Gas
TVD	9622	
TD	9637	

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*



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

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

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

#### *Variance for BOPE Requirements*

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

#### *Variance for Mud Material Requirements*

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

#### *Variance for Special Drilling Operation (surface equipment placement) Requirements*

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

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

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

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

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

***Conclusion***

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

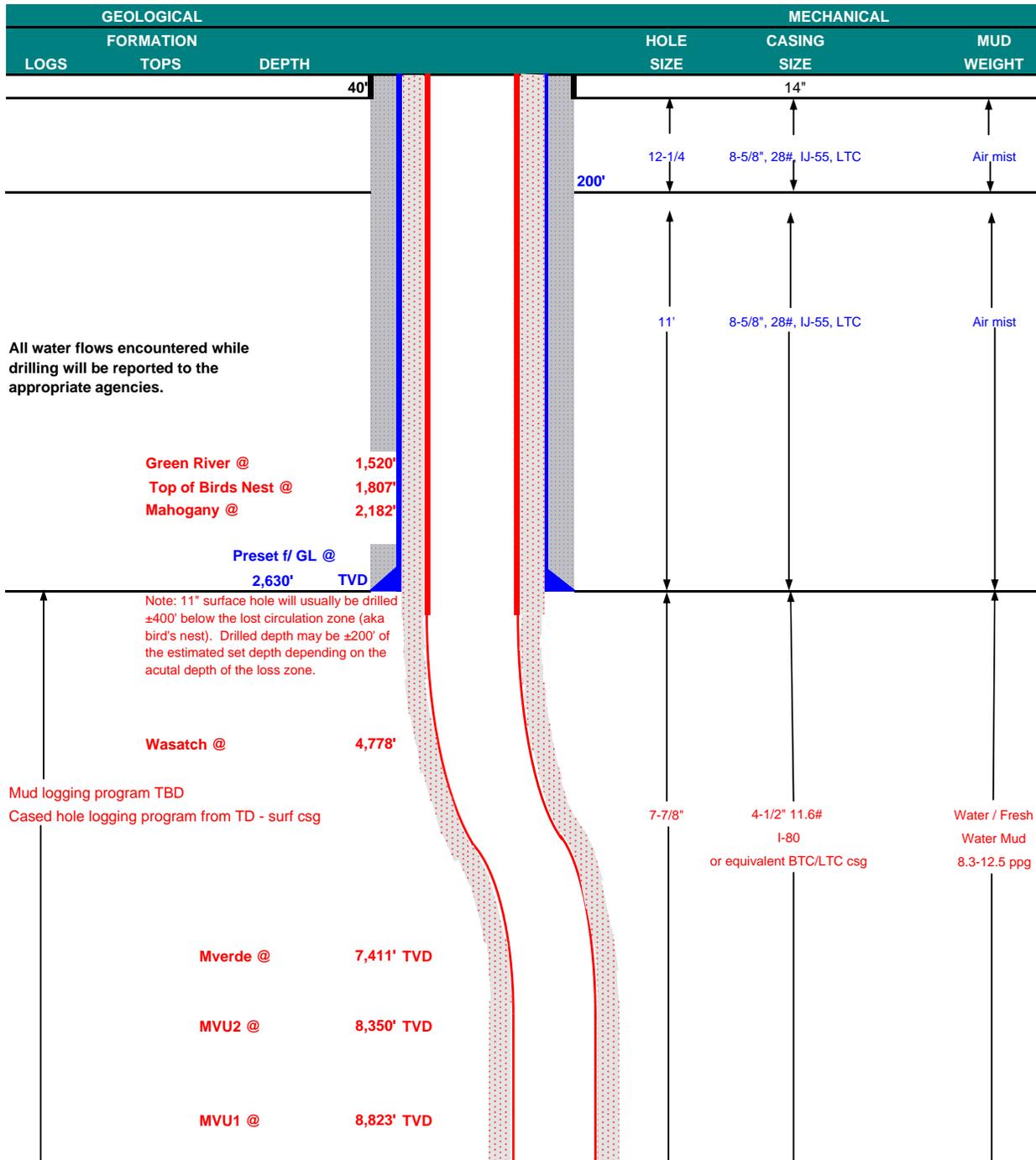
10. **Other Information:**

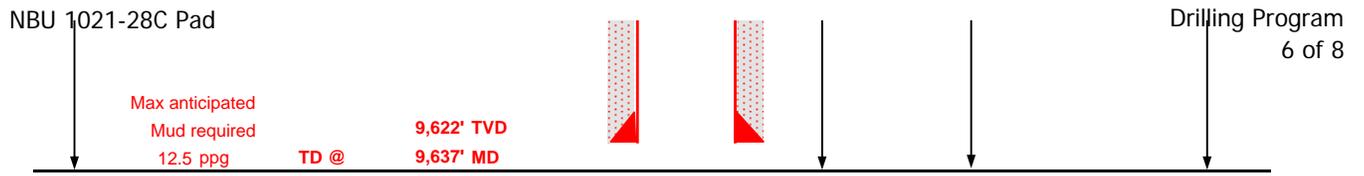
*Please refer to the attached Drilling Program.*



### KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	June 9, 2011			
WELL NAME	<b>NBU 922-30C1CS</b>		TD	9,622'	TVD	9,637' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4950'
SURFACE LOCATION	NENW	680 FNL	1982 FWL	Sec 30	T 9S	R 22E	
	Latitude:	40.012405	Longitude:	-109.483597			NAD 83
BTM HOLE LOCATION	NENW	405 FNL	1988 FWL	Sec 30	T 9S	R 22E	
	Latitude:	40.013160	Longitude:	-109.483577			NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.						







**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	LTC		BTC
							COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,630	28.00	IJ-55	LTC	2.06	1.53	5.40	N/A
PRODUCTION	4-1/2"	0 to 9,637	11.60	I-80	LTC/BTC	7,780	6,350	279,000	367,000
						1.11	1.02	3.09	4.06

**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 Option 1	LEAD 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs) 1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE Option 2	<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
	LEAD 2,130'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	35%	11.00	3.82
	TAIL 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD 4,277'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	20%	11.00	3.38
	TAIL 5,360'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,270	35%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained  
 \*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

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

**ADDITIONAL INFORMATION**

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

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

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

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

DRILLING ENGINEER:

Nick Spence / Danny Showers

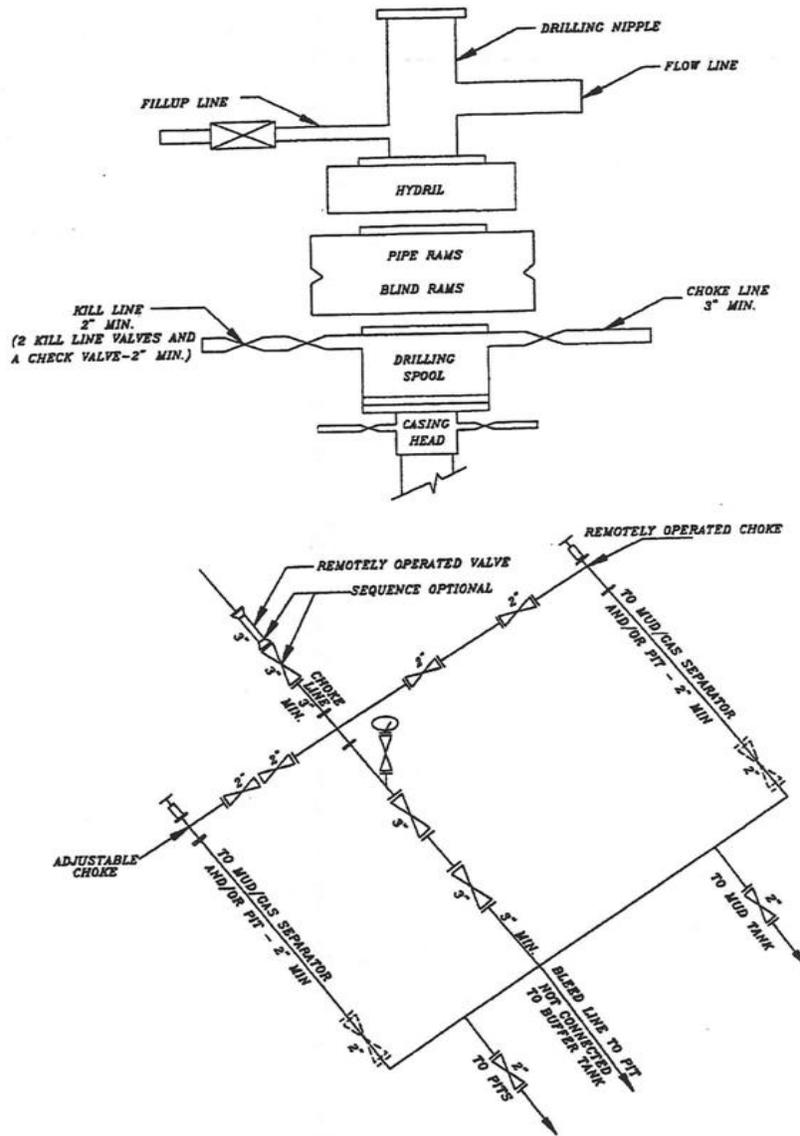
DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

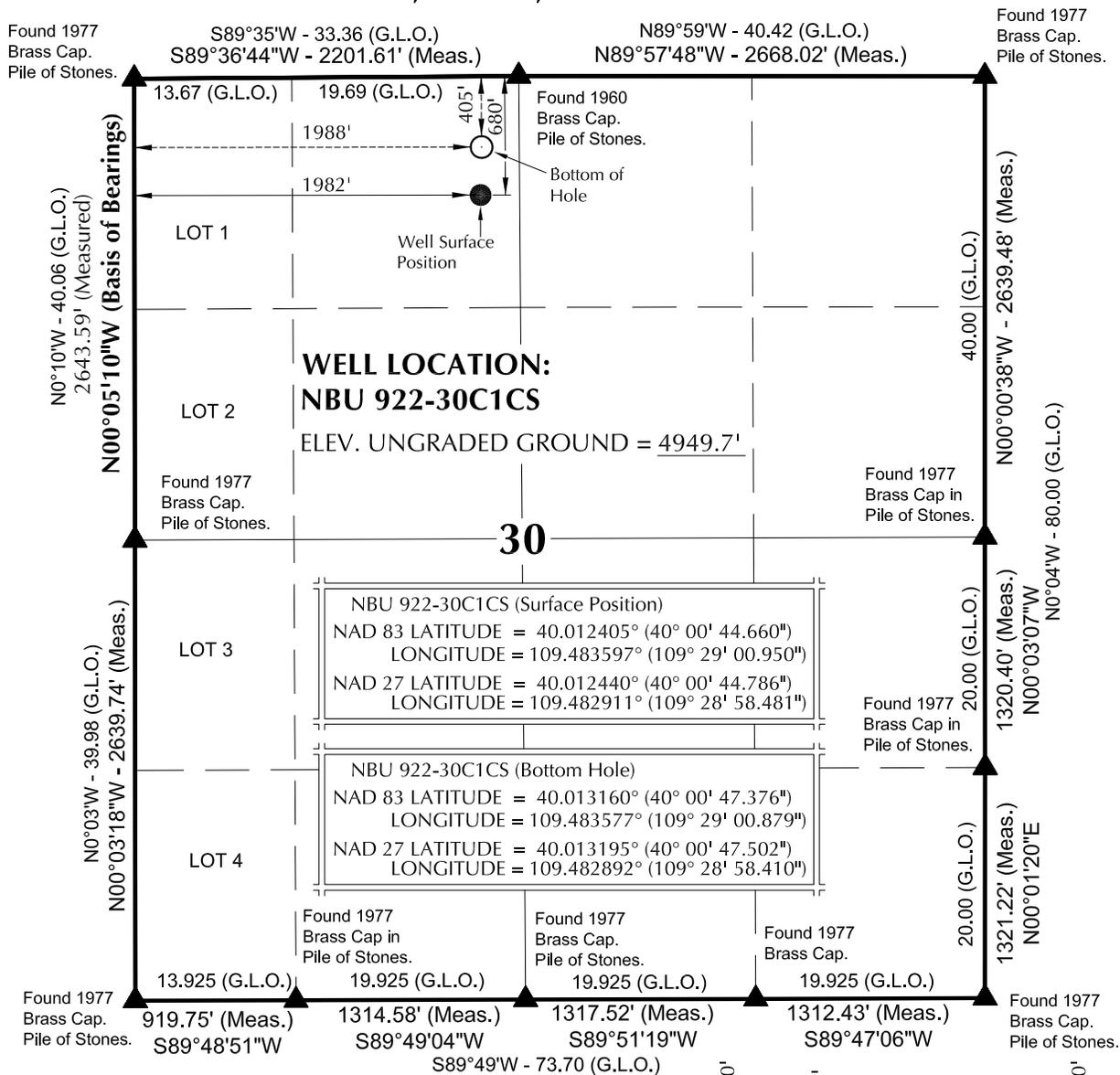
DATE:

**EXHIBIT A**  
**NBU 922-30C1CS**



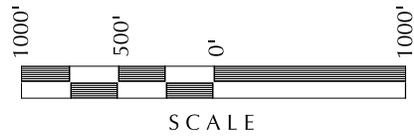
**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

# T9S, R22E, 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 N01°09'58"E 274.99' 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 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'.



**SURVEYOR'S CERTIFICATE**

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

PROF. SEAL  
No. 6028691  
**JOHN R. HAUGH**  
PROFESSIONAL LAND SURVEYOR  
REGISTRATION No. 6028691  
STATE OF UTAH 1-10-11

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

**WELL PAD: NBU 922-30C**

**NBU 922-30C1CS  
WELL PLAT**

**405' FNL, 1988' FWL (Bottom Hole)  
NE 1/4 NW 1/4 OF SECTION 30, T9S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.**

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

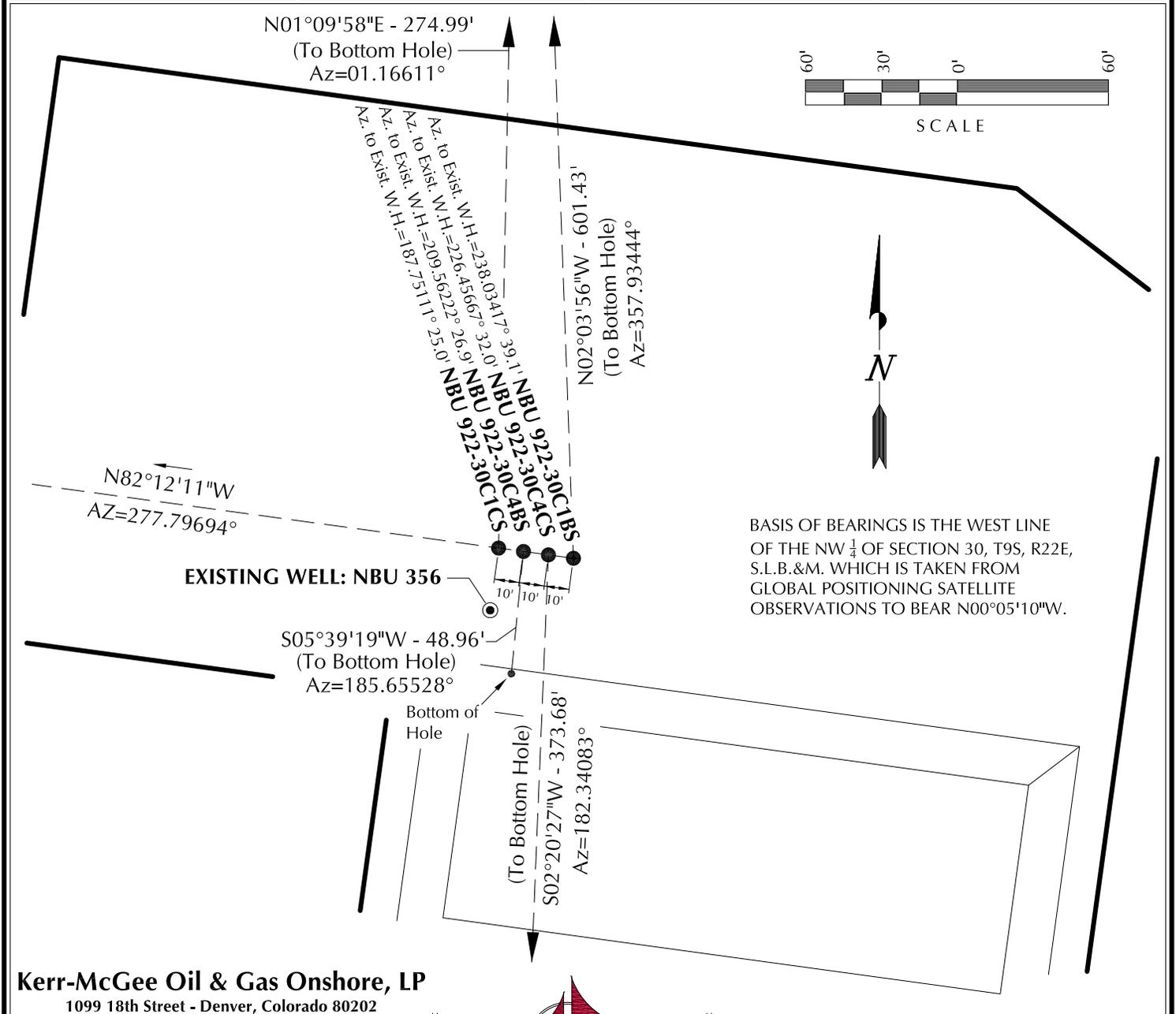
**TIMBERLINE** (435) 789-1365  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 07-12-10	SURVEYED BY: M.S.B.	SHEET NO: <b>1</b> 1 OF 16
DATE DRAWN: 07-14-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'		Date Last Revised: 01-07-11 E.M.S.

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 922-30C1CS	40°00'44.660"	109°29'00.950"	40°00'44.786"	109°28'58.481"	680' FNL 1982' FWL	40°00'47.376"	109°29'00.879"	40°00'47.502"	109°28'58.410"	405' FNL 1988' FWL
NBU 922-30C4BS	40°00'44.646"	109°29'00.823"	40°00'44.772"	109°28'58.354"	681' FNL 1992' FWL	40°00'44.165"	109°29'00.885"	40°00'44.291"	109°28'58.415"	730' FNL 1987' FWL
NBU 922-30C4CS	40°00'44.633"	109°29'00.695"	40°00'44.759"	109°28'58.226"	683' FNL 2002' FWL	40°00'40.944"	109°29'00.890"	40°00'41.070"	109°28'58.421"	1056' FNL 1986' FWL
NBU 922-30C1BS	40°00'44.619"	109°29'00.567"	40°00'44.746"	109°28'58.098"	684' FNL 2012' FWL	40°00'50.557"	109°29'00.847"	40°00'50.684"	109°28'58.378"	83' FNL 1991' FWL
NBU 356	40°00'44.415"	109°29'00.993"	40°00'44.541"	109°28'58.524"	705' FNL 1979' FWL	40.014044°	109.483569°	40.014079°	109.482883°	

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-30C1CS	274.9'	5.6'	NBU 922-30C4BS	-48.7'	-4.8'	NBU 922-30C4CS	-373.4'	-15.3'	NBU 922-30C1BS	601.0'	-21.7'



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

**WELL PAD - NBU 922-30C**

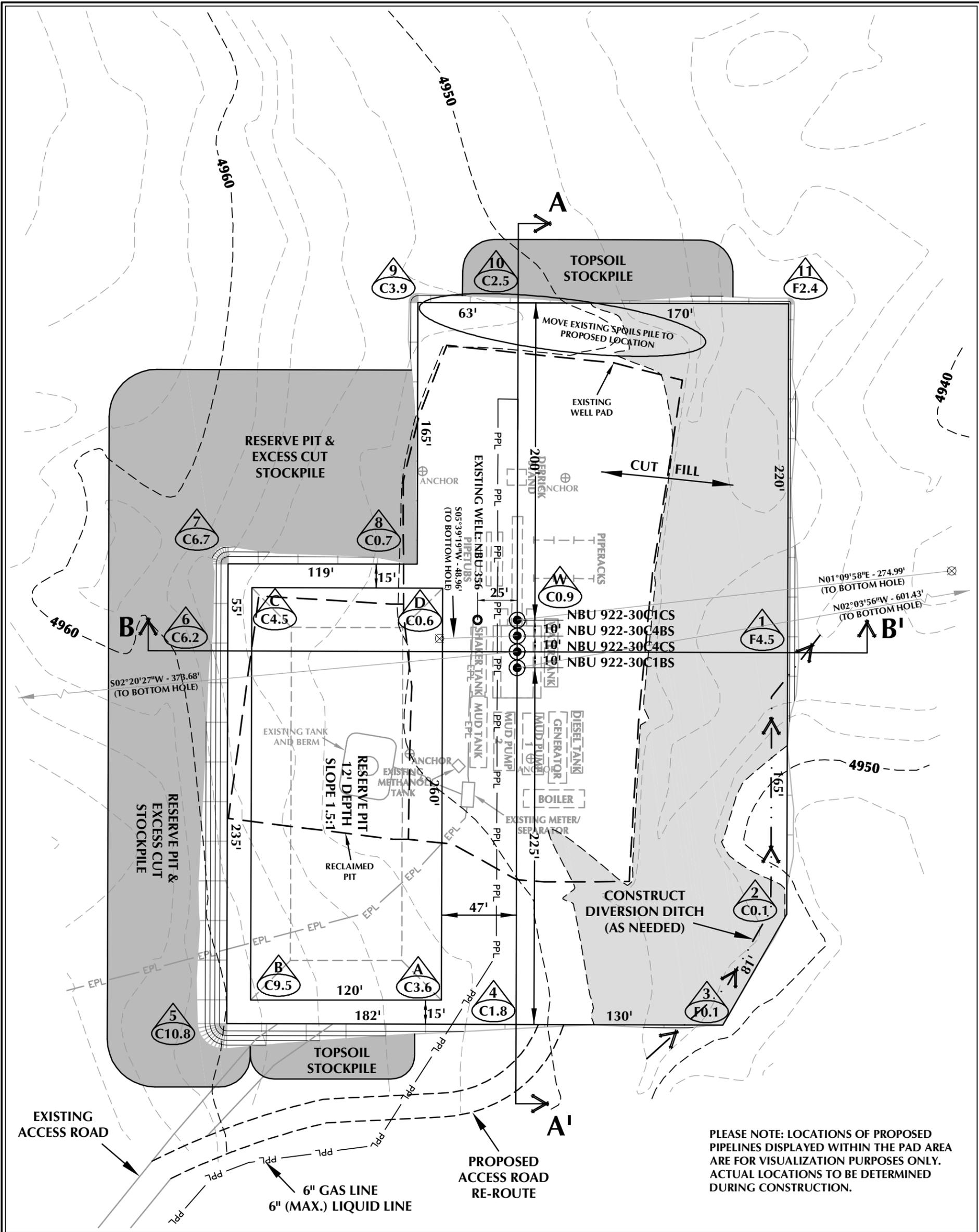
**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE SURVEYED: 07-12-10	SURVEYED BY: M.S.B.	SHEET NO: <b>5</b>
DATE DRAWN: 07-14-10	DRAWN BY: B.M.	
SCALE: 1" = 60'	Date Last Revised: 01-06-11 E.M.S.	5 OF 16



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

**WELL PAD - NBU 922-30C DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4949.9'  
 FINISHED GRADE ELEVATION = 4949.0'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.42 ACRES  
 TOTAL DISTURBANCE AREA = 4.60 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

WELL PAD - NBU 922-30C

WELL PAD - LOCATION LAYOUT  
 NBU 922-30C1CS, NBU 922-30C4BS,  
 NBU 922-30C4CS & NBU 922-30C1BS  
 LOCATED IN SECTION 30, T9S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



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

**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 7,770 C.Y.  
 TOTAL FILL FOR WELL PAD = 3,969 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,862 C.Y.  
 EXCESS MATERIAL = 3,801 C.Y.

**RESERVE PIT QUANTITIES**  
 TOTAL CUT FOR RESERVE PIT  
 +/- 11,020 CY  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 42,290 BARRELS

**WELL PAD LEGEND**

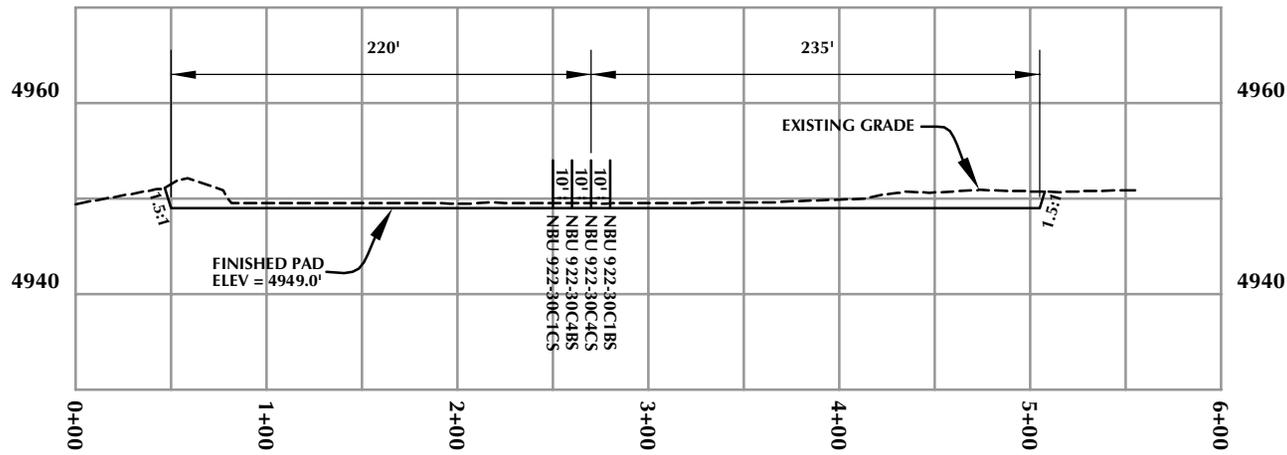
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



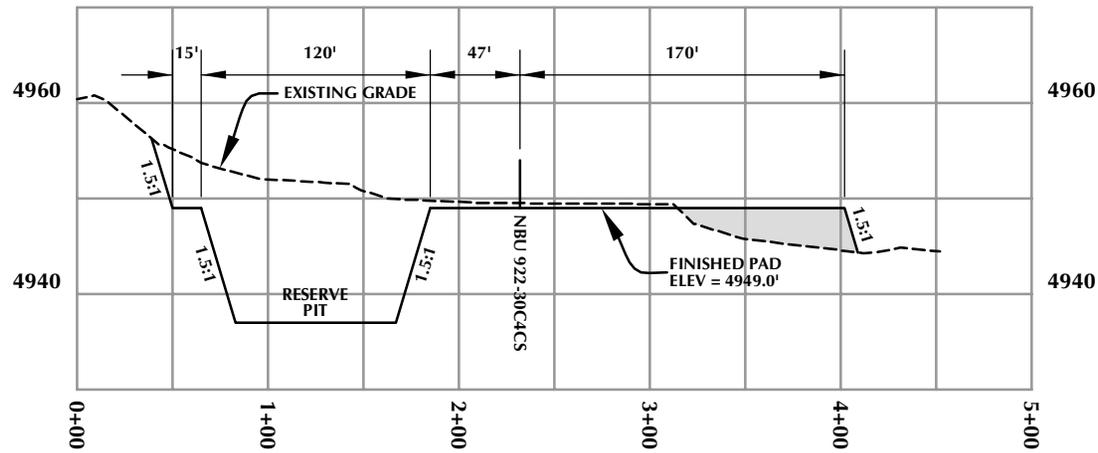
HORIZONTAL 0 30 60 1" = 60'  
 2' CONTOURS

Scale: 1"=60' Date: 1/14/11 SHEET NO:  
 REVISED: TAR 5/13/11 6 6 OF 16

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



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

WELL PAD - NBU 922-30C

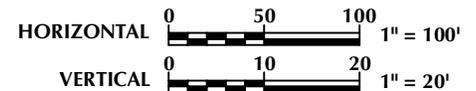
WELL PAD - CROSS SECTIONS  
NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., Uintah County, Utah



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(435) 789-1365



Scale: 1"=100'

Date: 1/14/11

SHEET NO:

REVISED:

**7**

7 OF 16

**RECEIVED: June 16, 2011**



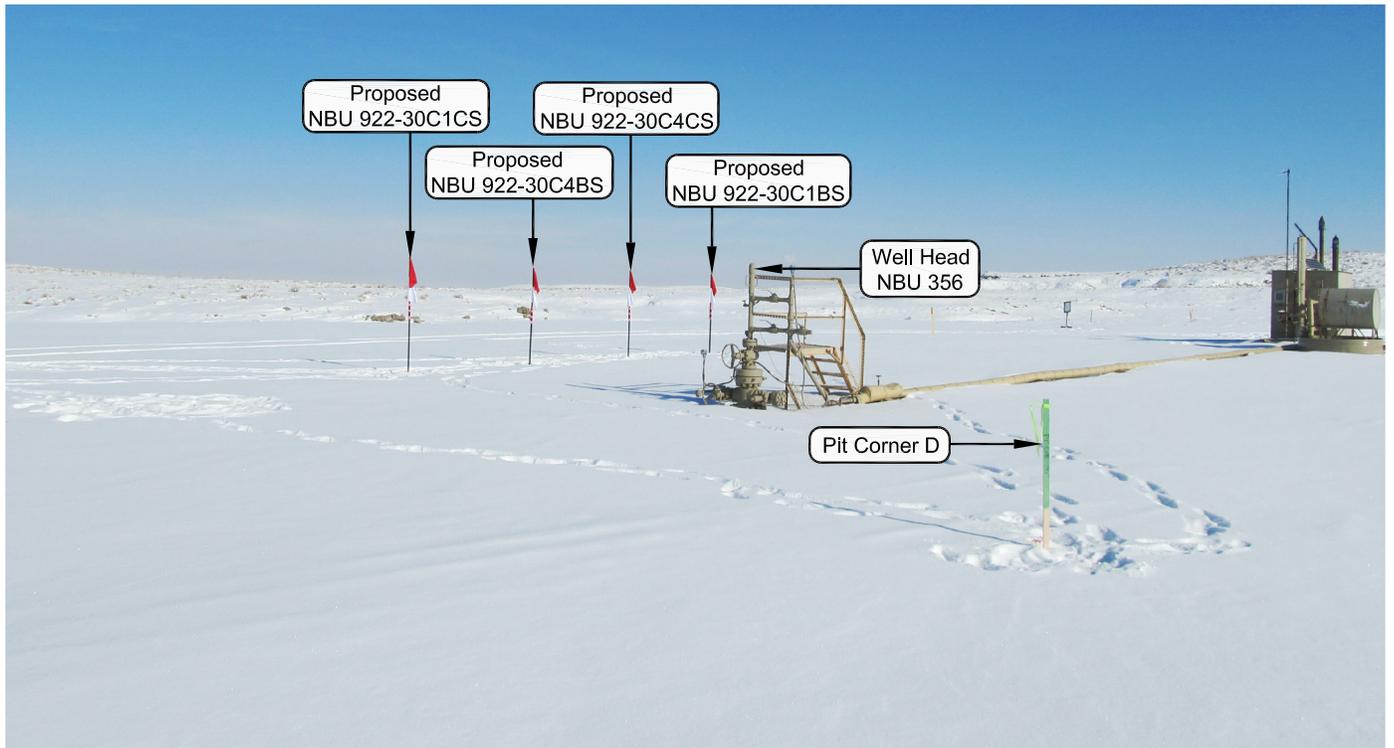


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

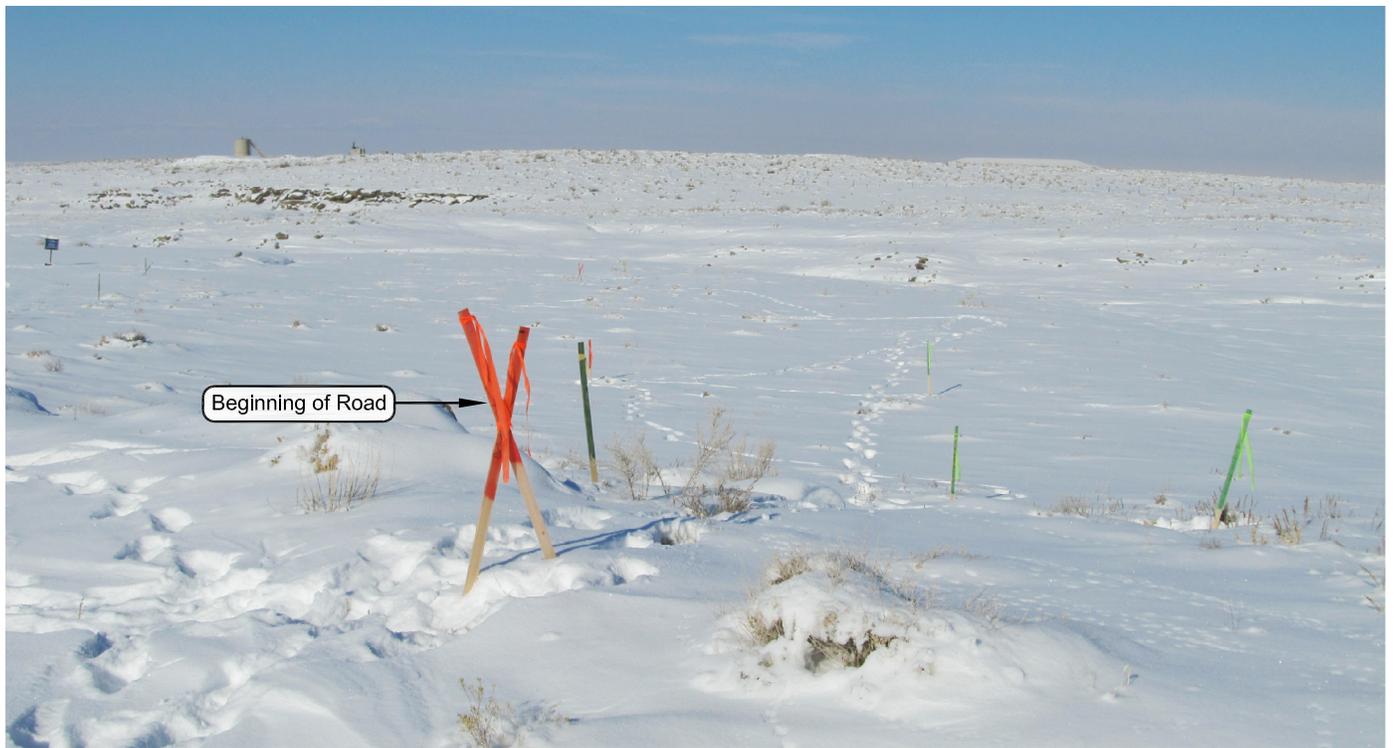


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

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

**WELL PAD - NBU 922-30C**

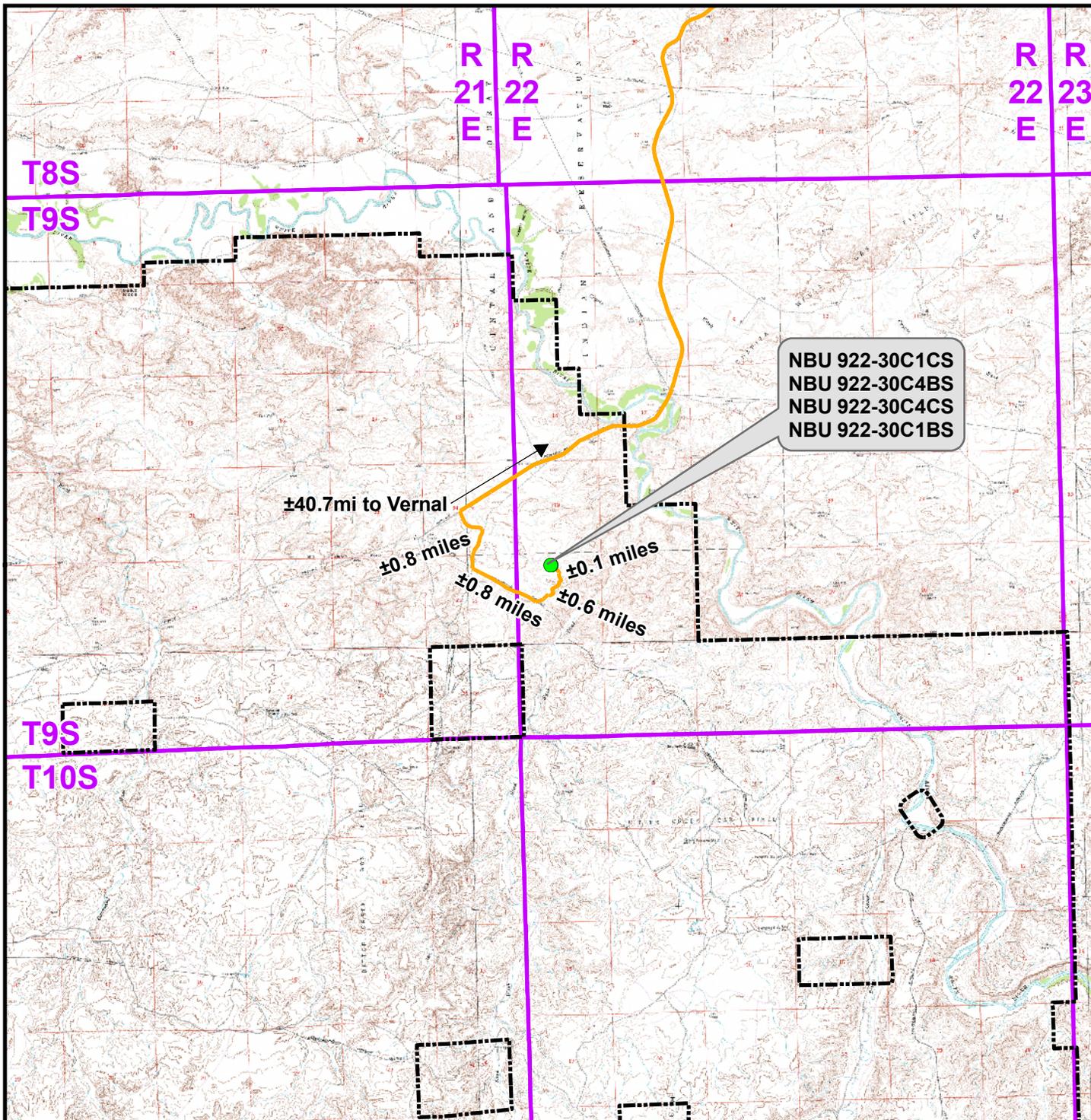
**LOCATION PHOTOS**  
 NBU 922-30C1CS, NBU 922-30C4BS,  
 NBU 922-30C4CS & NBU 922-30C1BS  
 LOCATED IN SECTION 30, T9S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

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

DATE PHOTOS TAKEN: 01-06-11	PHOTOS TAKEN BY: M.S.B.	SHEET NO: <b>9</b> 9 OF 16
DATE DRAWN: 07-15-10	DRAWN BY: B.M.	
Date Last Revised: 01-07-11 E.M.S.		



**Legend**

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

Distance From Well Pad - NBU 922-30C To Unit Boundary: ±5,022ft

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

**WELL PAD - NBU 922-30C**

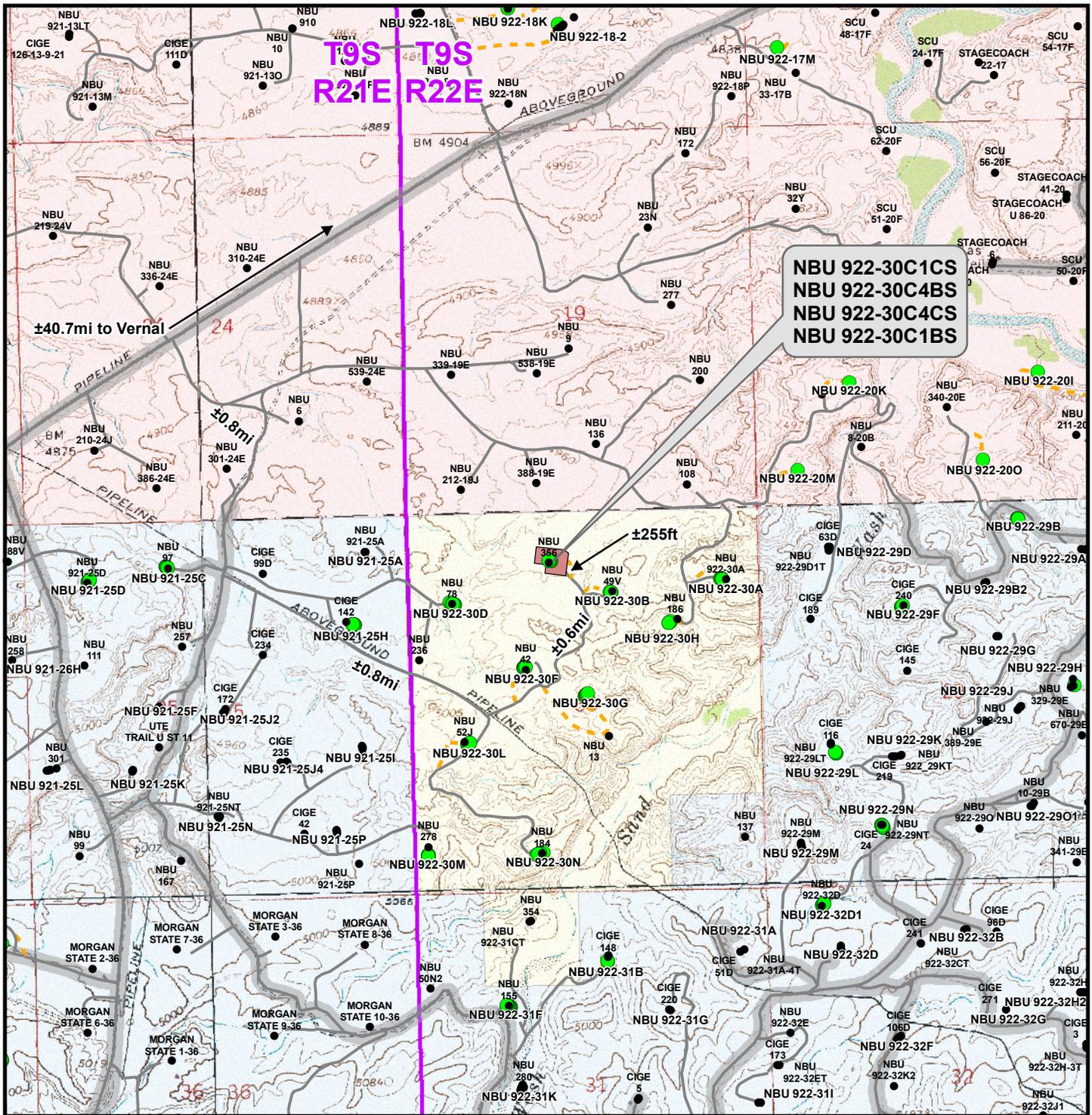
**TOPO A**  
 NBU 922-30C1CS, NBU 922-30C4BS,  
 NBU 922-30C4CS & NBU 922-30C1BS  
 LOCATED IN SECTION 30, T9S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



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



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 14 Jan 2011	10
Revised:	Date:	



**NBU 922-30C1CS  
NBU 922-30C4BS  
NBU 922-30C4CS  
NBU 922-30C1BS**

**Legend**

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

Total Proposed Road Length: ±255ft

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

**WELL PAD - NBU 922-30C**

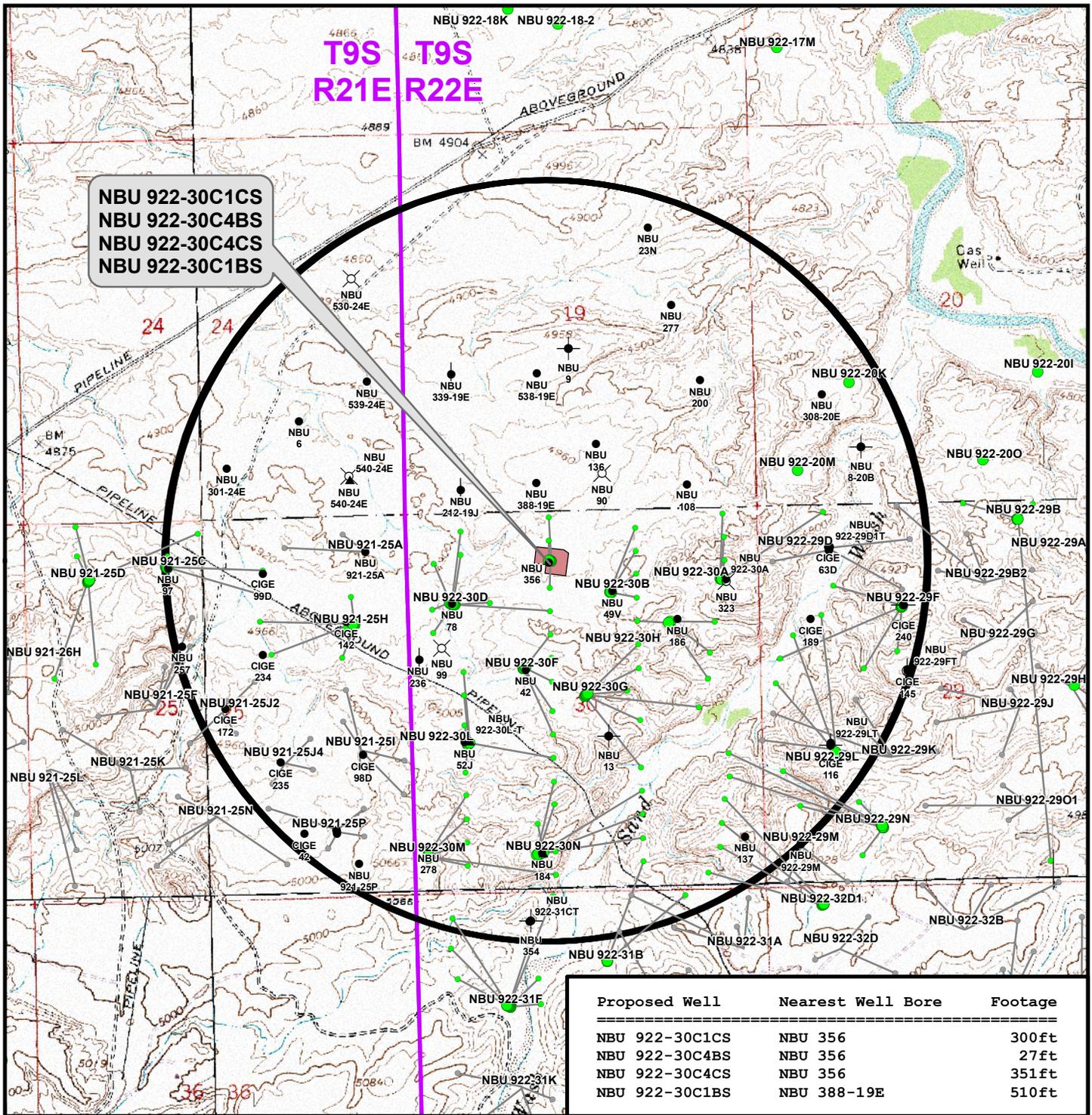
**TOPO B**  
NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: <b>11</b>	11 of 16
Drawn: TL	Date: 14 Jan 2011		
Revised:	Date:		

**RECEIVED: June 16, 2011**



Proposed Well	Nearest Well Bore	Footage
NBU 922-30C1CS	NBU 356	300ft
NBU 922-30C4BS	NBU 356	27ft
NBU 922-30C4CS	NBU 356	351ft
NBU 922-30C1BS	NBU 388-19E	510ft

**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Temporarily-Abandoned
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius
- ★ Active
- Shut-In
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- Plugged and Abandoned
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Location Abandoned
- ⊗ Drilling Operations Suspended
- ⊗ Dry hole marker, buried
- ⊗ Returned APD (Unapproved)

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

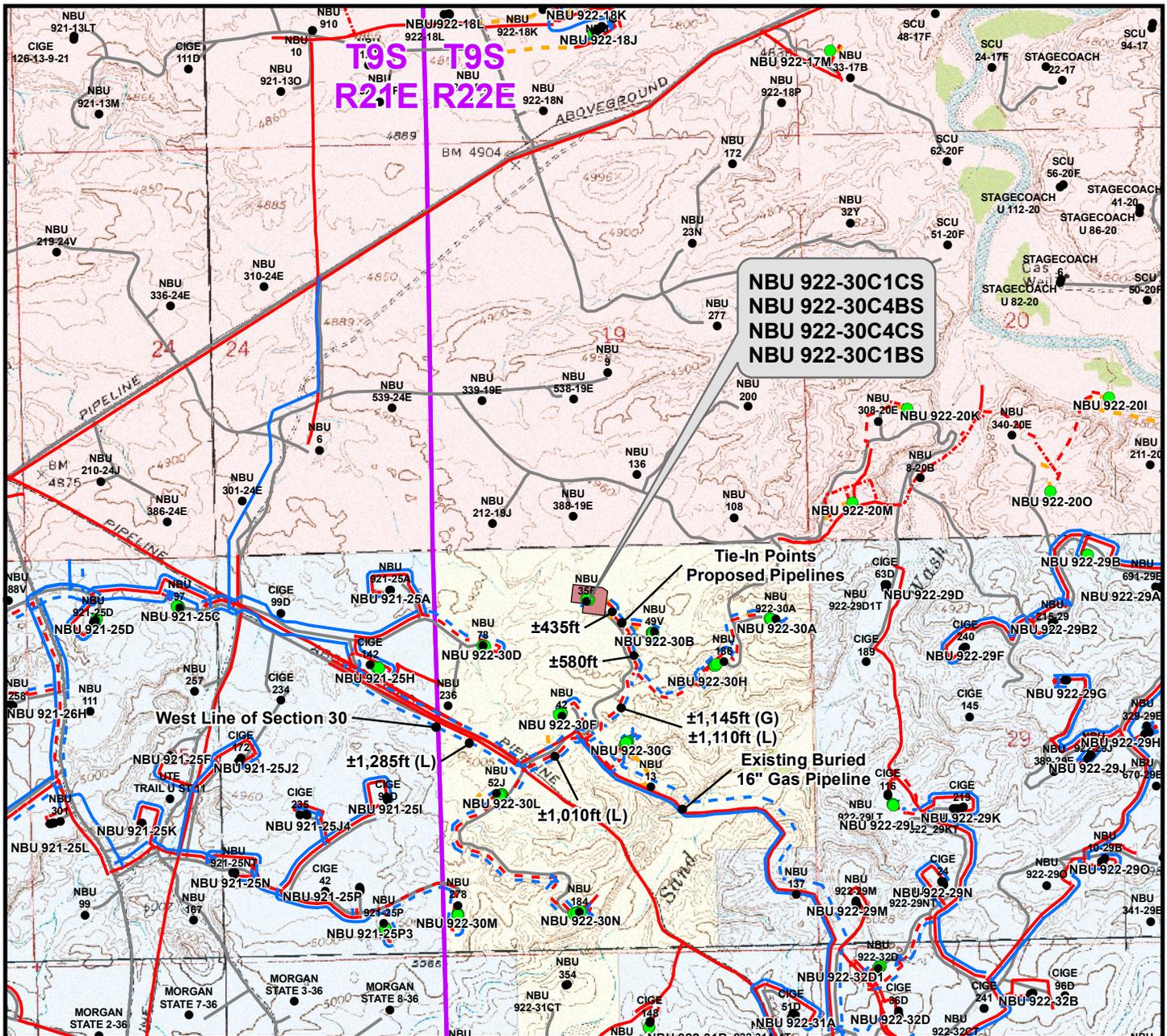
**WELL PAD - NBU 922-30C**

**TOPO C**  
NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 14 Jan 2011	12
Revised:	Date:	



**NBU 922-30C1CS  
NBU 922-30C4BS  
NBU 922-30C4CS  
NBU 922-30C1BS**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±450ft	Buried 6" (Meter House to Edge of Pad)	±450ft
Buried 6" (Max.) (Edge of Pad to 30B Intersection)	±435ft	Buried 6" (Edge of Pad to 30B Intersection)	±435ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±885ft</b>	<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±885ft</b>

**Legend**

- Well - Proposed (Green dot)
- Well - Existing (Black dot)
- Well Pad (Brown rectangle)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - To Be Upgraded (Blue dotted line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow rectangle)
- Indian Reservation (Pink rectangle)
- State (Light blue rectangle)
- Private (White rectangle)

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

**WELL PAD - NBU 922-30C**

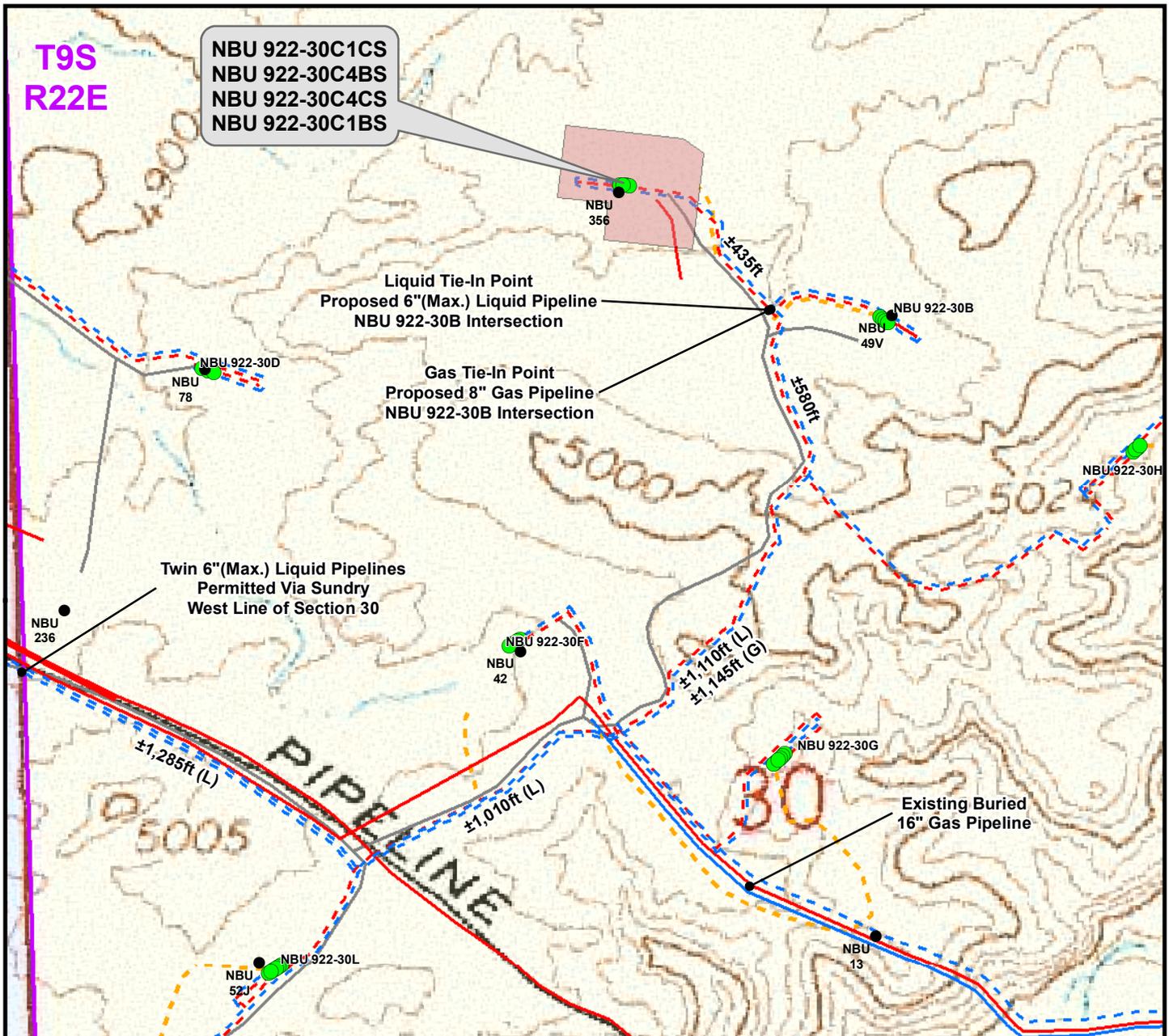
**TOPO D**  
NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**609**

**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
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Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 14 Jan 2011	<b>13</b> 13 of 16
Revised: TL	Date: 13 May 2011	



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±450ft
Buried 6" (Max.) (Edge of Pad to 30B Intersection)	±435ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±885ft</b>

Proposed Gas Pipeline	Length
Buried 6" (Meter House to Edge of Pad)	±450ft
Buried 6" (Edge of Pad to 30B Intersection)	±435ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±885ft</b>

**Legend**

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

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

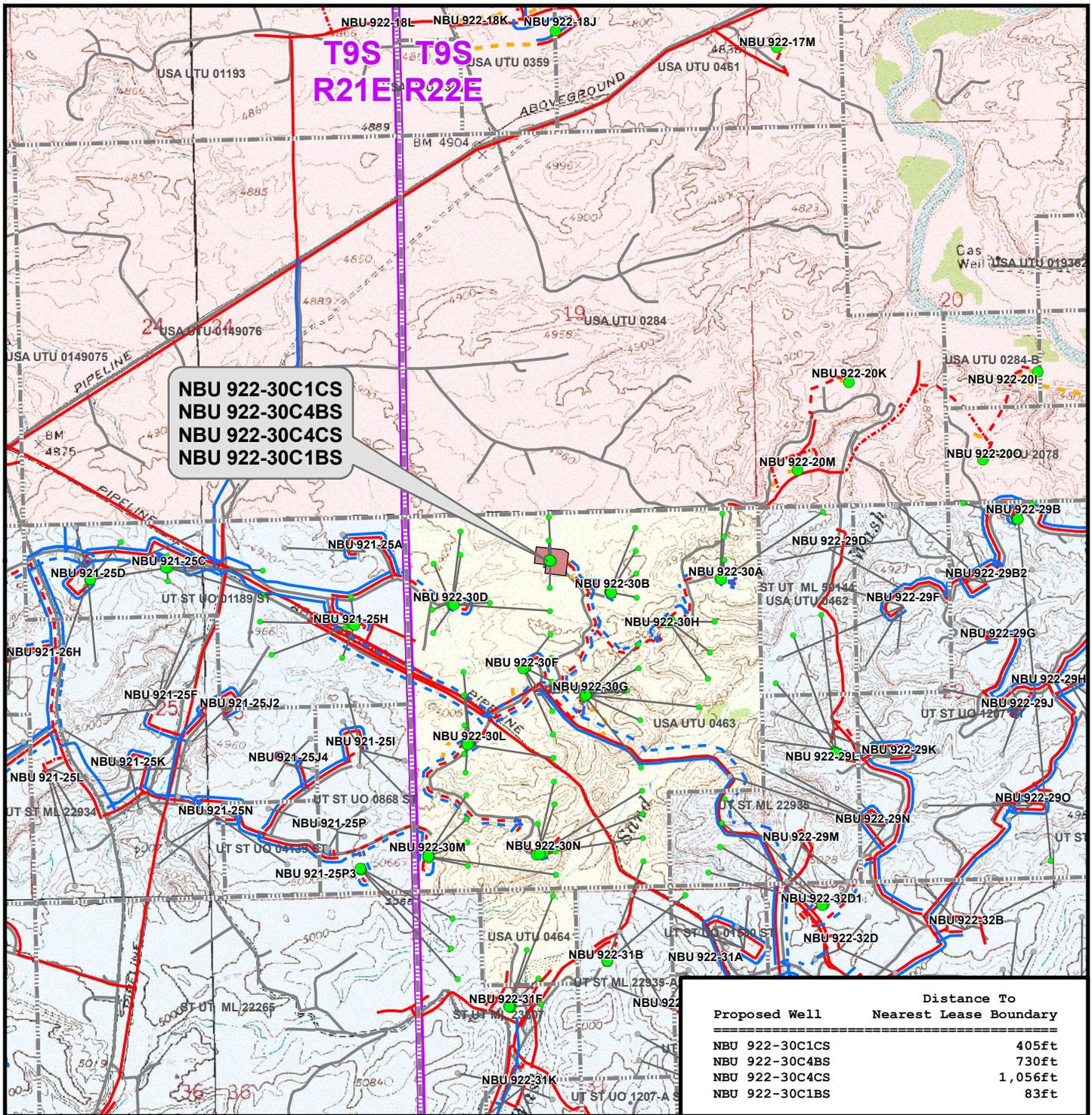
**WELL PAD - NBU 922-30C**

**TOPO D2 (PAD & PIPELINE DETAIL)**  
 NBU 922-30C1CS, NBU 922-30C4BS,  
 NBU 922-30C4CS & NBU 922-30C1BS  
 LOCATED IN SECTION 30, T9S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH

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

Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 14 Jan 2011	<b>14</b>
Revised: TL	Date: 13 May 2011	

14 of 16



**NBU 922-30C1CS  
NBU 922-30C4BS  
NBU 922-30C4CS  
NBU 922-30C1BS**

Proposed Well	Distance To Nearest Lease Boundary
NBU 922-30C1CS	405ft
NBU 922-30C4BS	730ft
NBU 922-30C4CS	1,056ft
NBU 922-30C1BS	83ft

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

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

**WELL PAD - NBU 922-30C**

**TOPO E**  
NBU 922-30C1CS, NBU 922-30C4BS,  
NBU 922-30C4CS & NBU 922-30C1BS  
LOCATED IN SECTION 30, T9S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**609**

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



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: <b>15</b> 15 of 16
Drawn: TL	Date: 14 Jan 2011	
Revised: TL	Date: 13 May 2011	

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 922-30C**  
**WELLS – NBU 922-30C1CS, NBU 922-30C4BS,**  
**NBU 922-30C4CS & NBU 922-30C1BS**  
**Section 30, T9S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.2 miles to a service road to the southeast. Exit left and proceed in a southeasterly then southerly direction along the service road approximately 0.8 miles to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 0.8 miles to a third service road to the northeast. Exit left and proceed in a northeasterly then northwesterly direction along the third service road approximately 0.6 miles to the proposed access road. Follow the road flags in a northerly then northwesterly direction approximately 255 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 42.9 miles in a southerly direction.



Project: Uintah County, UT UTM12  
 Site: NBU 922-30C PAD  
 Well: NBU 922-30C1CS  
 Wellbore: OH  
 Design: PLAN #1 PRELIMINARY



**WELL DETAILS: NBU 922-30C1CS**  
**GL 4949' & KB 9' @ 4958.00ft (ASSUMED)**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14534190.66	2065221.64	40° 0' 44.784 N	109° 28' 58.480 W

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	9622.00	274.98	5.32	14534465.69	2065222.28	40° 0' 47.502 N	109° 28' 58.411 W	Circle (Radius: 25.0)

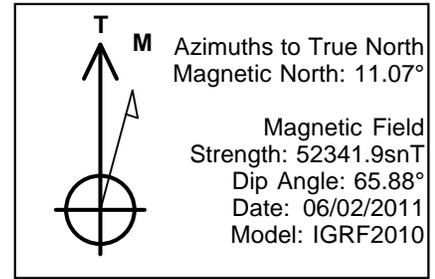
FORMATION TOP DETAILS			CASING DETAILS			
TVDPATH	MDPATH	FORMATION	TVD	MD	Name	Size
1520.00	1526.29	GREEN RIVER	2632.00	2645.23	8 5/8"	8.625
4778.00	4792.63	WASATCH				
7411.00	7425.63	MESAVERDE				

**SECTION DETAILS**

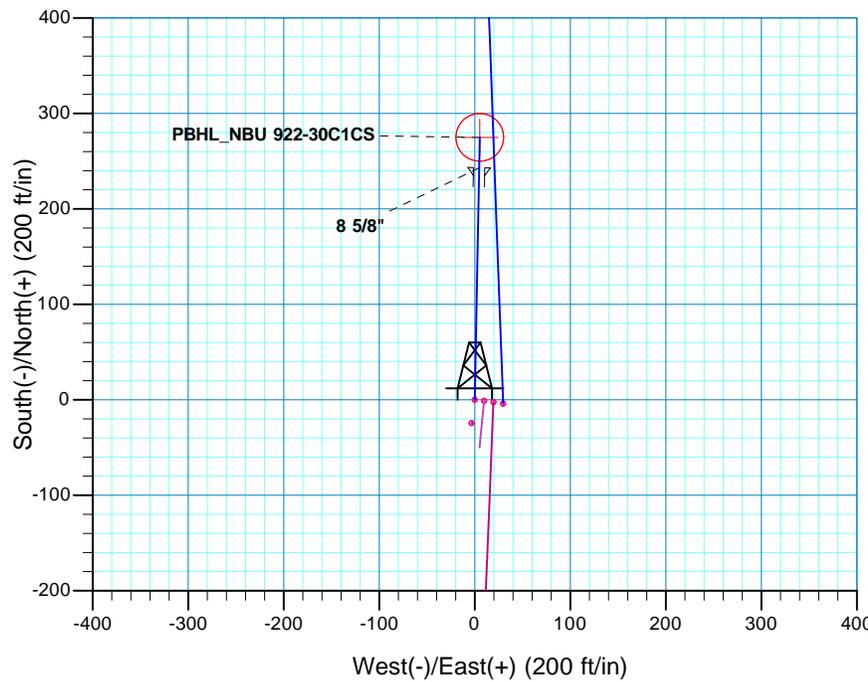
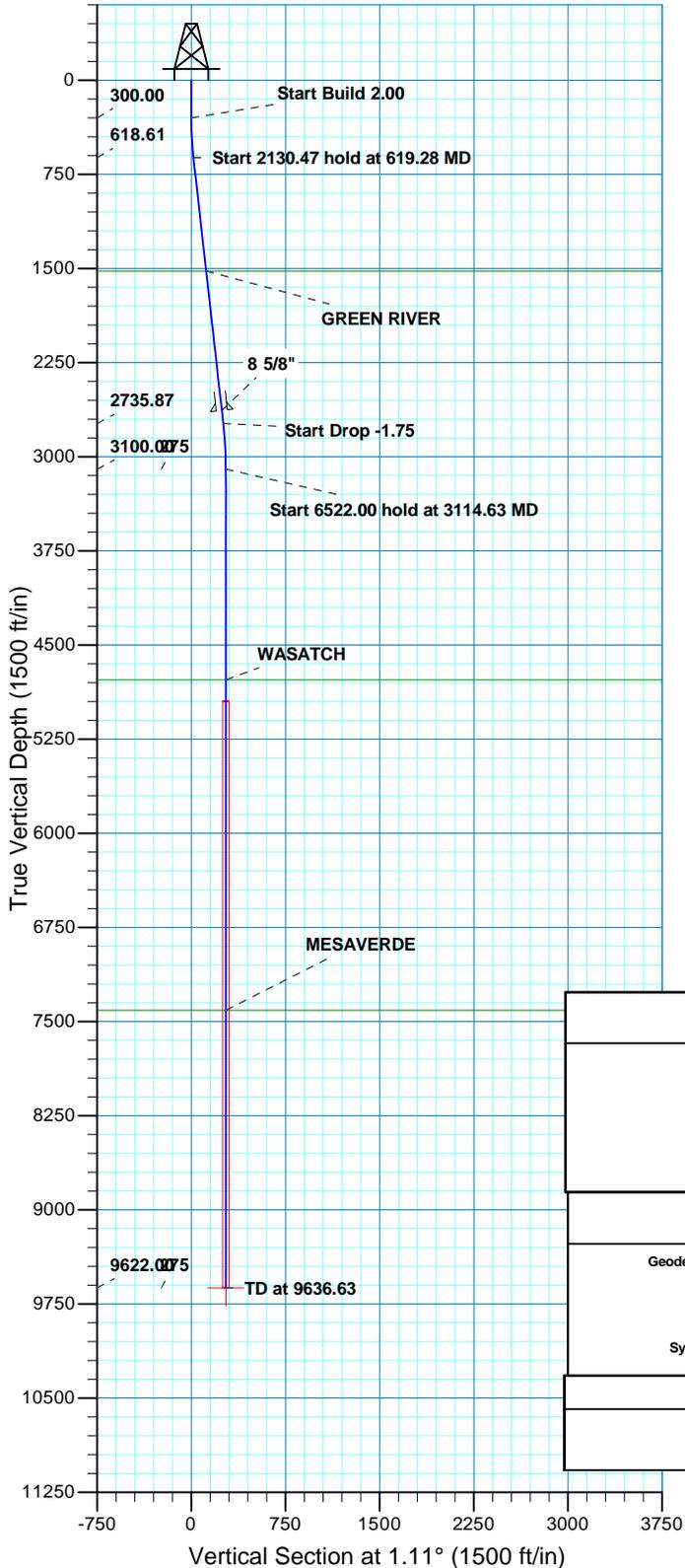
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
619.28	6.39	1.11	618.61	17.77	0.34	2.00	1.11	17.77	
2749.75	6.39	1.11	2735.87	254.67	4.93	0.00	0.00	254.72	
3114.63	0.00	0.00	3100.00	274.98	5.32	1.75	180.00	275.03	
9636.63	0.00	0.00	9622.00	274.98	5.32	0.00	0.00	275.03	PBHL_NBU 922-30C1CS

**PROJECT DETAILS: Uintah County, UT UTM12**

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 - Western US  
 Ellipsoid: Clarke 1866  
 Zone: Zone 12N (114 W to 108 W)  
 Location: SECTION 30 T9S R22E  
 System Datum: Mean Sea Level



WELL DETAILS: NBU 922-30C1CS									
GL 4949' & KB 9' @ 4958.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	14534190.66	2065221.64	40° 0' 44.784 N	109° 28' 58.480 W				
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	9622.00	274.98	5.32	14534465.69	2065222.28	40° 0' 47.502 N	109° 28' 58.411 W	Circle (Radius: 25.00)	
- plan hits target center									



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
619.28	6.39	1.11	618.61	17.77	0.34	2.00	1.11	17.77	
2749.75	6.39	1.11	2735.87	254.67	4.93	0.00	0.00	254.72	
3114.63	0.00	0.00	3100.00	274.98	5.32	1.75	180.00	275.03	
9636.63	0.00	0.00	9622.00	274.98	5.32	0.00	0.00	275.03	PBHL_NBU 922-30C1CS
PROJECT DETAILS: Uintah County, UT UTM12					FORMATION TOP DETAILS				
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 - Western US Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 30 T9S R22E System Datum: Mean Sea Level					TVDPath	MDPath	Formation		
					1520.00	1526.29	GREEN RIVER		
					4778.00	4792.63	WASATCH		
					7411.00	7425.63	MESAVERDE		
CASING DETAILS									
			TVD	MD	Name	Size			
			2632.00	2645.23	8 5/8"	8.625			

REC



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

**Uintah County, UT UTM12  
NBU 922-30C PAD  
NBU 922-30C1CS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**06 June, 2011**





SDI  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Site:</b>	NBU 922-30C PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 922-30C PAD, SECTION 30 T9S R22E				
<b>Site Position:</b>	<b>Northing:</b>	14,534,187.17 usft	<b>Latitude:</b>	40° 0' 44.744 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,065,251.39 usft	<b>Longitude:</b>	109° 28' 58.098 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.98 °

<b>Well</b>	NBU 922-30C1CS, 680 FNL 1982 FWL					
<b>Well Position</b>	<b>+N/-S</b>	4.01 ft	<b>Northing:</b>	14,534,190.67 usft	<b>Latitude:</b>	40° 0' 44.784 N
	<b>+E/-W</b>	-29.69 ft	<b>Easting:</b>	2,065,221.64 usft	<b>Longitude:</b>	109° 28' 58.480 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,949.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	06/02/2011	11.07	65.88	52,342

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	1.11

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
619.28	6.39	1.11	618.61	17.77	0.34	2.00	2.00	0.00	1.11	
2,749.75	6.39	1.11	2,735.87	254.67	4.93	0.00	0.00	0.00	0.00	
3,114.63	0.00	0.00	3,100.00	274.98	5.32	1.75	-1.75	0.00	180.00	
9,636.63	0.00	0.00	9,622.00	274.98	5.32	0.00	0.00	0.00	0.00	PBHL_NBU 922-30C



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Site:</b>	NBU 922-30C PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>										
400.00	2.00	1.11	399.98	1.74	0.03	1.75	2.00	2.00	2.00	0.00
500.00	4.00	1.11	499.84	6.98	0.14	6.98	2.00	2.00	2.00	0.00
600.00	6.00	1.11	599.45	15.69	0.30	15.69	2.00	2.00	2.00	0.00
619.28	6.39	1.11	618.61	17.77	0.34	17.77	2.00	2.00	2.00	0.00
<b>Start 2130.47 hold at 619.28 MD</b>										
700.00	6.39	1.11	698.84	26.75	0.52	26.75	0.00	0.00	0.00	0.00
800.00	6.39	1.11	798.22	37.87	0.73	37.87	0.00	0.00	0.00	0.00
900.00	6.39	1.11	897.60	48.99	0.95	48.99	0.00	0.00	0.00	0.00
1,000.00	6.39	1.11	996.98	60.10	1.16	60.12	0.00	0.00	0.00	0.00
1,100.00	6.39	1.11	1,096.36	71.22	1.38	71.24	0.00	0.00	0.00	0.00
1,200.00	6.39	1.11	1,195.74	82.34	1.59	82.36	0.00	0.00	0.00	0.00
1,300.00	6.39	1.11	1,295.12	93.46	1.81	93.48	0.00	0.00	0.00	0.00
1,400.00	6.39	1.11	1,394.50	104.58	2.02	104.60	0.00	0.00	0.00	0.00
1,500.00	6.39	1.11	1,493.88	115.70	2.24	115.72	0.00	0.00	0.00	0.00
1,526.29	6.39	1.11	1,520.00	118.63	2.30	118.65	0.00	0.00	0.00	0.00
<b>GREEN RIVER</b>										
1,600.00	6.39	1.11	1,593.26	126.82	2.45	126.85	0.00	0.00	0.00	0.00
1,700.00	6.39	1.11	1,692.63	137.94	2.67	137.97	0.00	0.00	0.00	0.00
1,800.00	6.39	1.11	1,792.01	149.06	2.88	149.09	0.00	0.00	0.00	0.00
1,900.00	6.39	1.11	1,891.39	160.18	3.10	160.21	0.00	0.00	0.00	0.00
2,000.00	6.39	1.11	1,990.77	171.30	3.32	171.33	0.00	0.00	0.00	0.00
2,100.00	6.39	1.11	2,090.15	182.42	3.53	182.46	0.00	0.00	0.00	0.00
2,200.00	6.39	1.11	2,189.53	193.54	3.75	193.58	0.00	0.00	0.00	0.00
2,300.00	6.39	1.11	2,288.91	204.66	3.96	204.70	0.00	0.00	0.00	0.00
2,400.00	6.39	1.11	2,388.29	215.78	4.18	215.82	0.00	0.00	0.00	0.00
2,500.00	6.39	1.11	2,487.67	226.90	4.39	226.94	0.00	0.00	0.00	0.00
2,600.00	6.39	1.11	2,587.05	238.02	4.61	238.06	0.00	0.00	0.00	0.00
2,645.23	6.39	1.11	2,632.00	243.05	4.70	243.09	0.00	0.00	0.00	0.00
<b>8 5/8"</b>										
2,700.00	6.39	1.11	2,686.43	249.14	4.82	249.19	0.00	0.00	0.00	0.00
2,749.75	6.39	1.11	2,735.87	254.67	4.93	254.72	0.00	0.00	0.00	0.00
<b>Start Drop -1.75</b>										
2,800.00	5.51	1.11	2,785.85	259.88	5.03	259.92	1.75	-1.75	0.00	0.00
2,900.00	3.76	1.11	2,885.52	267.95	5.19	268.00	1.75	-1.75	0.00	0.00
3,000.00	2.01	1.11	2,985.39	272.97	5.28	273.02	1.75	-1.75	0.00	0.00
3,100.00	0.26	1.11	3,085.37	274.95	5.32	275.00	1.75	-1.75	0.00	0.00
3,114.63	0.00	0.00	3,100.00	274.98	5.32	275.03	1.75	-1.75	-7.58	0.00
<b>Start 6522.00 hold at 3114.63 MD</b>										
3,200.00	0.00	0.00	3,185.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,285.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,385.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,485.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,585.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,685.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,785.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,885.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,985.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,085.37	274.98	5.32	275.03	0.00	0.00	0.00	0.00



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Site:</b>	NBU 922-30C PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,200.00	0.00	0.00	4,185.37	274.98	5.32	275.03	0.00	0.00	0.00
4,300.00	0.00	0.00	4,285.37	274.98	5.32	275.03	0.00	0.00	0.00
4,400.00	0.00	0.00	4,385.37	274.98	5.32	275.03	0.00	0.00	0.00
4,500.00	0.00	0.00	4,485.37	274.98	5.32	275.03	0.00	0.00	0.00
4,600.00	0.00	0.00	4,585.37	274.98	5.32	275.03	0.00	0.00	0.00
4,700.00	0.00	0.00	4,685.37	274.98	5.32	275.03	0.00	0.00	0.00
4,792.63	0.00	0.00	4,778.00	274.98	5.32	275.03	0.00	0.00	0.00
<b>WASATCH</b>									
4,800.00	0.00	0.00	4,785.37	274.98	5.32	275.03	0.00	0.00	0.00
4,900.00	0.00	0.00	4,885.37	274.98	5.32	275.03	0.00	0.00	0.00
5,000.00	0.00	0.00	4,985.37	274.98	5.32	275.03	0.00	0.00	0.00
5,100.00	0.00	0.00	5,085.37	274.98	5.32	275.03	0.00	0.00	0.00
5,200.00	0.00	0.00	5,185.37	274.98	5.32	275.03	0.00	0.00	0.00
5,300.00	0.00	0.00	5,285.37	274.98	5.32	275.03	0.00	0.00	0.00
5,400.00	0.00	0.00	5,385.37	274.98	5.32	275.03	0.00	0.00	0.00
5,500.00	0.00	0.00	5,485.37	274.98	5.32	275.03	0.00	0.00	0.00
5,600.00	0.00	0.00	5,585.37	274.98	5.32	275.03	0.00	0.00	0.00
5,700.00	0.00	0.00	5,685.37	274.98	5.32	275.03	0.00	0.00	0.00
5,800.00	0.00	0.00	5,785.37	274.98	5.32	275.03	0.00	0.00	0.00
5,900.00	0.00	0.00	5,885.37	274.98	5.32	275.03	0.00	0.00	0.00
6,000.00	0.00	0.00	5,985.37	274.98	5.32	275.03	0.00	0.00	0.00
6,100.00	0.00	0.00	6,085.37	274.98	5.32	275.03	0.00	0.00	0.00
6,200.00	0.00	0.00	6,185.37	274.98	5.32	275.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,285.37	274.98	5.32	275.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,385.37	274.98	5.32	275.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,485.37	274.98	5.32	275.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,585.37	274.98	5.32	275.03	0.00	0.00	0.00
6,700.00	0.00	0.00	6,685.37	274.98	5.32	275.03	0.00	0.00	0.00
6,800.00	0.00	0.00	6,785.37	274.98	5.32	275.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,885.37	274.98	5.32	275.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,985.37	274.98	5.32	275.03	0.00	0.00	0.00
7,100.00	0.00	0.00	7,085.37	274.98	5.32	275.03	0.00	0.00	0.00
7,200.00	0.00	0.00	7,185.37	274.98	5.32	275.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,285.37	274.98	5.32	275.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,385.37	274.98	5.32	275.03	0.00	0.00	0.00
7,425.63	0.00	0.00	7,411.00	274.98	5.32	275.03	0.00	0.00	0.00
<b>MESAVERDE</b>									
7,500.00	0.00	0.00	7,485.37	274.98	5.32	275.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,585.37	274.98	5.32	275.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,685.37	274.98	5.32	275.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,785.37	274.98	5.32	275.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,885.37	274.98	5.32	275.03	0.00	0.00	0.00
8,000.00	0.00	0.00	7,985.37	274.98	5.32	275.03	0.00	0.00	0.00
8,100.00	0.00	0.00	8,085.37	274.98	5.32	275.03	0.00	0.00	0.00
8,200.00	0.00	0.00	8,185.37	274.98	5.32	275.03	0.00	0.00	0.00
8,300.00	0.00	0.00	8,285.37	274.98	5.32	275.03	0.00	0.00	0.00
8,400.00	0.00	0.00	8,385.37	274.98	5.32	275.03	0.00	0.00	0.00
8,500.00	0.00	0.00	8,485.37	274.98	5.32	275.03	0.00	0.00	0.00
8,600.00	0.00	0.00	8,585.37	274.98	5.32	275.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,685.37	274.98	5.32	275.03	0.00	0.00	0.00
8,800.00	0.00	0.00	8,785.37	274.98	5.32	275.03	0.00	0.00	0.00
8,900.00	0.00	0.00	8,885.37	274.98	5.32	275.03	0.00	0.00	0.00
9,000.00	0.00	0.00	8,985.37	274.98	5.32	275.03	0.00	0.00	0.00
9,100.00	0.00	0.00	9,085.37	274.98	5.32	275.03	0.00	0.00	0.00



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4949' & KB 9' @ 4958.00ft (ASSUMED)
<b>Site:</b>	NBU 922-30C PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
9,200.00	0.00	0.00	9,185.37	274.98	5.32	275.03	0.00	0.00	0.00
9,300.00	0.00	0.00	9,285.37	274.98	5.32	275.03	0.00	0.00	0.00
9,400.00	0.00	0.00	9,385.37	274.98	5.32	275.03	0.00	0.00	0.00
9,500.00	0.00	0.00	9,485.37	274.98	5.32	275.03	0.00	0.00	0.00
9,600.00	0.00	0.00	9,585.37	274.98	5.32	275.03	0.00	0.00	0.00
9,636.63	0.00	0.00	9,622.00	274.98	5.32	275.03	0.00	0.00	0.00
PBHL_NBU 922-30C1CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-30C1C - hit/miss target - Shape - Circle (radius 25.00)	0.00	0.00	9,622.00	274.98	5.32	14,534,465.70	2,065,222.28	40° 0' 47.502 N	109° 28' 58.411 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,645.23	2,632.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,526.29	1,520.00	GREEN RIVER				
4,792.63	4,778.00	WASATCH				
7,425.63	7,411.00	MESAVERDE				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
619.28	618.61	17.77	0.34	Start 2130.47 hold at 619.28 MD	
2,749.75	2,735.87	254.67	4.93	Start Drop -1.75	
3,114.63	3,100.00	274.98	5.32	Start 6522.00 hold at 3114.63 MD	
9,636.63	9,622.00	274.98	5.32	TD at 9636.63	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 922-30C Pad**

<u>API #</u>	<u>NBU 922-30C1BS</u>		
	Surface:	684 FNL / 2012 FWL	NENW Lot
	BHL:	83 FNL / 1991 FWL	NENW Lot
<u>API #</u>	<u>NBU 922-30C1CS</u>		
	Surface:	680 FNL / 1982 FWL	NENW Lot
	BHL:	405 FNL / 1988 FWL	NENW Lot
<u>API #</u>	<u>NBU 922-30C4BS</u>		
	Surface:	681 FNL / 1992 FWL	NENW Lot
	BHL:	730 FNL / 1987 FWL	NENW Lot
<u>API #</u>	<u>NBU 922-30C4CS</u>		
	Surface:	683 FNL / 2002 FWL	NENW Lot
	BHL:	1056 FNL / 1986 FWL	NENW Lot

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

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

An on-site meeting was held on May 5, 2011. Present were:

- David Gordon, Melissa Wardle, Karl Wright and Dan Emmett - BLM; and
- John Slaugh and Mitch Batty - Timberline Engineering & Land Surveying, Inc.; and
- Jacob Dunham - 609 Consulting, LLC; and
- Andy Lytle, Charles Chase, Ken Gathings, Roger Parry, Grizz Oleen, and Sheila Wopsock - Kerr-McGee

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**No segments require a ROW.**

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

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road-utility corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s) adjacent to the well pad, as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as

necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

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

±255' (0.05 miles) – Section 30 T09S R22E (NE/4 NW/4) – On-lease UTU0463, re-route from the center of the E edge of pad to the existing access road. Please refer to Topo B.

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

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

This pad will expand the existing pad for the NBU 356, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on June 2, 2011. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components that contain fluids (i.e. production tanks, produced liquids tanks, but typically excluding dehy's and/or separators). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event, and be independent of the back cut. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

**GAS GATHERING**

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

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±2,615' and the individual segments are broken up as follows:

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

- ±450' (0.09 miles) – Section 30 T09S R22E (NE/4 NW/4) – On-lease UTU0463, BLM surface, New 6" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±435' (0.08 miles) – Section 30 T09S R22E (NE/4 NW/4) – On-lease UTU0463, BLM surface, New 6" buried gas gathering pipeline from the edge of the 30C pad to the tie-in at the proposed 30B Intersection (NE/4 NW/4). Please refer to Exhibit A, Line 6.
- ±580' (0.1 miles) – Section 30 T09S R22E (NW/4 NE/4) – On-lease UTU0463, BLM surface, New 8" buried gas gathering pipeline from the 30B intersection to the 30H cross country intersection (SW/4 NE/4). Please refer to Exhibit A, Line 5. This pipeline will be used concurrently with the 30B pad.
- ±320' (0.06 miles) – Section 30 T09S R22E (SW/4 NE/4) – On-lease UTU0463, BLM surface, New 10" buried gas gathering pipeline from the 30H 8" cross country intersection to the proposed 10" cross country gas gathering pipeline intersection (SE/4 NW/4). This pipeline will be used concurrently with the 30H, 30B, and 30A pads. Please refer to Exhibit A, Line 4.
- ±510' (0.09 miles) – Section 30 T09S R22E (SE/4 NW/4) – On-lease UTU0463, BLM surface, New 10" cross country buried gas gathering pipeline from the proposed 10" gas gathering intersection to the proposed 10" gas pipeline (SE/4 NW/4). This pipeline will be used concurrently with the 30H, 30B, and 30A pads. Please refer to Exhibit A, Line 3.
- ±320' (0.06 miles) – Section 30 T09S R22E (SE/4 NW/4) – On-lease UTU0463, BLM surface, New 10" buried gas gathering pipeline from the proposed cross country gas gathering pipeline segment to the existing 16" gas gathering pipeline tie-in point (SE/4 NW/4). Please refer to This pipeline will be used concurrently with the 30H, 30B, 30A, 30G, and 30F pads. Exhibit A, Lines 1 and 2.

**LIQUID GATHERING**

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

Kerr-McGee proposes to install liquid gathering lines in a southwesterly direction to tie into a proposed southeasterly flowing buried pipeline. The total of this proposed liquid gathering from the meter to the Section lease line (SE/4 SE/4) is  $\pm 6,465'$  and the individual segments are broken up as follows:

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

- $\pm 450'$  (0.09 miles) – Section 30 T09S R22E (NE/4 NW/4) – On-lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 435'$  (0.08 miles) – Section 30 T09S R22E (NE/4 NW/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the tie-in at the proposed 30B Intersection 6" (NE/4 NW/4). Please refer to Exhibit B, Line 7.
- $\pm 580'$  (0.1 miles) – Section 30 T09S R22E (NW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B Intersection to the proposed 30H cross country intersection (SW/4 NE/4). Please refer to Exhibit B, Line 6. This pipeline will be used concurrently with the 30B pad.
- $\pm 320'$  (0.06 miles) – Section 30 T09S R22E (SW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B/30H 6" buried liquid gathering pipeline intersection to the proposed 6" cross country liquid gathering pipeline (SE/4 NW/4). Please refer to Exhibit A, Line 5. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- $\pm 510'$  (0.09 miles) – Section 30 T09S R22E (SE/4 NW/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 6" 30B pipeline segment to the proposed 6" liquid gathering pipeline segment (SW/4 NE/4). Please refer to Exhibit B, Line 4. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- $\pm 285'$  (0.05 miles) – Section 30 T09S R22E (SW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B cross country 6" liquid line to the (2) proposed twin 6" liquid gathering pipelines at the 30F intersection (SE/4 NW/4). Please refer to Exhibit B, Line 3. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- $\pm 495'$  (0.09 miles) – Section 30 T09S R22E (SE/4 NW/4) – Lease UTU0463, BLM surface, Two (2) new 6" buried liquid gathering pipelines from the proposed Transfer line to the tie-in point at the proposed 30G/30F intersection (SW/4 NE/4). Please refer to Exhibit B, Line 13. This pipeline will be used concurrently with the 30H, 30B, 30A, 30F, 30G, 30N, and 30L pads. Two (2) Lines for a total of 990'.
- $\pm 2,895'$  (0.55 miles) – Section 30 T09S R22E (SW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30G/30F intersection going southeast to the edge of the lease boundary of SE/4 SE/4. Please refer to Exhibit B, Line 15. The remaining liquid pipeline segment will travel to the existing tank battery on State surface. Kerr-McGee will apply for the appropriate State easements under separate cover. This pipeline will be used concurrently with the 30H, 30B, 30A, 30F, 30G, 30N, and 30L pads.

Kerr-McGee, additionally will install a liquid gathering line in a southwesterly direction to tie-into a proposed northwesterly flowing buried pipeline. The total of this proposed liquid gathering from the meter to the tie in point is  $\pm 4,875'$  and the individual segments are broken up as follows:

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

- $\pm 450'$  (0.09 miles) – Section 30 T09S R22E (NE/4 NW/4) – On-lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 435'$  (0.08 miles) – Section 30 T09S R22E (NE/4 NW/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the tie-in at the proposed 30B Intersection 6" (NE/4 NW/4). Please refer to Exhibit B, Line 7.
- $\pm 580'$  (0.1 miles) – Section 30 T09S R22E (NW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B Intersection to the proposed 30H cross country intersection (SW/4 NE/4). Please refer to Exhibit B, Line 6. This pipeline will run concurrently with the 30B pad.

- ±320' (0.06 miles) – Section 30 T09S R22E (SW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B/30H 6" buried liquid gathering pipeline intersection to the proposed 6" cross country liquid gathering pipeline (SE/4 NW/4). Please refer to Exhibit A, Line 5. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- ±510' (0.09 miles) – Section 30 T09S R22E (SE/4 NW/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 6" 30B pipeline segment to the proposed 6" liquid gathering pipeline segment (SW/4 NE/4). Please refer to Exhibit B, Line 4. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- ±285' (0.05 miles) – Section 30 T09S R22E (SW/4 NE/4) – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the proposed 30B cross country 6" liquid line to the (2) proposed twin 6" liquied gathing pipelines at the 30F intersection (SE/4 NW/4). Please refer Exhibit B, Line 3. This pipeline will be used concurrently with the 30H, 30B, and 30A pads.
- ±1,010' (0.19 miles) – Section 30 T09S R22E (SE/4 NW/4) – Lease UTU0463, BLM surface, Two (2) new 6" buried liquid gathering pipelines from the proposed 30G Intersection to the proposed 30L intersection (SE/4 NW/4). Please refer to Exhibit B, Line 2. This pipeline will be used concurrently with the 30H, 30B, 30A, 30F, 30G, 30N, and 30L pads. Two (2) lines for a total of 2,020'.
- ±1,285' (0.24 miles) – Section 30 T09S R22E (NW/4 SW/4) – Lease UTU0463, BLM surface, Two (2) new 6" buried liquid gathering pipelines from the proposed 30L Intersection to the West Line of Section 30 where it will tie-into an existing liquid gathering pipeline on State surface. Please refer to Exhibit B, Line 1. Two (2) lines for a total of 2,570'. This pipeline will be used concurrently with the 30H, 30B, 30A, 30F, 30G, 30N, and 30L pads.

#### Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr-McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. 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. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45' for buried lines and 30' for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30'.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If all three lines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

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.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface. Please see site specific PODs and/or mapping materials for location of related facilities such as cathodic protection wells or pumping stations. Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, lateral T's, and/or cathodic protection wells will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

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

Please refer to Exhibit C for ACTs Lines

Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize the pit on this the proposed location as an Anadarko Completion Transport System (ACTS) staging pit which will be utilized for other completion operations in the area. The ACTS process will reduce the amount of truck traffic on a field-wide basis, also reducing vehicle emissions and fugitive dust generation.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum pipe liquids transfer lines between frac locations. The pit will be refurbished as follows: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit. Hog fence panels (5' X 16') will be built and painted shadow gray and will be put up on the work side of the pit. Polypropylene netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks can unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum pipe water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. Kerr-McGee understands that due to the temporary nature of this system BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

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

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

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.

**F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. 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 (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

**G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including to the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil/topsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

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

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

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 (trash and other solid waste including cans, paper, cable, etc.) 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. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42" 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'. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

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.

#### **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.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance, or meet the quantities criteria per BLM Instruction Memorandum No. 93-344, will not be used.

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.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
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

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

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. 34 T9S R21E

#### H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

#### I. Well Site Layout:

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.

For the protection of livestock and wildlife, all open pits and cellars will be fenced 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.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

Where produced liquids tanks are utilized, the tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids. The tanks will be fenced or capped to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without the prior approval of the BLM.

#### J. Plans for Surface Reclamation:

The 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. Interim 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 may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

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. Disposal of pit fluids and linings is discussed in Section G.

**Final Reclamation**

Final reclamation will be performed for unproductive wells and after 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 Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. 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 the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24" on 18 to 24" centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18" deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. 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 in accordance with the seeding specifications of the BLM.

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

**Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. 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 seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

<b>Shadescale Mix</b>	<b>e Live Seed lbs/acre</b>
Indian Ricegrass (Nezpar)	3
Sandberg bluegrass	0.75
Bottlebrush squirreltail	1
Great Basin Wildrye	0.5
Crested wheatgrass (Ephraim)	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
<b>Total</b>	<b>9.5</b>

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes 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, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as "Sustain" (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

**Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

**Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 31, of the calendar year following the data collection.

**K. Surface/Mineral Ownership:**

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

**L. Other Information:****Onsite Specifics:**

- A 404 Stream Alteration Permit will be obtained to cross the Sand Wash in the SE/4 of the section - See Exhibit A or B.
- Facilities: Will be painted Shadow Grey
- Existing surface gas gathering pipeline will be removed from location if no longer in service

**Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

**Resource Reports:**

A Class I literature survey was completed on February 11, 2011, by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 10-243b.

A paleontological reconnaissance survey was completed on December 21, 2010, by Intermountain Paleo-Consulting. For additional details please refer to report IPC #10-31.

Biological field survey was completed on January 27, 2011, by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-397.

Biological field survey was completed for the Southeast Trunk Liquid Line on June 2, 2011, by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-457.

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

Laura Abrams  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6356

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

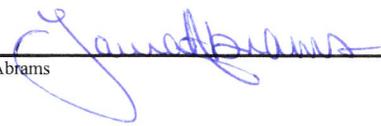
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

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

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

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

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

  
\_\_\_\_\_  
Laura Abrams

June 2, 2011  
\_\_\_\_\_  
Date



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

April 4, 2011

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

Re: Directional Drilling R649-3-11  
NBU 922-30C1CS  
T9S-R22E  
Section 30 NENW (Surf), NENW (Bottom)  
Surface: 680' FNL, 1982' FWL  
Bottom Hole: 405' FNL, 1988' FWL  
Uintah County, Utah

Dear Ms. Mason:

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

- Kerr-McGee's NBU 922-30C1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

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

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

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

Joe Matney  
Sr. Staff Landman



# 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 20, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

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

**NBU 922-30A PAD**

43-047-51666	NBU 922-29D1BS	Sec 30 T09S R22E 0990 FNL 0492 FEL
	BHL	Sec 29 T09S R22E 0088 FNL 0925 FWL

43-047-51667	NBU 922-30A4BS	Sec 30 T09S R22E 0987 FNL 0502 FEL
	BHL	Sec 30 T09S R22E 0732 FNL 0457 FEL

43-047-51668	NBU 922-30A1CS	Sec 30 T09S R22E 0985 FNL 0512 FEL
	BHL	Sec 30 T09S R22E 0406 FNL 0457 FEL

43-047-51670	NBU 922-30A1BS	Sec 30 T09S R22E 0982 FNL 0521 FEL
	BHL	Sec 30 T09S R22E 0083 FNL 0469 FEL

**NBU 922-30B PAD**

43-047-51669	NBU 922-30B1CS	Sec 30 T09S R22E 1135 FNL 2047 FEL
	BHL	Sec 30 T09S R22E 0570 FNL 1682 FEL

43-047-51671	NBU 922-30B1BS	Sec 30 T09S R22E 1130 FNL 2056 FEL
	BHL	Sec 30 T09S R22E 0251 FNL 1682 FEL

43-047-51673	NBU 922-30B4BS	Sec 30 T09S R22E 1141 FNL 2039 FEL
	BHL	Sec 30 T09S R22E 0896 FNL 1681 FEL

43-047-51674	NBU 922-30B4CS	Sec 30 T09S R22E 1146 FNL 2030 FEL
	BHL	Sec 30 T09S R22E 1222 FNL 1680 FEL

**NBU 922-30C PAD**

43-047-51672	NBU 922-30C1BS	Sec 30 T09S R22E 0684 FNL 2012 FWL
	BHL	Sec 30 T09S R22E 0083 FNL 1991 FWL

**RECEIVED: June 21, 2011**

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

**NBU 922-30C PAD**

43-047-51675	NBU 922-30C1CS	Sec 30 T09S R22E 0680 FNL 1982 FWL
	BHL	Sec 30 T09S R22E 0405 FNL 1988 FWL

43-047-51676	NBU 922-30C4BS	Sec 30 T09S R22E 0681 FNL 1992 FWL
	BHL	Sec 30 T09S R22E 0730 FNL 1987 FWL

43-047-51677	NBU 922-30C4CS	Sec 30 T09S R22E 0683 FNL 2002 FWL
	BHL	Sec 30 T09S R22E 1056 FNL 1986 FWL

**NBU 922-30D PAD**

43-047-51678	NBU 922-30D1BS	Sec 30 T09S R22E 1236 FNL 0616 FWL
	BHL	Sec 30 T09S R22E 0240 FNL 0771 FWL

43-047-51681	NBU 922-30D1CS	Sec 30 T09S R22E 1243 FNL 0635 FWL
	BHL	Sec 30 T09S R22E 0569 FNL 0762 FWL

43-047-51683	NBU 922-30F1BS	Sec 30 T09S R22E 1249 FNL 0654 FWL
	BHL	Sec 30 T09S R22E 1238 FNL 1154 FWL

**NBU 922-30F PAD**

43-047-51679	NBU 922-30F1CS	Sec 30 T09S R22E 2144 FNL 1622 FWL
	BHL	Sec 30 T09S R22E 1706 FNL 1984 FWL

43-047-51680	NBU 922-30F4BS	Sec 30 T09S R22E 2149 FNL 1614 FWL
	BHL	Sec 30 T09S R22E 2032 FNL 1983 FWL

43-047-51682	NBU 922-30F4CS	Sec 30 T09S R22E 2154 FNL 1605 FWL
	BHL	Sec 30 T09S R22E 2357 FNL 1982 FWL

43-047-51684	NBU 922-30K1BS	Sec 30 T09S R22E 2159 FNL 1596 FWL
	BHL	Sec 30 T09S R22E 2523 FSL 1980 FWL

43-047-51685	NBU 922-30K1CS	Sec 30 T09S R22E 2164 FNL 1588 FWL
	BHL	Sec 30 T09S R22E 2198 FSL 1979 FWL

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

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

MCoulthard:mc:6-20-11

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 6/16/2011

API NO. ASSIGNED: 43047516750000

WELL NAME: NBU 922-30C1CS

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

PHONE NUMBER: 720 929-6356

CONTACT: Laura Abrams

PROPOSED LOCATION: NENW 30 090S 220E

Permit Tech Review: 

SURFACE: 0680 FNL 1982 FWL

Engineering Review: 

BOTTOM: 0405 FNL 1988 FWL

Geology Review: 

COUNTY: UINTAH

LATITUDE: 40.01241

LONGITUDE: -109.48289

UTM SURF EASTINGS: 629483.00

NORTHINGS: 4430027.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU463

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

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

Commingling Approved

## LOCATION AND SITING:

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

Comments: Presite Completed

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

RECEIVED: August 17, 2011



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 922-30C1CS  
**API Well Number:** 43047516750000  
**Lease Number:** UTU463  
**Surface Owner:** FEDERAL  
**Approval Date:** 8/17/2011

**Issued to:**

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

**Authority:**

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

**Duration:**

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

**Commingle:**

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

**General:**

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

**Conditions of Approval:**

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

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

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

**Notification Requirements:**

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

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
- OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

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

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

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

RECEIVED

Form 3160-3  
(August 2007)

JUN 16 2011

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
BLM VERNAL, UTAH

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU463
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR-MCGEE OIL&GAS ONSHORE LP Contact: LAURA ABRAMS Email: Laura.Abrams@anadarko.com		7. If Unit or CA Agreement, Name and No. UTU63047A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 922-30C1CS
3b. Phone No. (include area code) Ph: 720-929-6356 Fx: 720-929-7356		9. API Well No. 43-047-S1U7S
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENW 680FNL 1982FWL 40.012405 N Lat, 109.483597 W Lon At proposed prod. zone NENW 405FNL 1988FWL 40.013160 N Lat, 109.483577 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 42.9 MILES SOUTH OF VERNAL, UT		11. Sec., T., R., M., or Blk. and Survey or Area Sec 30 T9S R22E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 405'	16. No. of Acres in Lease 551.00	12. County or Parish UINTAH COUNTY
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 300'	19. Proposed Depth 9637 MD 9622 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4950 GL	22. Approximate date work will start 12/01/2011	17. Spacing Unit dedicated to this well
		20. BLM/BIA Bond No. on file WYB000291
		23. Estimated duration 60-90 DAYS

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) LAURA ABRAMS Ph: 720-929-6356	Date 06/10/2011
Title REGULATORY ANALYST II		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date DEC 06 2011
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

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

Additional Operator Remarks (see next page)

Electronic Submission #110274 verified by the BLM Well Information System  
For KERR-MCGEE OIL&GAS ONSHORE LP, sent to the Vernal

NOTICE OF APPROVAL

RECEIVED

DEC 14 2011

3-31-11

UDOGM

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

11SX50473AE

NOS-3-29-2011



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

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



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

Company: Kerr-McGee Oil & Gas Onshore, LP      Location: NENW, Sec. 30, T9S, R22E  
Well No: NBU 922-30C1CS      Lease No: UTU-463  
API No: 43-047-51675      Agreement: Natural Buttes

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

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

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

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

**NOTIFICATION REQUIREMENTS**

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

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

- Kerr McGee will adhere to all applicant committed conservation measures and conservation recommendations that are stated in the USFWS's "Final Biological Opinion for the Anadarko Petroleum Corporation Natural Buttes Unit and Bonanza Area Natural Gas Development Project.
- The operator will follow the Green River District Reclamation Guidelines for Reclamation.

**Mitigation for Invasive Weeds**

- All vehicles and equipment -will be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas will be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established
- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an integrated pest management program is applicable, coordination has been undertaken with the state and local management program (if existing). A copy of the pest management plan will be submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.

**Mitigation for Paleontology**

- A permitted paleontologist is to be present for monitor purposes during all surface disturbing actives: examples include the following building of the well pad, access road, and pipelines

**Mitigation Measures for Colorado River Fish Species:**

- The best method to avoid entrapment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - a. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - b. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (see above); and
  - c. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
- Screen all pump intakes with 3/32" mesh material.
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:  
Northeastern Region  
152 East 100 North, Vernal, UT 84078  
Phone: (435) 781-9453

**Mitigation for Migratory birds.**

- Construction and drilling is not allowed from January 1 – August 31 to minimize impacts during Golden Eagle and Red-tailed hawk nesting
- If it is anticipated that construction or drilling will occur during the given timing restriction, a BLM or qualified biologist shall be notified so surveys can be conducted. Depending upon the results of the surveys, permission to proceed may or may not be ~~recommended~~ or granted by the BLM biologist.

*Authorized  
Officer*

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

**SITE SPECIFIC DOWNHOLE COAs:**

- 1. Gamma ray Log shall be run from Total Depth to Surface.
  
- Variances Granted: Air Drilling
  1. Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
  2. Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.
  3. Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 40' from the well bore.
  4. In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for the kill medium and will utilize a skid pump near the reserve pit to supply the water to the well bore if necessary.
  5. Automatic igniter. Variance granted for igniter due to there being no productive formations encountered while air drilling.
  6. FIT test. Variance granted due to well-known geology and problems that can occur with the FIT test.

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

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

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

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU463
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 922-30C1CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047516750000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6511	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0680 FNL 1982 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	<b>COUNTY:</b> UINTAH	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/15/2012  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. THE WELL WAS SPUD ON 03/15/2012 AT 1030 HRS.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 19, 2012</b>		
<b>NAME (PLEASE PRINT)</b> Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/19/2012	

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By JAIME SCHARNOWSKE Phone Number 720.929.6304  
Well Name/Number NBU 922-30C1CS  
Qtr/Qtr NENW Section 30 Township 9S Range 22E  
Lease Serial Number UTU463  
API Number 4304751675

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

Date/Time 03/14/2012 15:00 HRS AM  PM

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

- Surface Casing
- Intermediate Casing
- Production Casing
- Liner
- Other

**RECEIVED**  
**MAR 13 2012**  
DIV. OF OIL, GAS & MINING

Date/Time 03/28/2012 08:00 HRS AM  PM

BOPE

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

Date/Time \_\_\_\_\_ AM  PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVELL YOUNG AT 435.781.7051

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

FORM 6

**ENTITY ACTION FORM**

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

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751675	NBU 922-30C1CS		NENW	30	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/15/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 03/15/2012 AT 1030 HRS. BHL renew							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751676	NBU 922-30C4BS		NENW	30	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/15/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 03/15/2012 AT 0730 HRS. BHL renew							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751677	NBU 922-30C4CS		NENW	30	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
B	99999	2900	3/14/2012			3/20/2012	
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 03/14/2012 AT 1630 HRS. BHL: renew							

**ACTION CODES:**

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

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

3/19/2012

Title

Date

**RECEIVED**

**MAR 19 2012**

(5/2000)

Div. of Oil, Gas & Mining

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU463
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>PHONE NUMBER:</b> 720 929-6511	<b>8. WELL NAME and NUMBER:</b> NBU 922-30C1CS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0680 FNL 1982 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	<b>9. API NUMBER:</b> 43047516750000
	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
	<b>COUNTY:</b> UINTAH
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/9/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU AIR RIG ON 4/8/2012. DRILLED SURFACE HOLE TO 2821'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 April 13, 2012**

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/10/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU463
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> NBU 922-30C1CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047516750000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6514
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0680 FNL 1982 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>4/26/2012</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b> <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

THE OPERATOR REQUESTS APPROVAL FOR A FIT WAIVER, A CLOSED LOOP DRILLING OPTION, AND A PRODUCTION CASING CHANGE. ALL OTHER ASPECTS OF THE PREVIOUSLY APPROVED DRILLING PLAN WILL NOT CHANGE. PLEASE SEE THE ATTACHMENT. THANK YOU.

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

Date: May 21, 2012

By: *Derek Quist*

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/26/2012	

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 922-30C1CS**

Surface: 680 FNL / 1982 FWL      NENW  
 BHL: 405 FNL / 1988 FWL      NENW

Section 30 T9S R22E

Uintah County, Utah  
 Mineral Lease: USA UTU 0463

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,520'	
Birds Nest	1,807'	Water
Mahogany	2,182'	Water
Wasatch	4,778'	Gas
Mesaverde	7,411'	Gas
Sego	9,622'	Gas
TVD	9,622'	
TD	9,637'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 9622' TVD, approximately equals  
6,158 psi (0.64 psi/ft = actual bottomhole gradient)

---

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

Maximum anticipated surface pressure equals approximately 4,028 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

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

**8. Anticipated Starting Dates:**

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

**9. Variances:**

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

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

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

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

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

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

**Background**

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

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

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

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

#### **Variance for BOPE Requirements**

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

#### **Variance for Mud Material Requirements**

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

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

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

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

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

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

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

**Variance for FIT Requirements**

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

**Conclusion**

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

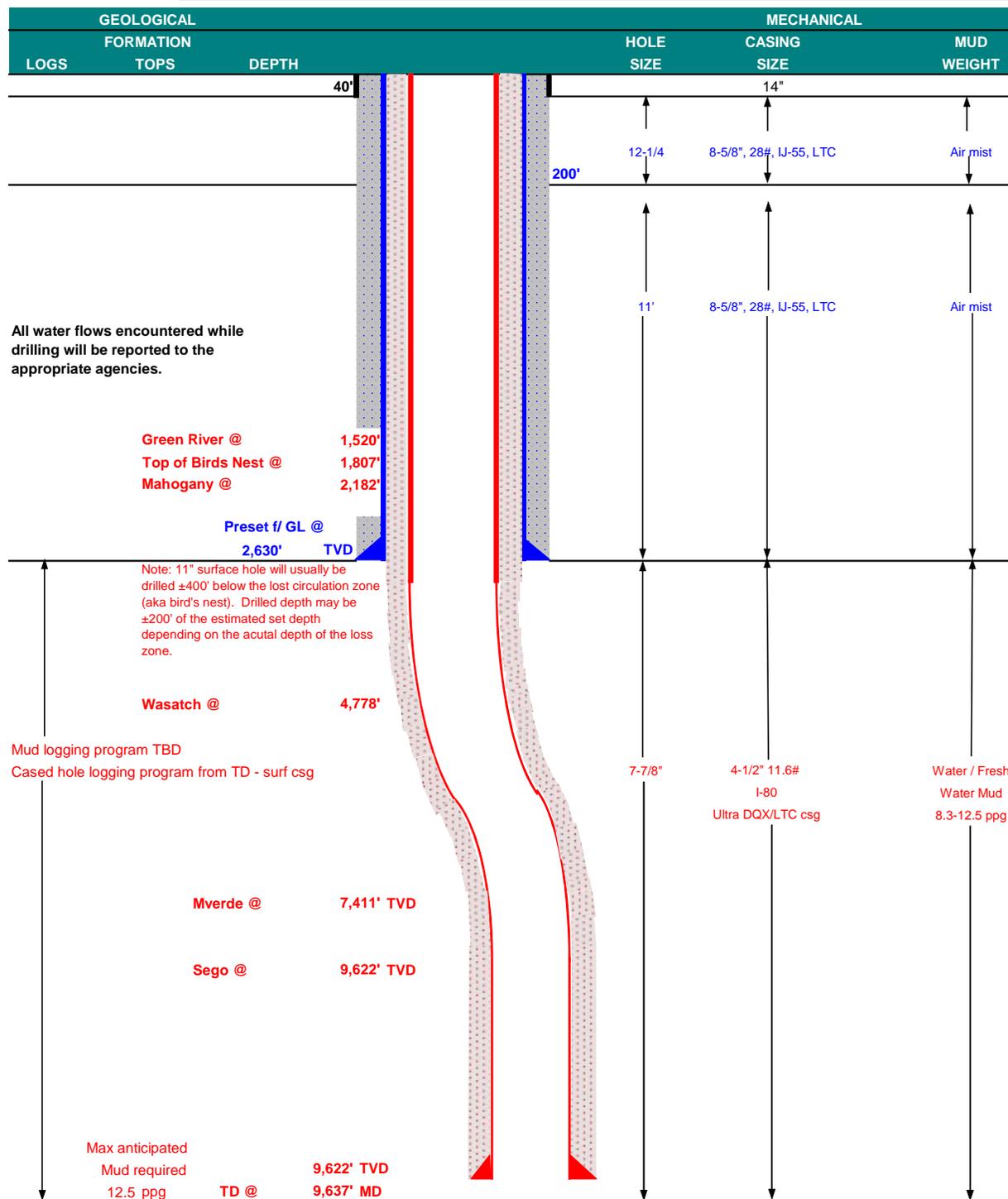
**10. Other Information:**

Please refer to the attached Drilling Program.



### KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	April 26, 2012			
WELL NAME	<b>NBU 922-30C1CS</b>		TD	9,622'	TVD	9,637' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,949'
SURFACE LOCATION	NENW	680 FNL	1982 FWL	Sec 30	T 9S	R 22E	
	Latitude: 40.012405		Longitude: -109.483597		NAD 83		
BTM HOLE LOCATION	NENW	405 FNL	1988 FWL	Sec 30	T 9S	R 22E	
	Latitude: 40.013160		Longitude: -109.483577		NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.						





**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'							
SURFACE	8-5/8"	0 to 2,630	28.00	IJ-55	LTC	3,390	1,880	348,000	N/A
						7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.02		2.95
						7,780	6,350	223,000	267,035
	4-1/2"	5,000 to 9,637'	11.60	I-80	LTC	1.11	1.02	5.12	

**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 Option 1	LEAD 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs) 1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>						
SURFACE Option 2	LEAD 2,130'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	35%	11.00	3.82
	TAIL 500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD 4,277'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	340	35%	12.00	3.38
	TAIL 5,360'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,270	35%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained  
 \*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

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

Nick Spence / Danny Showers / Chad Loesel

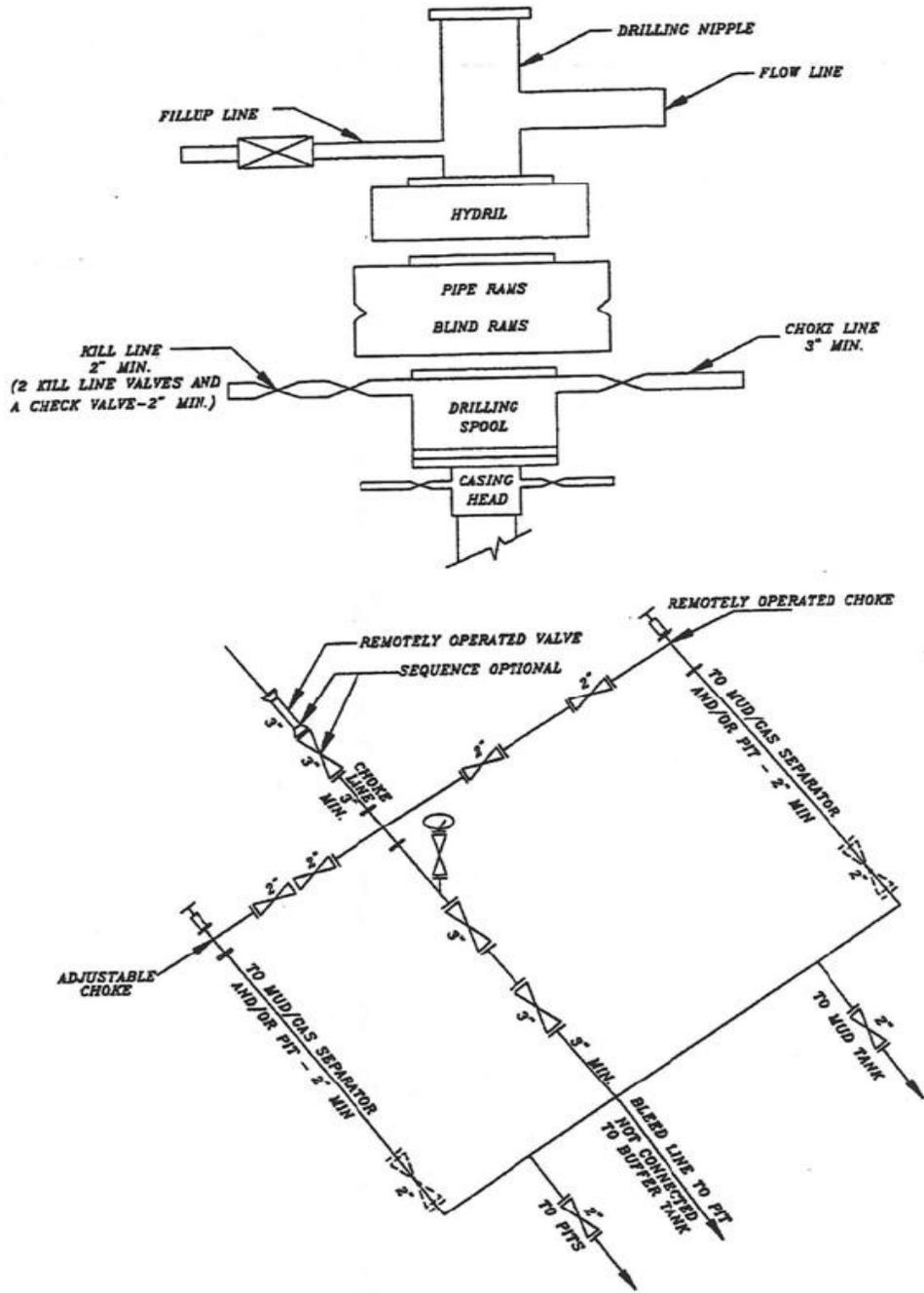
**DATE:**

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**

### EXHIBIT A NBU 922-30C1CS



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

Requested Drilling Options:

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

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

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU463
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: NBU 922-30C1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0680 FNL 1982 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	9. API NUMBER: 43047516750000
5. PHONE NUMBER: 720 929-6514	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: Uintah
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/6/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: ACTS PIT

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

MIRU ROTARY RIG. FINISHED DRILLING FROM 2821' TO 9640' ON 6/5/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED SST 54 RIG ON 6/6/2012 @ 23:59 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 July 10, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 6/7/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU463	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES	
<b>1. TYPE OF WELL</b> Gas Well	
<b>8. WELL NAME and NUMBER:</b> NBU 922-30C1CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	
<b>9. API NUMBER:</b> 43047516750000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 <span style="float: right;"><b>PHONE NUMBER:</b> 720 929-6511</span>	
<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0680 FNL 1982 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	
<b>COUNTY:</b> UINTAH	
<b>STATE:</b> UTAH	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Started completing the well in June 2012.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 July 11, 2012**

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/6/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU463
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047516750000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6514  9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0680 FNL 1982 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/3/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

No activity for the month of July 2012. Well TD at 9,640'.

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

**FOR RECORD ONLY**

August 06, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 8/3/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU463
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047516750000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6514  9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0680 FNL 1982 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/17/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 08/17/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

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

**FOR RECORD ONLY**

August 21, 2012

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 8/21/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: UTU463
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047516750000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511  9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0680 FNL 1982 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 30 Township: 09.0S Range: 22.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH

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TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Started completing the well in August 2012. Well TD at 9,640.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
September 07, 2012**

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/5/2012	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU463

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

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator **KERR MCGEE OIL & GAS ONSHORE** Contact: CARA MAHLER  
 Mail: cara.mahler@anadarko.com

8. Lease Name and Well No.  
NBU 922-30C1CS ✓

3. Address **1099 18TH STREET, SUITE 1800 DENVER, CO 80202** 3a. Phone No. (include area code)  
 Ph: 720-929-6029

9. API Well No. **43-047-51675**

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
 At surface **NENW 680FNL 1982FWL 40.012405 N Lat, 109.483597 W Lon**

10. Field and Pool, or Exploratory  
NATURAL BUTTES

At top prod interval reported below **NENW 394FNL 1994FWL**  
 At total depth **NENW 409FNL 1984FWL BHL by HSM**

11. Sec., T., R., M., or Block and Survey  
or Area **Sec 30 T9S R22E Mer SLB**

12. County or Parish **JINTAH** 13. State **UT**

14. Date Spudded **03/15/2012** 15. Date T.D. Reached **06/05/2012** 16. Date Completed  
 D & A  Ready to Prod. **08/17/2012**

17. Elevations (DF, KB, RT, GL)\*  
**4949 GL**

18. Total Depth: MD **9640** TVD **9624** 19. Plug Back T.D.: MD **9567** TVD **9551** 20. Depth Bridge Plug Set: MD **MD** TVD **TVD**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
**CBL/GR/CCL/TEMP** 22. Was well cored?  No  Yes (Submit analysis)  
 Was DST run?  No  Yes (Submit analysis)  
 Directional Survey?  No  Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	2795		670		0	
7.875	4.500 P-110	11.6	0	9614		1504		693	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8852							

25. Producing Intervals 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	6226	7367	6226 TO 7367	0.360	72	OPEN
B) MESAVERDE	7442	9287	7442 TO 9287	0.360	165	OPEN
C)						
D)						

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

Depth Interval	Amount and Type of Material
6226 TO 9287	PUMP 10,507 BBLs SLICK H2O & 251,051 LBS 30/50 OTTAWA SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
08/17/2012	09/02/2012	24	→	0.0	2017.0	385.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	563	1209.0	→	0	2017	385		PGW	

28a. Production - Interval B

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

(See Instructions and spaces for additional data on reverse side)  
 ELECTRONIC SUBMISSION #149481 VERIFIED BY THE BLM WELL INFORMATION SYSTEM  
**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***

RECEIVED  
SEP 19 2012

28b. Production - Interval C

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

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1452 1826 2319 4795 7430

32. Additional remarks (include plugging procedure):

The first 210 ft. of the surface hole was drilled with a 12 1/4 in. bit. The remainder of the surface hole was drilled with an 11 in. bit. DQX P-110 csg was run from surface to 4,818 ft; LTC csg was run from 4,818 ft. to 9,614 ft. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

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

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

**Electronic Submission #149481 Verified by the BLM Well Information System.  
 For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal**

Name (please print) CARA MAHLER Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) Date 09/10/2012

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

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 3/11/2012

End Date: 6/7/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/8/2012	4:00 - 5:30	1.50	MIRU	01	B	P		MOVE TO NBU 922-30C1CS ( WELL 4/4 )  INSTALL DIVERTOR HEAD AND BLUEY LINE.  BUILD DITCH. SPOT IN RIG.  SPOT IN CATWALK AND PIPE RACKS.  RIG UP PIT PUMP.  RIG UP PUMP. PRIME PUMP. INSPECT RIG.  HELD PRE-SPUD SAFETY MEETING.  PU BHA & SPUD @ 05:30 DRL F/ 44' T/210' (166'@ 110.66' PER HR)  WOB, 5-15 kRPM, 45  UP/DWN/ROT WEIGHTS 20/20/20  PSI ON BTTM, 600 OFF BTTM, 400  M.W. 8.34, VIS 27 PULL OUT OF HOLE  PICK UP 11" BIT & DIRECTIONAL TOOLS  TRIP IN HOLE TO 210' DRL F/210' T/670' (460'@153.33 ' PER HR)  WOB, 20 RPM, 45  UP/DWN/ROT WEIGHTS 55/45/50  PSI ON BTTM/1000 OFF BTTM/800  M.W. 8.34, VIS 27  3' LEFT & .07' HIGH OF LINE DRL F/670' T/2170' (1500'@125 ' PER HR)  WOB, 20 RPM, 40  UP/DWN/ROT WEIGHTS 77/63/67  PSI ON BTTM/1450 OFF BTTM/1500  M.W. 8.34, VIS 27  3.49' LEFT & 2.21' HIGH OF LINE
	5:30 - 7:00	1.50	DRLSUR	02	D	P		
	7:00 - 9:00	2.00	DRLSUR	06	A	P		
	9:00 - 12:00	3.00	DRLSUR	02	D	P		
	12:00 - 0:00	12.00	DRLSUR	02	D	P		

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30C1CS GREEN Spud Date: 4/8/2012  
 Project: UTAH-UINTAH Site: NBU 922-30C PAD Rig Name No: PROPETRO 11/11, SST 54/54  
 Event: DRILLING Start Date: 3/11/2012 End Date: 6/7/2012  
 Active Datum: RKB @4,967.00usft (above Mean Sea Level) UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/9/2012	0:00 - 7:00	7.00	DRLSUR	02	D	P		DRL F/2170' T/2821' (651'@ 93 ' PER HR)  WOB, 20 RPM, 40  UP/DWN/ROT WEIGHTS 90/70/80  PSI ON BTTM/1800 OFF BTTM/1700  M.W. 8.34, VIS 27  11.2' LEFT & 3.88' BELOW THE LINE CIRCULATE FOR CASING
	7:00 - 9:00	2.00	DRLSUR	05	C	P		LD DS
	9:00 - 10:00	1.00	DRLSUR	06	D	P		SPOT MUD
	10:00 - 10:30	0.50	DRLSUR	05	B	P		LD DS, BHA & DIRECTIONAL TOOLS
	10:30 - 14:00	3.50	DRLSUR	06	D	P		MOVE PIPE RACKS AND CATWALK.  PULL DIVERTER HEAD.  RIG UP TO RUN CSG.  MOVE CSG INTO POSITION TO P/U. RUN 63 JTS 28#, J55 CASING
	14:00 - 15:00	1.00	DRLSUR	12	A	P		SHOE @ 2781'
	15:00 - 17:30	2.50	DRLSUR	12	C	P		BAFFLE @ 2735' HOLD SAFETY MEETING,  RUN 200' OF 1".  RIG DOWN RIG MOVE OFF WELL,  REBUILD DITCH.  RIG UP CEMENT TRUCK, 2" HARD LINES,.
	17:30 - 18:30	1.00	DRLSUR	12	B	P		

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN		Spud Date: 4/8/2012	
Project: UTAH-UINTAH		Site: NBU 922-30C PAD	Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING		Start Date: 3/11/2012	End Date: 6/7/2012
Active Datum: RKB @4,967.00usft (above Mean Sea Level)		UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:30 - 20:30	2.00	DRLSUR	12	E	P		<p>HOLD SAFETY MEETING.</p> <p>PRO PETRO CMTERS MAKE UP HEAD &amp; LOAD PLUG</p> <p>TEST LINES TO 2000 PSI.</p> <p>PUMP 160 BBLs OF 8.4# H2O AHEAD.</p> <p>PUMP 20 BBLs OF 8.4# GEL WATER AHEAD.</p> <p>PUMP 220 SX(149 BBLs) 11# 3.82 YIELD LEAD CEMENT.</p> <p>PUMP 200 SX (41 BBLs) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE).</p> <p>DROP PLUG ON FLY AND DISPLACE W/ 173 BBLs OF 8.4# H2O.</p> <p>FINAL LIFT PRESSURE 650 PSI.</p> <p>BUMP PLUG AND HOLD 1000 PSI FOR 5 MIN.</p> <p>FLOAT HELD RETURNS THRU OUT JOB 40 BBLs LEAD CEMENT TO SURF</p> <p>PUMP 150 SX 15.8# (20.5BBLs) CMT W/4% CALCIUM DOWN 1".</p>
	20:30 - 23:00	2.50	DRLSUR	13	A	P		<p>CMT FELL BACK</p> <p>WOC</p> <p>PUMP 100 SX (20.42 BBLs) DOWN BACKSIDE</p> <p>CEMENT STAYED AT SURFACE</p>
5/31/2012	2:30 - 4:00	1.50	DRLPRO	01	C	P		RELEASE RIG @ 23:00
	4:00 - 5:00	1.00	DRLPRO	14	A	P		SKID RIG TO NBU 922-30C1CS
	5:00 - 9:00	4.00	DRLPRO	15	A	P		NIPPLE UP B.O.P'S
	9:00 - 10:00	1.00	DRLPRO	14	B	P		TEST B.O.P'S 250 LOW - 5000 HIGH & SET CASING
	10:00 - 11:00	1.00	DRLPRO	15	A	P		1500 PSI & TEST SWACO UNDER BALANCE SYSTEM
	11:00 - 15:00	4.00	DRLPRO	06	A	P		INSTALL WEAR BUSHING
	15:00 - 15:30	0.50	DRLPRO	07	A	P		FUNCTION TEST SWACO EQUIPMENT & SMITH ROTHEAD
	15:30 - 17:00	1.50	DRLPRO	07	C	P		P/U MOTOR - BIT & DIR TOOLS & TRIP IN HOLE & TAG CEMENT @ 2710
	17:00 - 19:00	2.00	DRLPRO	02	D	P		SER RIG
								CHANGE OUT SWIVEL PACKING ON TOP DRIVE
								DRILL SHOE TRACK

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 3/11/2012

End Date: 6/7/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:00 - 0:00	5.00	DRLPRO	02	D	P		SPUD 7 7/8 HOLE DIR DRILL F/ 2835 TO 3714 - 879' @ 175.8 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 1700 / 2050 SLIDE 50' - 5.6% ROT 829' - 94.4% 18.59' NORTH - 30.18' WEST
6/1/2012	0:00 - 12:00	12.00	DRLPRO	02	D	P		NOV DEWATER WITH BOTH CENTRIUGES, DIR DRILL F/ 3714 TO 5697 - 1983' @ 165.25 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 1700 / 2050 SLIDE 114' - 5.7% ROT 1869' - 94.3% 13' NORTH - 16' WEST
	12:00 - 13:30	1.50	DRLPRO	22	G	X		NOV DEWATER WITH BOTH CENTRIUGES, LOST RETURNS @ 5697 & PUMP LCM SWEEPS & REGAINS 30% OF FLOW & LOST 600 BBLS WATER & SWEEPS & VIS UP SYSTEM & RAISE LCM TO 8%
	13:30 - 15:30	2.00	DRLPRO	02	D	P		DIR DRILL F/ 5697 TO 5871- 174' @ 87.0FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 1800 / 2225 SLIDE 0' - 0% ROT 174' - 100% 13.5' NORTH - 17' WEST
	15:30 - 16:00	0.50	DRLPRO	07	A	P		BOTH CENTRIUGES, OFF LINE SER RIG
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DIR DRILL F/ 5871 TO 6540 - 669' @ 83.6 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 1800 / 2225 SLIDE 33' - 4.9% ROT 636' - 95.1% 10.09' NORTH - 16.38' WEST
6/2/2012	0:00 - 7:30	7.50	DRLPRO	02	D	P		BOTH CENTRIUGES, OFF LINE DIR DRILL F/ 6540 TO 6922 - 382' @ 50.9 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 1800 / 2225 SLIDE 18' - 4.7% ROT 364' - 95.3% 5.7' NORTH - 11.8' WEST
	7:30 - 10:00	2.50	DRLPRO	06	H	X		BOTH CENTRIUGES, OFF LINE LOST MWD SIGNAL & TRIP OUT HOLE 20 STANDS TRYING RETRIEVE SIGNAL & C/O TRANSCIEVER & RETRIEVED SINGNAL & TRIP IN HOLE.
	10:00 - 10:30	0.50	DRLPRO	07	A	P		SER RIG
	10:30 - 0:00	13.50	DRLPRO	02	D	P		DIR DRILL F/ 6922 TO 7485 - 563' @ 41.7 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 2900 / 3200 SLIDE 35' - 6.1% ROT 528' - 93.9% 8.48' NORTH - 10.25' WEST
								BOTH CENTRIUGES, OFF LINE

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30C1CS GREEN Spud Date: 4/8/2012  
 Project: UTAH-UJINTAH Site: NBU 922-30C PAD Rig Name No: PROPETRO 11/11, SST 54/54  
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 Active Datum: RKB @4,967.00usft (above Mean Sea Level) UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/3/2012	0:00 - 14:30	14.50	DRLPRO	02	D	P		DIR DRILL F/ 7485 TO 8252- 767' @ 52.8 FPH - WOB 18/20 RPM 45/121 = 166 - SPM 160 GPM 580 RPG .21 - TORQ 3/5 - PSI 2900 / 3200 SLIDE 30' - 7.4% ROT 737' - 92.6% 16.12' NORTH - 3.95' WEST BOTH CENTRIUGES,OFF LINE SER RIG
	14:30 - 15:00	0.50	DRLPRO	07	A	P		
	15:00 - 0:00	9.00	DRLPRO	02	D	P		DIR DRILL F/ 8252 TO 8715 - 463' @ 51.4 FPH - WOB 18/20 RPM 45/111 = 156 - SPM 150 GPM 528 RPG .21 - TORQ 3/5 - PSI 2750 / 3000 SLIDE 0' - 0% ROT 463' - 100% 14.81' NORTH - 7.16' WEST BOTH CENTRIUGES,OFF LINE
6/4/2012	0:00 - 7:00	7.00	DRLPRO	02	D	P		DIR DRILL F/ 8715 TO 8942 - 227' @ 32.4 FPH - WOB 18/20 RPM 45/111 = 156 - SPM 150 GPM 528 RPG .21 - TORQ 3/5 - PSI 2750 / 3000 SLIDE 0' - 0% ROT 227' - 100% 14.81' NORTH - 7.16' WEST BOTH CENTRIUGES,OFF LINE
	7:00 - 13:00	6.00	DRLPRO	06	A	P		TRIP FOR NEW BIT & ( TIGHT SPOTS @ 4750 & 4690 - CONT. TRIP OUT THE HOLE & LAY DOWN MOTOR & BIT
	13:00 - 15:30	2.50	DRLPRO	06	A	P		CHANGE OUT BIT & MOTOR & TRIP IN HOLE WITH BIT #2 TO CASING SHOE
	15:30 - 17:00	1.50	DRLPRO	09	A	P		SLIP & CUT DRILL LINE
	17:00 - 20:00	3.00	DRLPRO	06	A	P		TRIP IN HOLE WITH BIT #2
	20:00 - 20:30	0.50	DRLPRO	03	E	P		WASH 120' TO BOTTOM ( NO FILL )
	20:30 - 0:00	3.50	DRLPRO	02	D	P		DIR DRILL F/ 8942 TO 9210 - 268' @ 76.5 FPH - WOB 18/20 RPM 45/72 = 117 - SPM 120 GPM 422 RPG .17 - TORQ 8/10 - PSI 2300 / 2650 SLIDE 0' - 0% ROT 268' - 100%' NORTH - 3.5' NORTH 10.78' WEST BOTH CENTRIUGES,OFF LINE
6/5/2012	0:00 - 6:30	6.50	DRLPRO	02	D	P		DIR DRILL F/ 9210 TO 9640 - 430' @ 66.1 FPH - WOB 18/20 RPM 45/72 = 117 - SPM 120 GPM 422 RPG .17 - TORQ 8/10 - PSI 2300 / 2650 SLIDE 0' - 0% ROT 430' - 100%' NORTH - 3.75' SOUTH 7.04' WEST BOTH CENTRIUGES,OFF LINE
	6:30 - 7:30	1.00	DRLPRO	05	A	P		TD WELL @ 9640 & CIRCULATE BOTTOM UP
	7:30 - 8:30	1.00	DRLPRO	06	E	P		SHORT TRIP 10 STANDS
	8:30 - 10:30	2.00	DRLPRO	05	A	P		CIRCULATE BOTTOM UP & HELD S/M WITH KIMZEY & RIG UP LAY DOWN MACHINE
	10:30 - 22:00	11.50	DRLPRO	06	A	P		TRIP OUT OF HOLE 5 STANDS & PUMP DRY JOB & LAY DOWN DRILL PIPE & BOTTOM HOLE ASSEMBLY
	22:00 - 0:00	2.00	DRLPRO	14	B	P		PULL WEAR BUSHING & PULL ROTHEAD BEARING PACK & INSTALL CASING RUNNING ROTHEAD ADAPTOR SPOOL.
6/6/2012	0:00 - 0:30	0.50	DRLPRO	14	B	P		PULL BEARING PACK & WEAR BUSHING & INSTALL ROTHEAD CASING ADAPTOR.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: PROPETRO 11/11, SST 54/54

Event: DRILLING

Start Date: 3/11/2012

End Date: 6/7/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	0:30 - 10:30	10.00	DRLPRO	12	C	P		RIG UP KIMZEY CASING CREW & RUN 4.5 PROD CASING & SHOE SET @ 9614 & F/C @ 9572 - RUN 220 JOINTS PLUS 2 MARKERS.
	10:30 - 12:00	1.50	DRLPRO	05	D	P		RIG UP CEMENT HEAD & CIRCULATE BOTTOM UP
	12:00 - 15:00	3.00	DRLPRO	12	E	P		SAFETY MEET W/ BJ SER,R/U PRESSURE TEST TO 5K,PUMP 25 BBL FRESH,WATER & ,554 SX LEAD # 12.5 1.98 YLD- PLII+6%GEL +6%R-3+4%SMS+25#SK CELLO FLAKE+5#SK KOL-SEAL+4%FL-52 , F/ TAIL 950 SKS # 14.3 - YLD 1.32 YLD 50:50POZ+2%GELL+0.2%+R-3 +10%SALT+EC-1 0.005%SF& , DISPLACE 148 BBLs,FINAL LIFT PSI 2200,BUMP PLUG 500 OVER ,FLOATS HELD, 10 BBL WATER BACK TO PIT, BEFORE LOSING RETURNS FLUSH BOP,,SET PACK-OFF
	15:00 - 16:00	1.00	DRLPRO	14	A	P		
	16:00 - 0:00	8.00	DRLPRO	01	E	P		CLEAN PITS WITH PRICE PIG TRUCK,RIG DOWN,RIG RELEASE 6/6/2012 23:59 HR

## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	NBU 922-30C1CS GREEN	Wellbore No.	OH
Well Name	NBU 922-30C1CS	Wellbore Name	NBU 922-30C1CS
Report No.	1	Report Date	6/27/2012
Project	UTAH-UJINTAH	Site	NBU 922-30C PAD
Rig Name/No.		Event	COMPLETION
Start Date	6/27/2012	End Date	8/17/2012
Spud Date	4/8/2012	Active Datum	RKB @4,967.00usft (above Mean Sea Level)
UWI	NE/NW/0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0		

### 1.3 General

Contractor	CUTTERS WIRELINE	Job Method		Supervisor	ED GUDAC
Perforated Assembly	PRODUCTION CASING	Conveyed Method			

### 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

### 1.5 Summary

Gross Interval	6,226.0 (usft)-9,287.0 (usft)	Start Date/Time	8/3/2012 12:00AM
No. of Intervals	60	End Date/Time	8/3/2012 12:00AM
Total Shots	237	Net Perforation Interval	79.00 (usft)
Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
		Final Press Date	

## 2 Intervals

### 2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/3/2012 12:00AM	WASATCH/			6,226.0	6,227.0	3.00		0.360	EXP/	3.375	120.00			23.00	PRODUCTIO N

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/3/2012 12:00AM	WASATCH/			6,268.0	6,271.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,283.0	6,284.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,492.0	6,494.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,593.0	6,594.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,600.0	6,601.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,616.0	6,617.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,654.0	6,655.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,746.0	6,747.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,766.0	6,767.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,786.0	6,787.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,820.0	6,821.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,939.0	6,940.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			6,964.0	6,965.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,036.0	7,037.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,043.0	7,044.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,071.0	7,072.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,086.0	7,087.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,100.0	7,101.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,115.0	7,116.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	WASATCH/			7,366.0	7,367.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,442.0	7,444.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/3/2012 12:00AM	MESAVERDE/			7,486.0	7,487.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,505.0	7,506.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,528.0	7,530.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,576.0	7,577.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,627.0	7,628.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,668.0	7,670.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,785.0	7,786.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,818.0	7,820.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,851.0	7,852.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			7,876.0	7,877.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,010.0	8,012.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,063.0	8,065.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,122.0	8,123.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,156.0	8,157.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,211.0	8,212.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,233.0	8,234.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,445.0	8,446.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,467.0	8,469.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,517.0	8,518.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,562.0	8,563.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,580.0	8,581.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/3/2012 12:00AM	MESAVERDE/			8,609.0	8,611.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,686.0	8,687.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,732.0	8,734.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,788.0	8,790.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,815.0	8,816.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,841.0	8,843.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,876.0	8,877.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,928.0	8,930.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			8,960.0	8,961.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,003.0	9,005.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,033.0	9,034.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,055.0	9,056.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,114.0	9,116.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,134.0	9,135.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,165.0	9,167.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,206.0	9,207.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/3/2012 12:00AM	MESAVERDE/			9,285.0	9,287.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN		Spud Date: 4/8/2012	
Project: UTAH-UINTAH		Site: NBU 922-30C PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 6/27/2012	End Date: 8/17/2012
Active Datum: RKB @4,967.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/27/2012	12:30 - 12:45	0.25	COMP	33		P		RU HOT OILER, NO PSI ON SURFACE, FILLED WELL WITH 1/2 BBL TMAC PRESSURED TO 1500 HELD OK BLED WELL DOWN, INSTALLED POP OFF WENT TO 1022-2F PAD
6/28/2012	-							
7/27/2012	11:15 - 12:45	1.50		33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 13 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 25 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 58 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWFW
8/3/2012	7:00 - 10:00	3.00	FRAC	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 6/27/2012

End Date: 8/17/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/6/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>FRAC STG 1)WHP 1524 PSI, BRK 2974 PSI @ 4.8 BPM. ISIP 2244 PSI, FG .68.            CALC HOLES OPEN @ 50.5 BPM @ 5611 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN)            ISIP 2677 PSI, FG .73, NPI 433 PSI.            MP 6484 PSI, MR 50.8 BPM, AP 5216 PSI, AR 50.0 BPM            PUMPED 30/50 OTTAWA SAND IN THIS STAGE            X-OVER FOR W L</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9066' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 2254 PSI, BRK 3622 PSI @ 6.9 BPM. ISIP 2673 PSI, FG .74            CALC HOLES OPEN @ 50.0 BPM @ 5754 PSI = 83% HOLES OPEN. (20/24 HOLES OPEN)            ISIP 2715 PSI, FG .74, NPI 42 PSI.            MP 5975 PSI, MR 50.5 BPM, AP 5754 PSI, AR 50.3 BPM            PUMPED 30/50 OTTAWA SAND IN THIS STAGE            X-OVER FOR W L</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8,853' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 2151 PSI, BRK 2388 PSI @ 4.1 BPM. ISIP 2154 PSI, FG .68.            CALC HOLES OPEN @ 50.5 BPM @ 5104 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN)            ISIP 2425 PSI, FG .72, NPI 271 PSI.            MP 5332 PSI, MR 50.9 BPM, AP 4855 PSI, AR 50.6 BPM            PUMPED 30/50 OTTAWA SAND IN THIS STAGE            X-OVER FOR W L</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8,631' P/U PERF AS PER PERF DESIGN. POOH. SWIFN</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 6/27/2012

End Date: 8/17/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/7/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>FRAC STG 4)WHP 1956 PSI, BRK 4314 PSI @ 4.9 BPM. ISIP 1915 PSI, FG .66. CALC HOLES OPEN @ 50.5 BPM @ 5177 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2420 PSI, FG .72, NPI 505 PSI. MP 5605 PSI, MR 50.9 BPM, AP 4999 PSI, AR 50.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8,264' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 780 PSI, BRK 2490 PSI @ 4.6 BPM. ISIP 1465 PSI, FG .62. CALC HOLES OPEN @ 45.2 BPM @ 6033 PSI = 63% HOLES OPEN. (15/24 HOLES OPEN) ISIP 2420 PSI, FG .74, NPI 955 PSI. MP 6441 PSI, MR 50.7 BPM, AP 5293 PSI, AR 49.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,907' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 839 PSI, BRK 2117 PSI @ 4.0 BPM. ISIP 890 PSI, FG .55. CALC HOLES OPEN @ 50.5 BPM @ 4792 PSI = 67% HOLES OPEN. (16/24 HOLES OPEN) ISIP 1862 PSI, FG .68, NPI 972 PSI. MP 5020 PSI, MR 50.8 BPM, AP 4661 PSI, AR 50.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,597' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 7)WHP 438 PSI, BRK 1892 PSI @ 4.6 BPM. ISIP 1231 PSI, FG .60. CALC HOLES OPEN @ 50.8 BPM @ 3696 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 1693 PSI, FG .67, NPI 462 PSI. MP 4525 PSI, MR 51.0 BPM, AP 3855 PSI, AR 50.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN,</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN

Spud Date: 4/8/2012

Project: UTAH-UINTAH

Site: NBU 922-30C PAD

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 6/27/2012

End Date: 8/17/2012

Active Datum: RKB @4,967.00usft (above Mean Sea Level)

UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								<p>23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7,146' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 8)WHP 144 PSI, BRK 1627 PSI @ 5.5 BPM. ISIP 1130 PSI, FG .60. CALC HOLES OPEN @ 50.0 BPM @ 4417 PSI = 71% HOLES OPEN. (17/24 HOLES OPEN) ISIP 1890 PSI, FG .71, NPI 760 PSI. MP 5465 PSI, MR 50.8 BPM, AP 4963 PSI, AR 50.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6,851' P/U PERF AS PER PERF DESIGN. POOH. SWIFN</p> <p>FRAC STG 9)WHP 274 PSI, BRK 1874 PSI @ 4.6 BPM. ISIP 1223 PSI, FG .62. CALC HOLES OPEN @ 50.5 BPM @ 4031 PSI = 83% HOLES OPEN. (20/24 HOLES OPEN) ISIP 1524 PSI, FG .67, NPI 301 PSI. MP 4349 PSI, MR 51.1 BPM, AP 4008 PSI, AR 50.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6,524' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 10)WHP 190 PSI, BRK 1238 PSI @ 4.1 BPM. ISIP 827 PSI, FG .57. CALC HOLES OPEN @ 50.5 BPM @ 3701 PSI = 91% HOLES OPEN. (19/24 HOLES OPEN) ISIP 823 PSI, FG .57, NPI -4 PSI. MP 3979 PSI, MR 51 BPM, AP 4508 PSI, AR 50.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 6176'. POOH. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 251,051 LBS TOTAL CLFL = 10,507 BBL HSM, PICKING TBG OFF OF FLOAT.</p> <p>ND WH NU BOPS, RU FLOOR &amp; TBG EQUIP. TALLY &amp; PU 37/8 BIT, POBS &amp; 194 JTS 23/8 P-110 TBG OFF FLOAT TO 6154 ' RU DRLG EQUIP, FILL HOLE TEST BOPS TO 4,000# OK SWI PREP TO D/O IN AM. HSM, WORKING W/ POWER SWIVEL &amp; PICKING UP TBG OFF FLOAT.</p>
8/8/2012	7:00 - 12:00	5.00	COMP	36	B	P		
8/16/2012	7:00 - 7:30	0.50	COMP	48		P		
	7:30 - 15:00	7.50	COMP	31	I	P		
8/17/2012	7:00 - 7:30	0.50	COMP	48		P		

**US ROCKIES REGION  
Operation Summary Report**

Well: NBU 922-30C1CS GREEN		Spud Date: 4/8/2012	
Project: UTAH-UINTAH		Site: NBU 922-30C PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 6/27/2012	End Date: 8/17/2012
Active Datum: RKB @4,967.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 17:00	9.50	COMP	44	C	P		<p>BROKE CIRC CONVENTIONAL RIH.</p> <p>C/O 5' SAND TAG 1ST PLG @ 6176' DRL PLG IN 5 MIN 0 # INCREASE RIH.</p> <p>C/O 20' SAND TAG 2ND PLG @ 6524' DRL PLG IN 3 MIN 250 # INCREASE RIH. 5 JTS TO 8682' TBG GOT STUCK, WORK TBG PUMPING DWN CSG &amp; TBG, GOT FREE, RIH.</p> <p>C/O 40' SAND TAG 3RD PLG @ 6851' DRL PLG IN 4 MIN 100 # INCREASE RIH.</p> <p>C/O 30' SAND TAG 4TH PLG @ 7146' DRL PLG IN 5 MIN 100# INCREASE RIH.</p> <p>C/O 45' SAND TAG 5TH PLG @ 7597' DRL PLG IN 2 MIN 150 # INCREASE RIH.</p> <p>C/O 40' SAND TAG 6TH PLG @ 7907' DRL PLG IN 4 MIN 750# INCREASE RIH.</p> <p>C/O 50' SAND TAG 7TH PLG @ 8264' DRL PLG IN 3 MIN 600# INCREASE RIH.</p> <p>C/O 30' SAND TAG 8TH PLG @ 8631' DRL PLG IN 2 MIN 1000 # INCREASE RIH.</p> <p>C/O 15' SAND TAG 9TH PLG @ 8853' DRL PLG IN 3 MIN 200# INCREASE RIH.</p> <p>C/O 30' SAND TAG 10TH PLG @ 9066' DRL PLG IN 3 MIN 400# INCREASE RIH.</p> <p>C/O TO 9478 ' CIRC CLN, HANG SWIVEL. L/D 20 JTS 23/8, LAND TBG ON 279 JTS 23/8 P-110. ND BOPS NU WH, PUMP OFF BIT LET WELL SET FOR 30 MIN FOR BIT TO FALL, TURN WELL OVER TO FB, RIG DWN MOVE OVER &amp; SPOT ON NBU 922-30C4CS 4TH OF 4 WELLS. SDFWE.</p> <p>KB = 18' ( SURFACE IS OPEN &amp; LOCKED )</p> <p>41/16 CAMERON HANGER = .83'</p> <p>279 JTS 23/8 P-110 = 8630.72' ( SICP 2017 FTP 100 )</p> <p>POBS W/ 1.875 X/N = 2.20'</p> <p>EOT @ 8851.75'</p> <p>TWTR 10,897 BBLS TWR 800 BBLS TWLTR 10,097 BBLS</p> <p>315 JT 23/8 P-110, HAULED OUT 279 LANDED 36 TO RETURN</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-30C1CS GREEN		Spud Date: 4/8/2012	
Project: UTAH-UINTAH		Site: NBU 922-30C PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 6/27/2012	End Date: 8/17/2012
Active Datum: RKB @4,967.00usft (above Mean Sea Level)		UWI: NE/NW0/9/S/22/E/30/0/0/26/PM/N/680/W/0/1982/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/18/2012		-						

Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: UINTAH\_NBU 922-30C PAD  
 Well: NBU 922-30C1CS  
 Wellbore: NBU 922-30C1CS  
 Section:  
 SHL:  
 Design: NBU 922-30C1CS (wp01)  
 Latitude: 40.012440  
 Longitude: -109.482911  
 GL: 4949.00  
 KB: 4949' GL +18' RKB @ 4967.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4778.00	4792.84	WASATCH
5378.00	5392.86	top of cylinder
7410.00	7424.89	MESAVERDE
9592.00	9606.91	SEGO

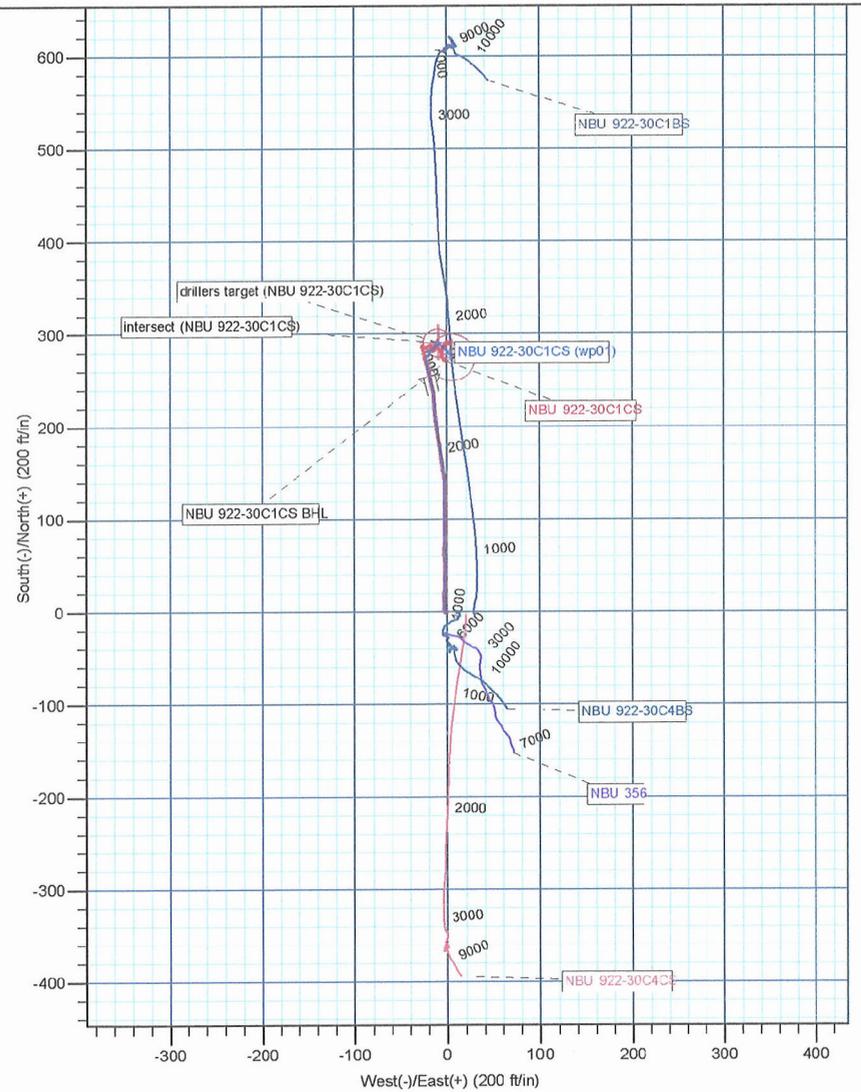
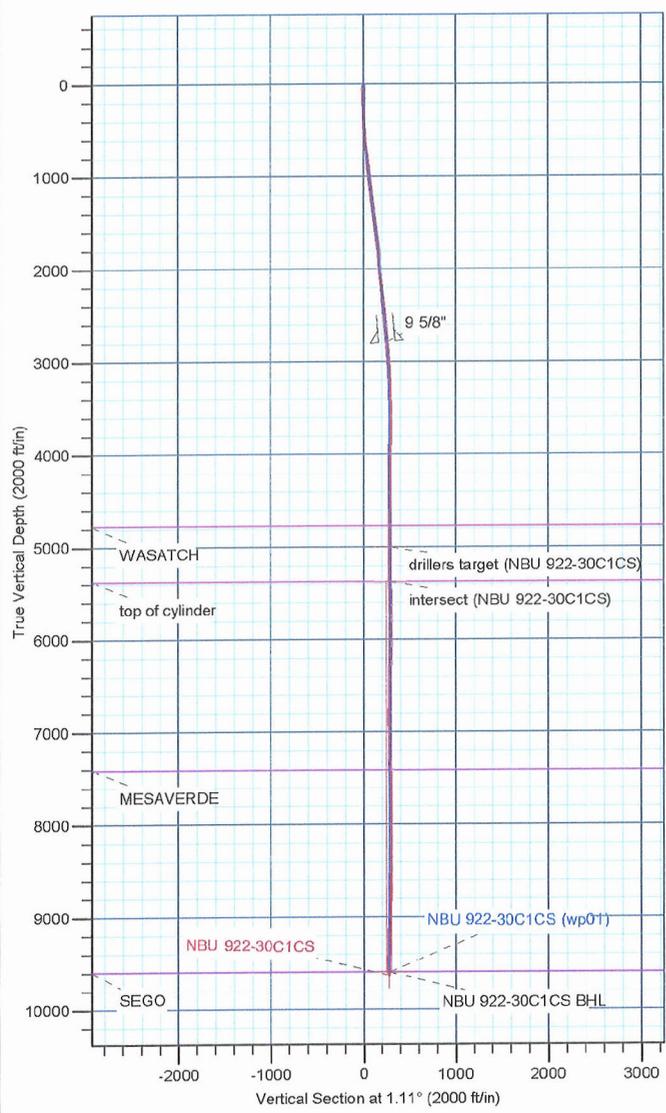
WELL DETAILS: NBU 922-30C1CS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4949.00 Latitude	40.012440	Longitude
0.00	0.00	14534190.66	2065221.64			-109.482911
		Slot				

CASING DETAILS			
TVD	MD	Name	Size
2781.03	2795.01	9 5/8"	9-5/8

Azimuths to True North  
 Magnetic North: 10.96°  
 Magnetic Field  
 Strength: 52252.2snT  
 Dip Angle: 65.86°  
 Date: 4/26/2012  
 Model: IGRF2010

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
drillers target (NBU 922-30C1CS)	5000.00	290.98	-10.32	14534481.43	2065206.37	40.013239	-109.482948	Circle (Radius: 15.00)	
intersect (NBU 922-30C1CS)	5378.00	291.10	-8.68	14534481.57	2065208.01	40.013239	-109.482942	Point	
NBU 922-30C1CS BHL	9592.00	274.98	5.32	14534465.69	2065222.28	40.013195	-109.482892	Circle (Radius: 25.00)	

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
2766.00	5.53	347.12	2752.16	251.75	-18.39	0.00	0.00	251.34	
2866.00	5.53	347.12	2851.69	261.14	-20.54	0.00	0.00	260.69	
3123.10	0.62	36.16	3108.36	274.35	-22.47	2.00	174.74	273.87	
5014.85	0.62	36.16	5000.00	290.98	-10.32	0.00	0.00	290.73	
5262.97	0.29	139.02	5248.11	291.60	-9.11	0.30	157.65	291.37	
9606.91	0.29	139.02	9592.00	274.98	5.32	0.00	0.00	275.03	



# **US ROCKIES REGION PLANNING**

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

**UINTAH\_NBU 922-30C PAD**

**NBU 922-30C1CS**

**NBU 922-30C1CS**

**Design: NBU 922-30C1CS**

## **Standard Survey Report**

**05 September, 2012**

# Andarko Petroleum Corporation

## Survey Report

<b>Company:</b> US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b> Well NBU 922-30C1CS
<b>Project:</b> UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b> 4949' GL +18' RKB @ 4967.00ft
<b>Site:</b> UINTAH_NBU 922-30C PAD	<b>MD Reference:</b> 4949' GL +18' RKB @ 4967.00ft
<b>Well:</b> NBU 922-30C1CS	<b>North Reference:</b> True
<b>Wellbore:</b> NBU 922-30C1CS	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> NBU 922-30C1CS	<b>Database:</b> edmp

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

<b>Site</b>	UINTAH_NBU 922-30C PAD				
<b>Site Position:</b>		<b>Northing:</b>	14,534,187.17 usft	<b>Latitude:</b>	40.012429
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,065,251.39 usft	<b>Longitude:</b>	-109.482805
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.98 °

<b>Well</b>	NBU 922-30C1CS					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,534,190.67 usft	<b>Latitude:</b>	40.012440
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,065,221.64 usft	<b>Longitude:</b>	-109.482911
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,949.00 ft

<b>Wellbore</b>	NBU 922-30C1CS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/26/2012	10.96	65.86	52,252

<b>Design</b>	NBU 922-30C1CS				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	14.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	14.00	0.00	0.00	359.64	

<b>Survey Program</b>	<b>Date</b>	9/5/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
159.00	2,769.00	Survey #1 (NBU 922-30C1CS)	MWD	MWD - STANDARD	
2,860.00	9,640.00	Survey #2 (NBU 922-30C1CS)	MWD	MWD - STANDARD	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00
159.00	0.62	239.14	159.00	-0.40	-0.67	-0.40	0.43	0.43	0.00
185.00	0.35	241.16	185.00	-0.51	-0.86	-0.51	1.04	-1.04	7.77
213.00	0.62	226.83	213.00	-0.66	-1.05	-0.65	1.05	0.96	-51.18
239.00	0.79	257.94	238.99	-0.79	-1.33	-0.78	1.58	0.65	119.65
268.00	0.62	285.98	267.99	-0.79	-1.67	-0.78	1.31	-0.59	96.69
297.00	0.79	303.21	296.99	-0.64	-1.99	-0.62	0.93	0.59	59.41
326.00	1.14	325.97	325.98	-0.29	-2.32	-0.27	1.77	1.21	78.48
355.00	1.76	334.06	354.98	0.35	-2.68	0.37	2.25	2.14	27.90
446.00	2.73	355.42	445.91	3.77	-3.46	3.79	1.39	1.07	23.47

# Andarko Petroleum Corporation

## Survey Report

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	4949' GL +18' RKB @ 4967.00ft
<b>Site:</b>	UINTAH_NBU 922-30C PAD	<b>MD Reference:</b>	4949' GL +18' RKB @ 4967.00ft
<b>Well:</b>	NBU 922-30C1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NBU 922-30C1CS	<b>Database:</b>	edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
536.00	4.04	4.56	535.75	9.06	-3.38	9.09	1.57	1.46	10.16
626.00	5.63	1.83	625.42	16.64	-2.99	16.66	1.78	1.77	-3.03
716.00	6.86	0.43	714.89	26.43	-2.81	26.44	1.38	1.37	-1.56
806.00	7.47	1.48	804.19	37.65	-2.61	37.66	0.69	0.68	1.17
896.00	6.77	359.46	893.49	48.80	-2.51	48.82	0.83	-0.78	-2.24
986.00	6.86	357.61	982.86	59.48	-2.79	59.49	0.26	0.10	-2.06
1,076.00	7.30	359.63	1,072.17	70.57	-3.05	70.58	0.56	0.49	2.24
1,166.00	6.68	0.86	1,161.50	81.52	-3.01	81.53	0.71	-0.69	1.37
1,256.00	6.85	1.86	1,250.87	92.12	-2.75	92.13	0.23	0.19	1.11
1,346.00	6.95	358.58	1,340.22	102.92	-2.71	102.94	0.45	0.11	-3.64
1,436.00	7.47	357.96	1,429.51	114.21	-3.06	114.23	0.58	0.58	-0.69
1,526.00	7.65	359.99	1,518.73	126.05	-3.27	126.07	0.36	0.20	2.26
1,616.00	7.21	1.04	1,607.97	137.69	-3.17	137.71	0.51	-0.49	1.17
1,706.00	5.98	354.03	1,697.38	148.00	-3.55	148.02	1.63	-1.37	-7.79
1,796.00	5.45	349.26	1,786.93	156.86	-4.83	156.89	0.79	-0.59	-5.30
1,886.00	5.54	352.60	1,876.52	165.37	-6.19	165.40	0.37	0.10	3.71
1,976.00	5.80	351.02	1,966.08	174.17	-7.46	174.21	0.34	0.29	-1.76
2,066.00	6.16	350.93	2,055.59	183.43	-8.93	183.48	0.40	0.40	-0.10
2,156.00	5.53	350.55	2,145.12	192.47	-10.40	192.54	0.70	-0.70	-0.42
2,246.00	5.36	350.49	2,234.71	200.90	-11.81	200.97	0.19	-0.19	-0.07
2,336.00	5.21	352.64	2,324.33	209.10	-13.03	209.17	0.28	-0.17	2.39
2,426.00	5.89	355.94	2,413.91	217.75	-13.88	217.84	0.83	0.76	3.67
2,516.00	6.42	357.00	2,503.39	227.39	-14.47	227.47	0.60	0.59	1.18
2,606.00	5.72	352.60	2,592.88	236.86	-15.31	236.95	0.93	-0.78	-4.89
2,696.00	5.28	346.27	2,682.47	245.33	-16.87	245.43	0.83	-0.49	-7.03
2,786.00	5.53	347.12	2,752.16	251.75	-18.39	251.86	0.37	0.36	1.21
2,860.00	5.31	348.99	2,845.74	260.43	-20.23	260.55	0.30	-0.23	1.99
2,956.00	4.94	345.87	2,941.35	268.80	-22.09	268.93	0.48	-0.39	-3.25
3,051.00	3.81	340.74	3,036.08	275.74	-24.13	275.89	1.26	-1.19	-5.40
3,146.00	2.25	354.74	3,130.94	280.58	-25.34	280.74	1.81	-1.64	14.74
3,241.00	2.25	338.37	3,225.87	284.17	-26.20	284.33	0.67	0.00	-17.23
3,337.00	1.19	348.62	3,321.82	286.90	-27.09	287.07	1.15	-1.10	10.68
3,432.00	0.63	94.24	3,416.82	287.83	-26.76	287.99	1.57	-0.59	111.18
3,527.00	0.75	129.74	3,511.81	287.39	-25.76	287.55	0.46	0.13	37.37
3,622.00	1.00	149.12	3,606.80	286.28	-24.86	286.44	0.40	0.26	20.40
3,718.00	0.63	99.12	3,702.79	285.48	-23.91	285.63	0.80	-0.39	-52.08
3,813.00	1.06	69.99	3,797.78	285.70	-22.57	285.84	0.63	0.45	-30.66
3,909.00	1.50	55.12	3,893.76	286.72	-20.70	286.85	0.57	0.46	-15.49
4,004.00	1.06	71.74	3,988.73	287.71	-18.85	287.82	0.60	-0.46	17.49
4,099.00	0.56	55.87	4,083.72	288.24	-17.63	288.35	0.57	-0.53	-16.71
4,195.00	1.00	173.87	4,179.72	287.67	-17.15	287.78	1.41	0.46	122.92
4,290.00	1.75	177.99	4,274.69	285.40	-17.01	285.50	0.80	0.79	4.34
4,386.00	1.06	184.37	4,370.66	283.05	-17.03	283.15	0.74	-0.72	6.65

# Andarko Petroleum Corporation

## Survey Report

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 922-30C1CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	4949' GL +18' RKB @ 4967.00ft
<b>Site:</b>	UINTAH_NBU 922-30C PAD	<b>MD Reference:</b>	4949' GL +18' RKB @ 4967.00ft
<b>Well:</b>	NBU 922-30C1CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	NBU 922-30C1CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NBU 922-30C1CS	<b>Database:</b>	edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,481.00	0.50	121.49	4,465.65	281.96	-16.74	282.06	0.99	-0.59	-66.19	
4,575.00	0.50	36.87	4,559.65	282.07	-16.14	282.17	0.72	0.00	-90.02	
4,671.00	0.25	57.87	4,655.65	282.52	-15.72	282.61	0.29	-0.26	21.88	
4,766.00	0.38	150.49	4,750.65	282.35	-15.38	282.45	0.49	0.14	97.49	
4,862.00	0.50	158.37	4,846.64	281.69	-15.07	281.78	0.14	0.13	8.21	
4,956.00	0.50	43.37	4,940.64	281.60	-14.64	281.69	0.90	0.00	-122.34	
5,052.00	1.13	29.49	5,036.63	282.73	-13.89	282.82	0.68	0.66	-14.46	
5,147.00	1.19	16.62	5,131.61	284.49	-13.14	284.57	0.28	0.06	-13.55	
5,243.00	0.81	33.87	5,227.60	286.01	-12.48	286.09	0.50	-0.40	17.97	
5,338.00	0.56	28.24	5,322.59	286.98	-11.89	287.05	0.27	-0.26	-5.93	
5,433.00	0.38	47.99	5,417.59	287.60	-11.43	287.67	0.25	-0.19	20.79	
5,528.00	0.32	59.41	5,512.59	287.94	-10.97	288.01	0.10	-0.06	12.02	
5,623.00	0.25	286.99	5,607.59	288.14	-10.94	288.20	0.55	-0.07	-139.39	
5,719.00	0.31	299.24	5,703.58	288.33	-11.37	288.39	0.09	0.06	12.76	
5,814.00	0.25	276.99	5,798.58	288.48	-11.80	288.55	0.13	-0.06	-23.42	
5,909.00	0.25	234.74	5,893.58	288.38	-12.17	288.46	0.19	0.00	-44.47	
6,005.00	0.31	189.24	5,989.58	288.01	-12.38	288.08	0.23	0.06	-47.40	
6,100.00	0.56	175.24	6,084.58	287.29	-12.39	287.36	0.28	0.26	-14.74	
6,196.00	0.75	173.62	6,180.57	286.20	-12.28	286.27	0.20	0.20	-1.69	
6,290.00	0.63	140.37	6,274.57	285.19	-11.88	285.26	0.44	-0.13	-35.37	
6,385.00	0.69	61.37	6,369.56	285.06	-11.05	285.13	0.89	0.06	-83.16	
6,480.00	0.69	99.99	6,464.56	285.24	-9.98	285.29	0.48	0.00	40.65	
6,576.00	0.81	137.24	6,560.55	284.64	-8.95	284.69	0.51	0.13	38.80	
6,671.00	1.06	150.24	6,655.54	283.38	-8.06	283.43	0.34	0.26	13.68	
6,766.00	1.19	153.87	6,750.52	281.73	-7.19	281.77	0.16	0.14	3.82	
6,859.00	0.38	129.49	6,843.51	280.67	-6.52	280.71	0.92	-0.87	-26.22	
6,953.00	0.63	9.62	6,937.51	280.98	-6.20	281.02	0.94	0.27	-127.52	
7,049.00	0.50	10.12	7,033.50	281.91	-6.04	281.95	0.14	-0.14	0.52	
7,144.00	0.44	22.37	7,128.50	282.66	-5.82	282.69	0.12	-0.06	12.89	
7,238.00	0.25	59.62	7,222.50	283.10	-5.51	283.13	0.30	-0.20	39.63	
7,334.00	0.56	58.12	7,318.49	283.45	-4.93	283.48	0.32	0.32	-1.56	
7,429.00	1.38	20.49	7,413.48	284.77	-4.14	284.79	1.05	0.86	-39.61	
7,525.00	1.06	17.49	7,509.46	286.70	-3.46	286.71	0.34	-0.33	-3.13	
7,620.00	0.81	22.37	7,604.45	288.16	-2.94	288.17	0.28	-0.26	5.14	
7,715.00	0.81	49.37	7,699.44	289.21	-2.18	289.22	0.40	0.00	28.42	
7,811.00	0.69	66.99	7,795.43	289.88	-1.13	289.88	0.27	-0.13	18.35	
7,906.00	0.74	84.17	7,890.42	290.17	0.00	290.16	0.23	0.05	18.08	
8,001.00	0.75	110.87	7,985.41	290.01	1.20	290.00	0.36	0.01	28.11	
8,096.00	0.50	1.12	8,080.41	290.20	1.78	290.19	1.09	-0.26	-115.53	
8,192.00	0.75	318.37	8,176.40	291.09	1.38	291.08	0.53	0.26	-44.53	
8,287.00	0.50	284.12	8,271.40	291.66	0.56	291.65	0.46	-0.26	-36.05	
8,382.00	0.56	248.99	8,366.40	291.59	-0.27	291.59	0.34	0.06	-36.98	
8,478.00	0.63	215.49	8,462.39	290.99	-1.02	290.99	0.36	0.07	-34.90	

# Andarko Petroleum Corporation

## Survey Report

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 922-30C PAD  
**Well:** NBU 922-30C1CS  
**Wellbore:** NBU 922-30C1CS  
**Design:** NBU 922-30C1CS

**Local Co-ordinate Reference:** Well NBU 922-30C1CS  
**TVD Reference:** 4949' GL +18' RKB @ 4967.00ft  
**MD Reference:** 4949' GL +18' RKB @ 4967.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** edmp

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,573.00	1.13	213.24	8,557.38	289.78	-1.84	289.79	0.53	0.53	-2.37
8,668.00	1.13	219.24	8,652.36	288.28	-2.94	288.29	0.12	0.00	6.32
8,763.00	1.25	208.99	8,747.34	286.64	-4.04	286.66	0.26	0.13	-10.79
8,859.00	1.40	198.23	8,843.31	284.61	-4.91	284.64	0.30	0.16	-11.21
8,954.00	1.38	184.87	8,938.29	282.37	-5.37	282.40	0.34	-0.02	-14.06
9,049.00	1.06	181.49	9,033.26	280.35	-5.49	280.38	0.35	-0.34	-3.56
9,145.00	1.19	176.87	9,129.25	278.47	-5.46	278.50	0.17	0.14	-4.81
9,239.00	0.94	175.74	9,223.23	276.73	-5.35	276.76	0.27	-0.27	-1.20
9,335.00	0.69	155.12	9,319.22	275.42	-5.05	275.44	0.40	-0.26	-21.48
9,430.00	0.69	142.62	9,414.21	274.44	-4.46	274.47	0.16	0.00	-13.16
9,526.00	1.06	139.62	9,510.20	273.31	-3.53	273.32	0.39	0.39	-3.13
9,580.00	1.49	138.77	9,564.19	272.40	-2.75	272.41	0.80	0.80	-1.57
<b>LAST MWD SURVEY</b>									
9,640.00	1.49	138.77	9,624.17	271.23	-1.72	271.23	0.00	0.00	0.00
<b>PROJECTION TO TD</b>									

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,580.00	9,564.19	272.40	-2.75	LAST MWD SURVEY
9,640.00	9,624.17	271.23	-1.72	PROJECTION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_