

**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> Morgan State 921-36C4CS																																
<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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>																																
<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> ML 22265			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" 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"/>			<b>20. LOCATION OF WELL</b>			<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>FOOTAGES</th> <th>QTR-QTR</th> <th>SECTION</th> <th>TOWNSHIP</th> <th>RANGE</th> <th>MERIDIAN</th> </tr> </thead> <tbody> <tr> <td>641 FNL 1998 FWL</td> <td>NENW</td> <td>36</td> <td>9.0 S</td> <td>21.0 E</td> <td>S</td> </tr> <tr> <td>1077 FNL 2143 FWL</td> <td>NENW</td> <td>36</td> <td>9.0 S</td> <td>21.0 E</td> <td>S</td> </tr> <tr> <td>1077 FNL 2143 FWL</td> <td>NENW</td> <td>36</td> <td>9.0 S</td> <td>21.0 E</td> <td>S</td> </tr> </tbody> </table>			FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	641 FNL 1998 FWL	NENW	36	9.0 S	21.0 E	S	1077 FNL 2143 FWL	NENW	36	9.0 S	21.0 E	S	1077 FNL 2143 FWL	NENW	36	9.0 S	21.0 E	S
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<b>21. COUNTY</b> UINTAH			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 1077			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 639			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 449			<b>26. PROPOSED DEPTH</b> MD: 10621 TVD: 10581																										
<b>27. ELEVATION - GROUND LEVEL</b> 4989			<b>28. BOND NUMBER</b> 22013542			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8496																																
<b>Hole, Casing, and Cement Information</b>																																						
<b>String</b>	<b>Hole Size</b>	<b>Casing Size</b>	<b>Length</b>	<b>Weight</b>	<b>Grade &amp; Thread</b>	<b>Max Mud Wt.</b>	<b>Cement</b>	<b>Sacks</b>	<b>Yield</b>	<b>Weight</b>																												
Surf	12.25	8.625	0 - 2620	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 - 10621	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength	320	3.38	12.0																												
							50/50 Poz	1530	1.31	14.3																												
<b>ATTACHMENTS</b>																																						
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>																																						
<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> Danielle Piernot				<b>TITLE</b> Regulatory Analyst				<b>PHONE</b> 720 929-6156																														
<b>SIGNATURE</b>				<b>DATE</b> 12/19/2011				<b>EMAIL</b> danielle.piernot@anadarko.com																														
<b>API NUMBER ASSIGNED</b> 43047522740000				<b>APPROVAL</b>   Permit Manager																																		

**Kerr-McGee Oil & Gas Onshore. L.P.****MORGAN STATE 921-36C4CS**

Surface: 641 FNL / 1998 FWL NENW  
 BHL: 1077 FNL / 2143 FWL NENW

Section 36 T9S R21E

Unitah County, Utah  
 Mineral Lease: ML-22265

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

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

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,365'	
Birds Nest	1,667'	Water
Mahogany	2,166'	Water
Wasatch	4,624'	Gas
Mesaverde	7,305'	Gas
Sego	9,488'	Gas
Castlegate	9,548'	Gas
MN5	9,981'	Gas
TVD =	10,581'	
TD =	10,621'	

- 2.C Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Segoe as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

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

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

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

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

**5. Drilling Fluids Program:**

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

**6. Evaluation Program:**

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

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

Maximum anticipated bottom hole pressure calculated at 10581' TVD, approximately equals  
6,983 psi (0.66 psi/ft = actual bottomhole gradient)

---

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

Maximum anticipated surface pressure equals approximately 4,704 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

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

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

Maximum anticipated bottom hole pressure calculated at 9488' TVD, approximately equals  
6,072 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,972 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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

**8. Anticipated Starting Dates:**

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

**9. Variances:**

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

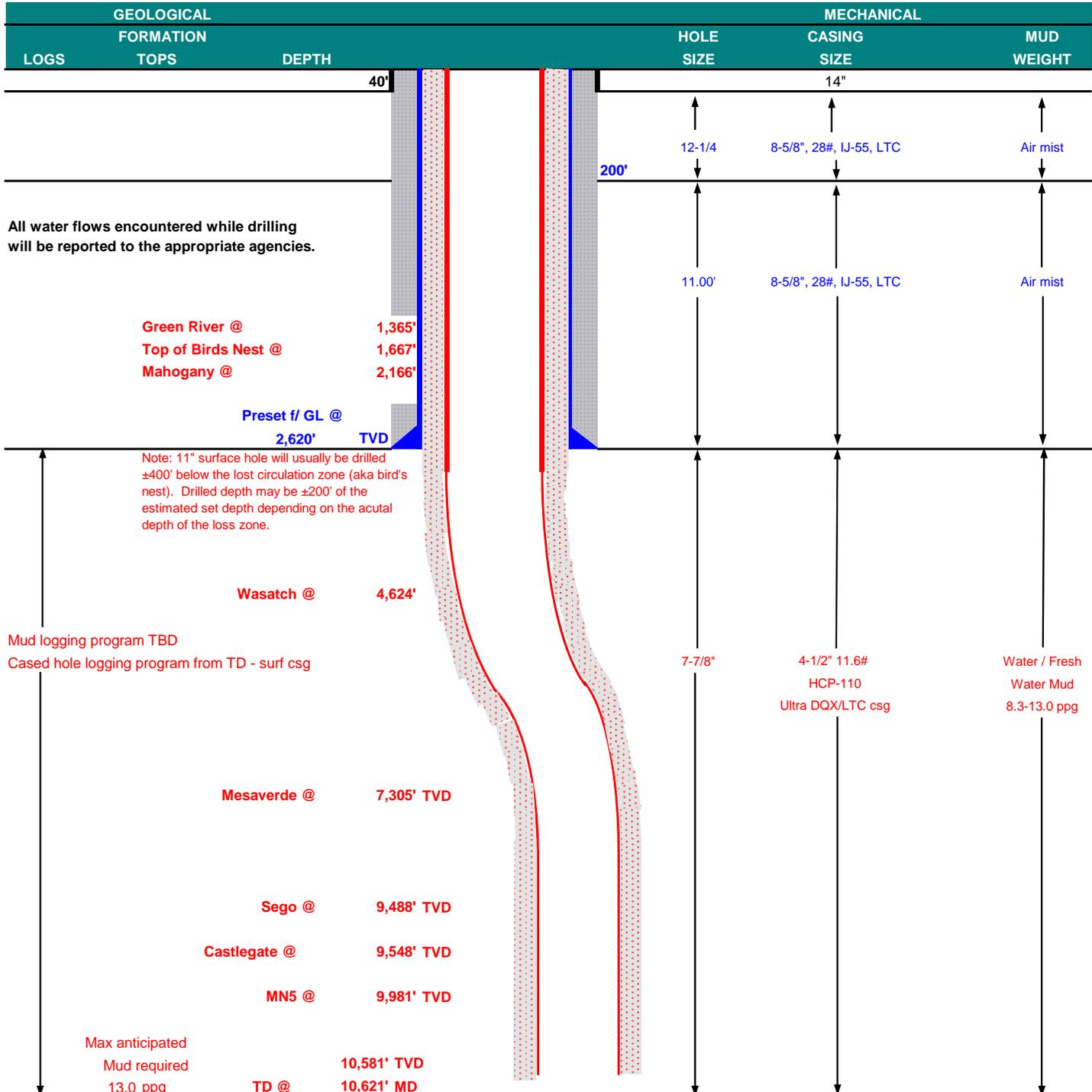
10. **Other Information:**

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



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

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	December 19, 2011			
WELL NAME	<b>MORGAN STATE 921-36C4CS</b>		TD	10,581'	TVD	10,621' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,988'
SURFACE LOCATION	NENW	641 FNL	1998 FWL	Sec 36	T 9S	R 21E	
	Latitude:	39.998015	Longitude:	-109.501666			NAD 27
BTM HOLE LOCATION	NENW	1077 FNL	2143 FWL	Sec 36	T 9S	R 21E	
	Latitude:	39.996819	Longitude:	-109.501148			NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						





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

**CASING PROGRAM**

							DESIGN FACTORS			
							LTC		DQX	
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'					3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,620	28.00	IJ-55	LTC	2.05	1.53	5.42	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	HCP-110	DQX	1.19	1.21	279,000	367,174
	4-1/2"	5,000	to 10,621'	11.60	HCP-110	LTC	1.19	1.21	5.34	

**Surface Casing:**

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

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

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

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

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>							
SURFACE	LEAD	2,120'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,121'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL	6,500'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,530	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.

**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:**

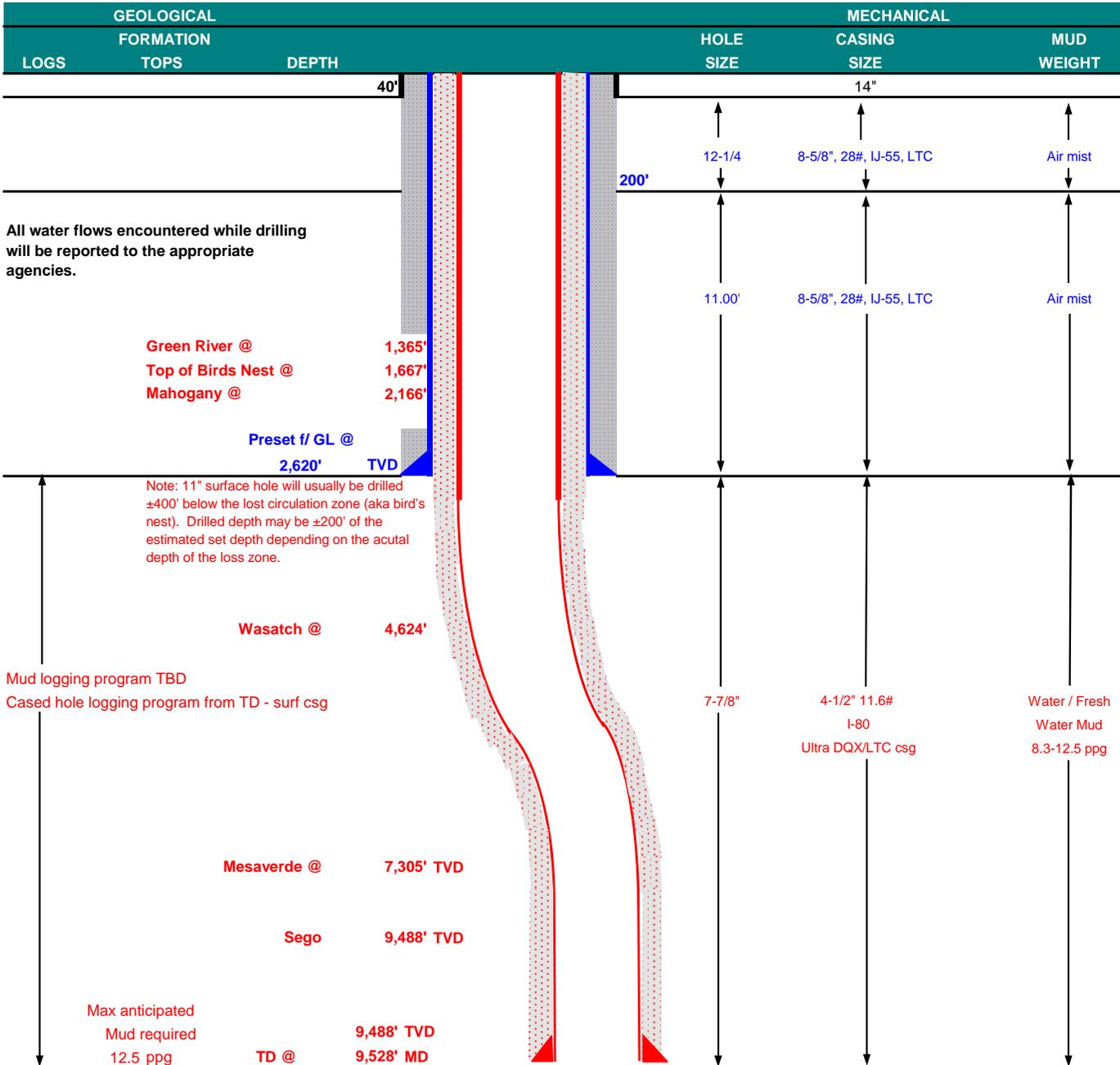
Kenny Gathings / Lovel Young

DATE: \_\_\_\_\_



## KERR-McGEE OIL & GAS ONSHORE LP WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	December 19, 2011	
WELL NAME	<b>MORGAN STATE 921-36C4CS</b>		TD	9,488'	9,528' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NENW	641 FNL	1998 FWL	Sec 36 T 9S R 21E	FINISHED ELEVATION 4,988'
	Latitude: 39.998015		Longitude: -109.501666		NAD 27
BTM HOLE LOCATION	NENW	1077 FNL	2143 FWL	Sec 36 T 9S R 21E	
	Latitude: 39.996819		Longitude: -109.501148		NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





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

**WASATCH/MESAVERDE DRILLING PROGRAM**

**CASING PROGRAM**

							DESIGN FACTORS			
							LTC		DQX	
	SIZE	INTERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION		
CONDUCTOR	14"	0-40'								
						3,390	1,880	348,000	N/A	
SURFACE	8-5/8"	0 to 2,620	28.00	IJ-55	LTC	2.05	1.53	5.42	N/A	
						7,780	6,350		267,035	
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.03		2.99	
						7,780	6,350	223,000		
	4-1/2"	5,000 to 9,528'	11.60	I-80	LTC	1.11	1.03	5.25		

**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)

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**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	Option 1						
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
	Option 2						
	LEAD	2,120'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	35%	11.00	3.82
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	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,118'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL	5,410'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,280	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

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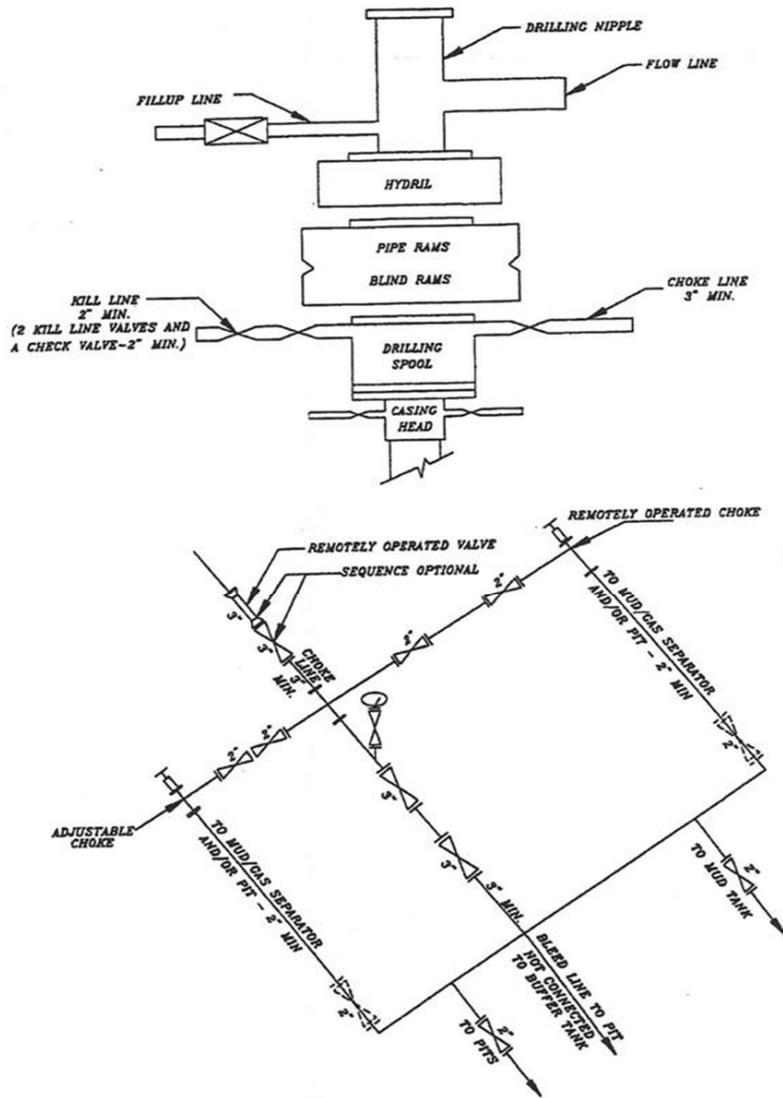
DRILLING ENGINEER: \_\_\_\_\_  
Nick Spence / Danny Showers / Chad Loesel

DATE: \_\_\_\_\_

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

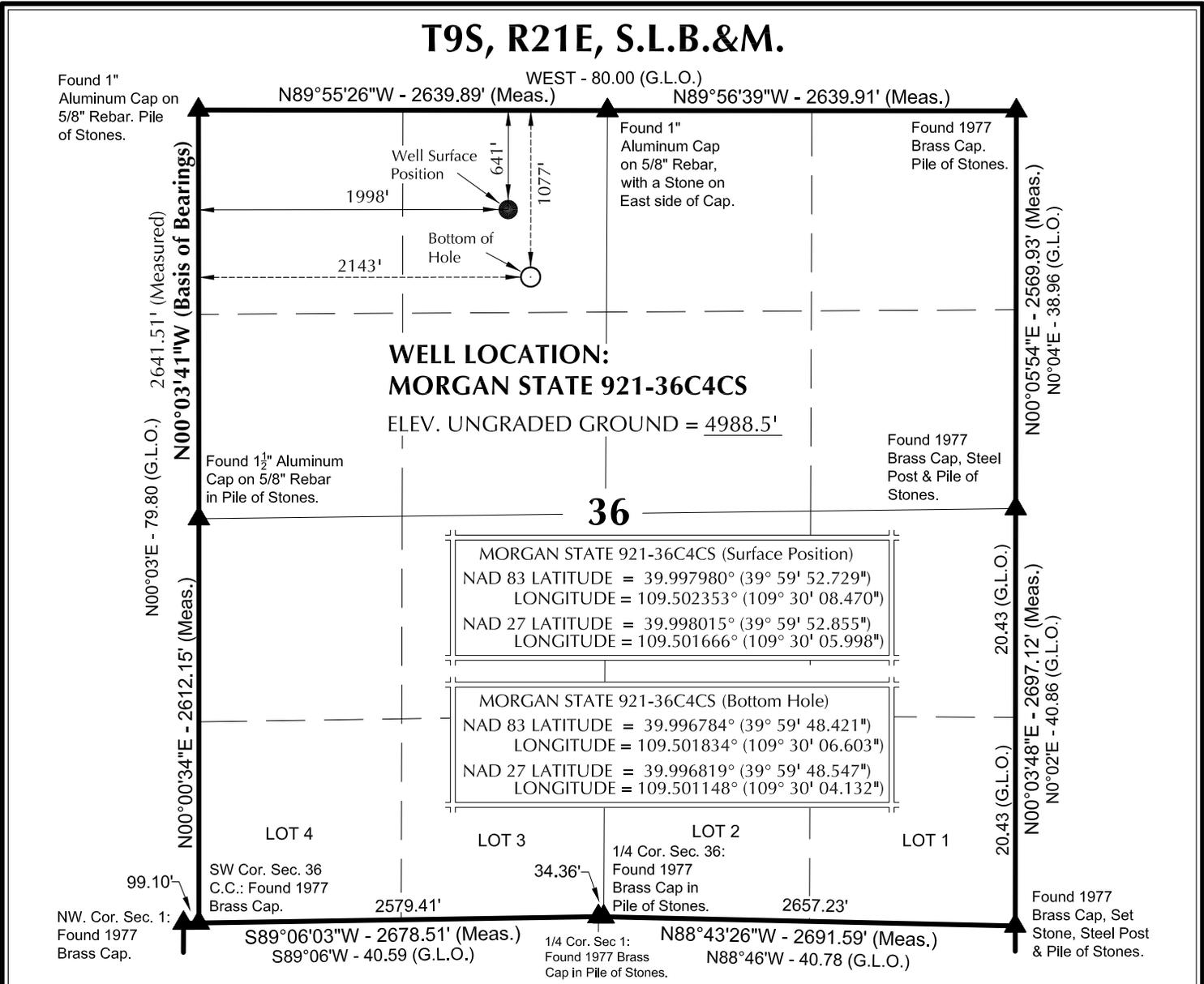
DATE: \_\_\_\_\_

**EXHIBIT A**  
**MORGAN STATE 921-36C4CS**



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

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



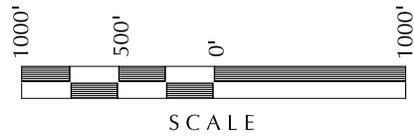
**WELL LOCATION:  
MORGAN STATE 921-36C4CS**

ELEV. UNGRADED GROUND = 4988.5'

<p>MORGAN STATE 921-36C4CS (Surface Position)</p> <p>NAD 83 LATITUDE = 39.997980° (39° 59' 52.729")</p> <p>LONGITUDE = 109.502353° (109° 30' 08.470")</p> <p>NAD 27 LATITUDE = 39.998015° (39° 59' 52.855")</p> <p>LONGITUDE = 109.501666° (109° 30' 05.998")</p>
<p>MORGAN STATE 921-36C4CS (Bottom Hole)</p> <p>NAD 83 LATITUDE = 39.996784° (39° 59' 48.421")</p> <p>LONGITUDE = 109.501834° (109° 30' 06.603")</p> <p>NAD 27 LATITUDE = 39.996819° (39° 59' 48.547")</p> <p>LONGITUDE = 109.501148° (109° 30' 04.132")</p>

**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 S18°24'29"E 459.63' 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 ¼ 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.

11-11-11  
 JOHN R. LAUGH  
 PROFESSIONAL LAND SURVEYOR  
 REGISTRATION No. 6028691  
 STATE OF UTAH

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

**WELL PAD: MORGAN STATE 921-36C**

**MORGAN STATE 921-36C4CS  
 WELL PLAT**  
 1077' FNL, 2143' FWL (Bottom Hole)  
 NE ¼ NW ¼ OF SECTION 36, T9S, R21E,  
 S.L.B.&M., UTAH COUNTY, UTAH.

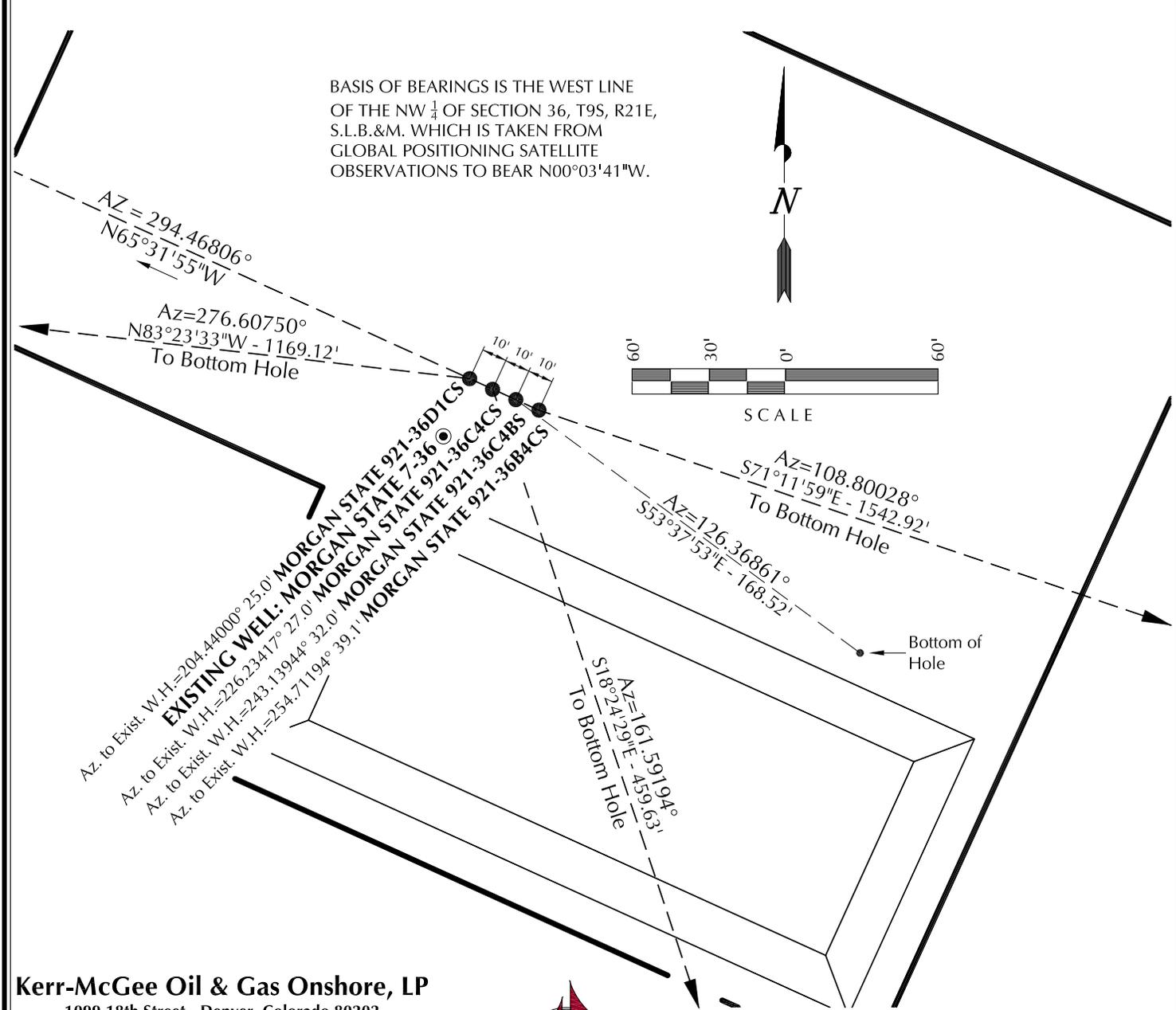
**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

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

DATE SURVEYED: 10-13-11	SURVEYED BY: J.W.	SHEET NO: <b>3</b>
DATE DRAWN: 11-02-11	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'		3 OF 16

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
MORGAN STATE 921-36B4CS	39°59'52.647"	109°30'08.236"	39°59'52.773"	109°30'05.764"	649' FNL 2016' FWL	39°59'47.740"	109°29'49.471"	39°59'47.866"	109°29'47.000"	1145' FNL 1800' FEL
MORGAN STATE 921-36C4BS	39°59'52.688"	109°30'08.353"	39°59'52.814"	109°30'05.881"	645' FNL 2007' FWL	39°59'51.701"	109°30'06.609"	39°59'51.827"	109°30'04.138"	745' FNL 2143' FWL
MORGAN STATE 921-36C4CS	39°59'52.729"	109°30'08.470"	39°59'52.855"	109°30'05.998"	641' FNL 1998' FWL	39°59'48.421"	109°30'06.603"	39°59'48.547"	109°30'04.132"	1077' FNL 2143' FWL
MORGAN STATE 921-36D1CS	39°59'52.769"	109°30'08.587"	39°59'52.896"	109°30'06.115"	637' FNL 1989' FWL	39°59'54.093"	109°30'23.507"	39°59'54.219"	109°30'21.034"	504' FNL 828' FWL
MORGAN STATE 7-36	39°59'52.545"	109°30'08.720"	39°59'52.671"	109°30'06.248"	660' FNL 1979' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole											
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
MORGAN STATE 921-36B4CS	-497.2'	1460.6'	MORGAN STATE 921-36C4BS	-99.9'	135.7'	MORGAN STATE 921-36C4CS	-436.1'	145.1'	MORGAN STATE 921-36D1CS	134.5'	-1161.4'



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**WELL PAD - MORGAN STATE 921-36C**

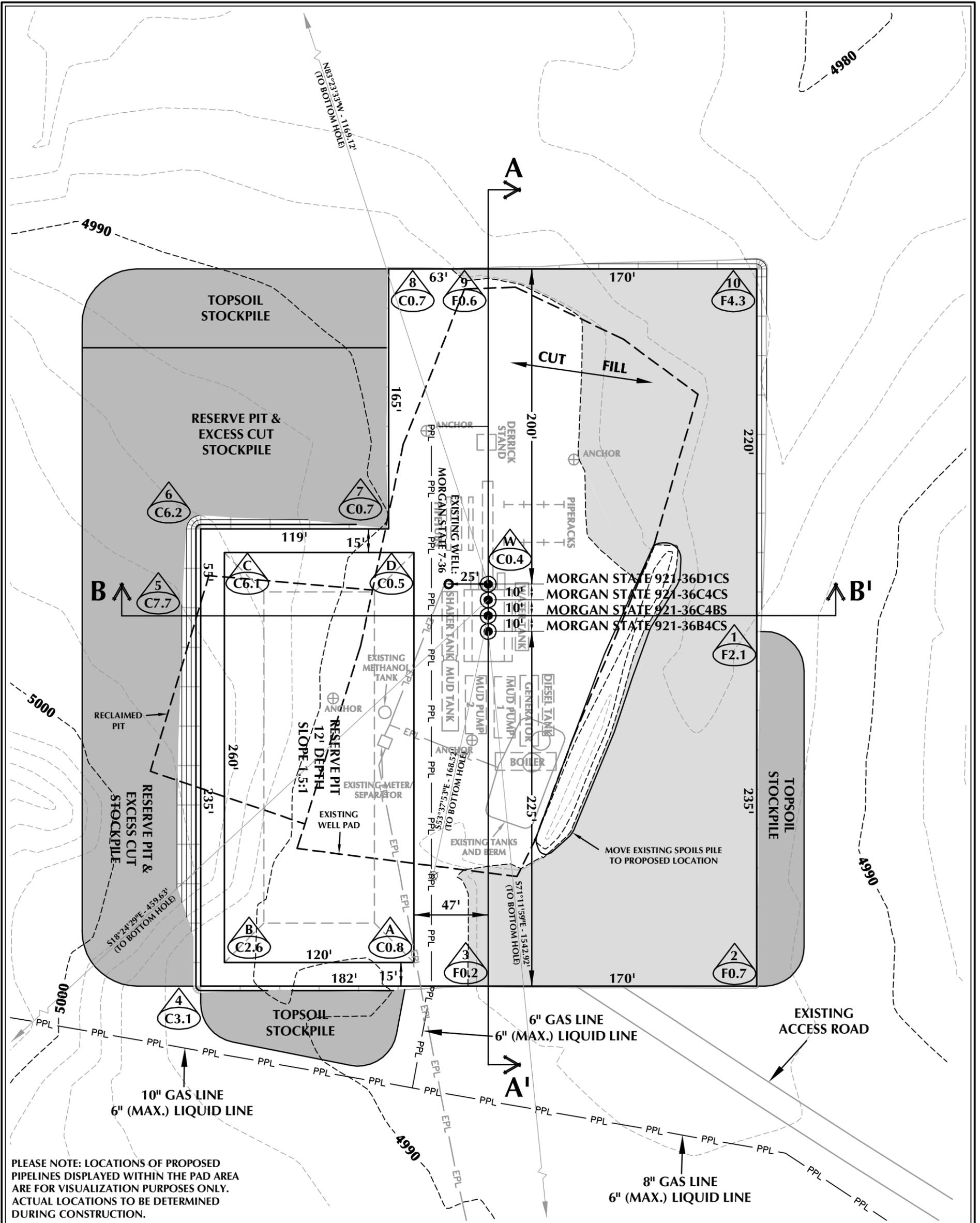
WELL PAD INTERFERENCE PLAT  
 WELLS - MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH.



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

DATE SURVEYED: 10-13-11	SURVEYED BY: J.W.	SHEET NO: <b>5</b> 5 OF 16
DATE DRAWN: 11-02-11	DRAWN BY: T.J.R.	
SCALE: 1" = 60'	Date Last Revised:	



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

**WELL PAD - MORGAN STATE 921-36C DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4988.5'  
 FINISHED GRADE ELEVATION = 4988.1'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.40 ACRES  
 TOTAL DISTURBANCE AREA = 4.77 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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

**WELL PAD - MORGAN STATE 921-36C**

WELL PAD - LOCATION LAYOUT  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., UTAH COUNTY, UTAH



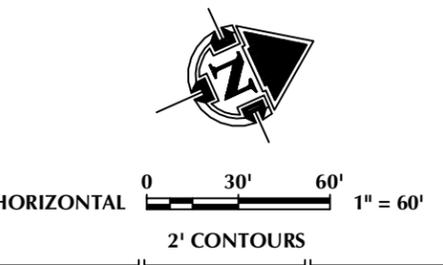
**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 5,627 C.Y.  
 TOTAL FILL FOR WELL PAD = 3,941 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,709 C.Y.  
 EXCESS MATERIAL = 1,686 C.Y.

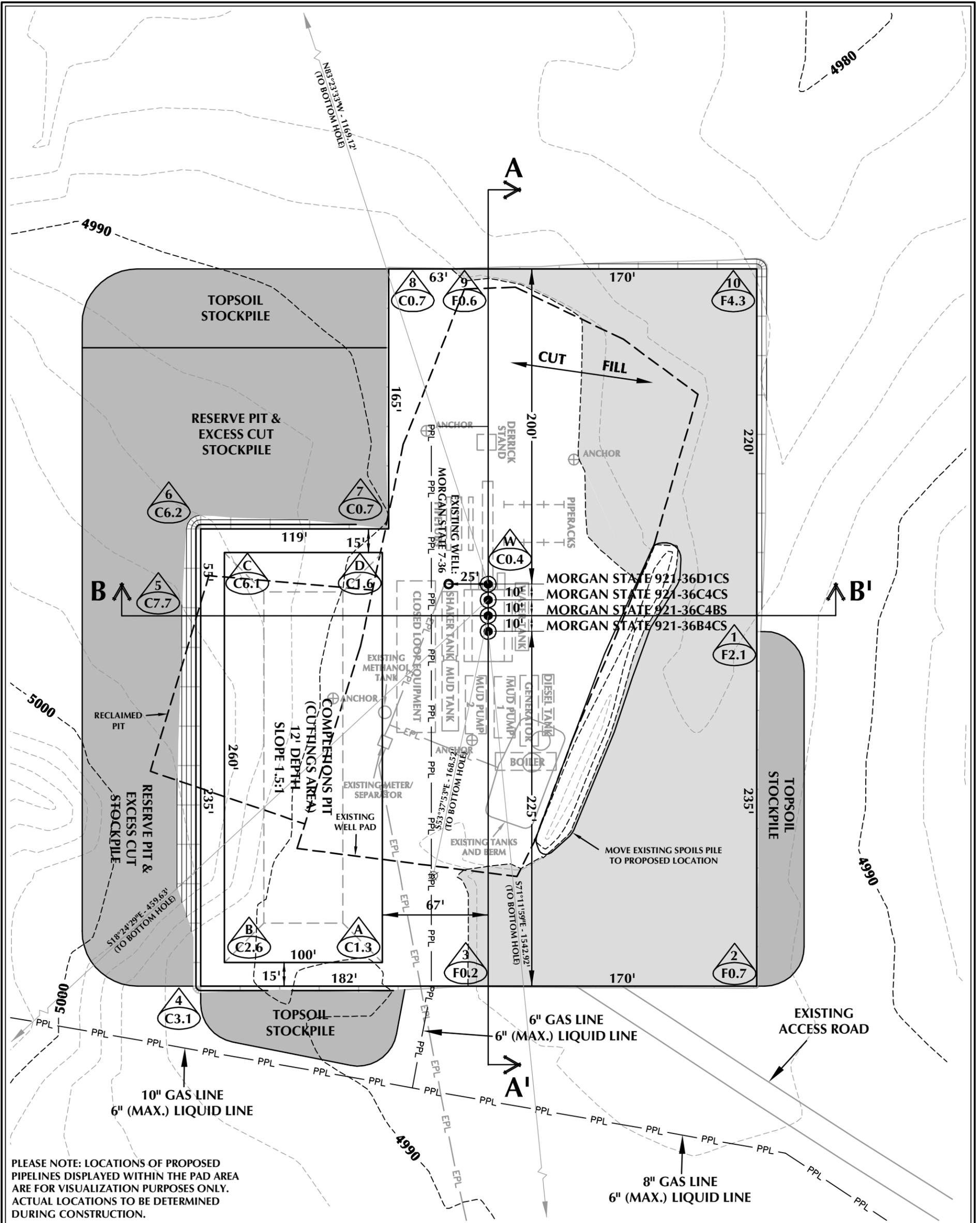
**RESERVE PIT QUANTITIES**  
 TOTAL CUT FOR RESERVE PIT  
 +/- 11,020 C.Y.  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 42,290 BARRELS

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 209 NORTH 300 WEST - VERNAL, UTAH 84078  
 (435) 789-1365

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



SCALE: 1"=60' DATE: 11/11/11 SHEET NO:  
 REVISED: **6** 6 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 - MORGAN STATE 921-36C (CLOSED LOOP) DESIGN SUMMARY**

EXISTING GRADE @ CENTER OF WELL PAD = 4988.5'  
 FINISHED GRADE ELEVATION = 4988.1'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1  
 TOTAL WELL PAD AREA = 3.40 ACRES  
 TOTAL DISTURBANCE AREA = 4.77 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00

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**WELL PAD - MORGAN STATE 921-36C**  
 WELL PAD - LOCATION LAYOUT  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., UTAH COUNTY, UTAH

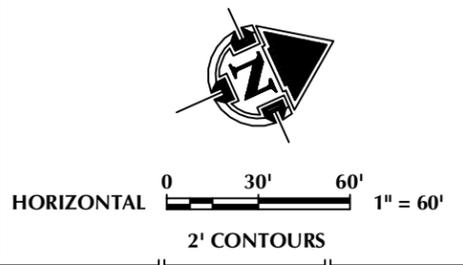


**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**WELL PAD QUANTITIES**  
 TOTAL CUT FOR WELL PAD = 5,627 C.Y.  
 TOTAL FILL FOR WELL PAD = 3,941 C.Y.  
 TOPSOIL @ 6" DEPTH = 1,709 C.Y.  
 EXCESS MATERIAL = 1,686 C.Y.

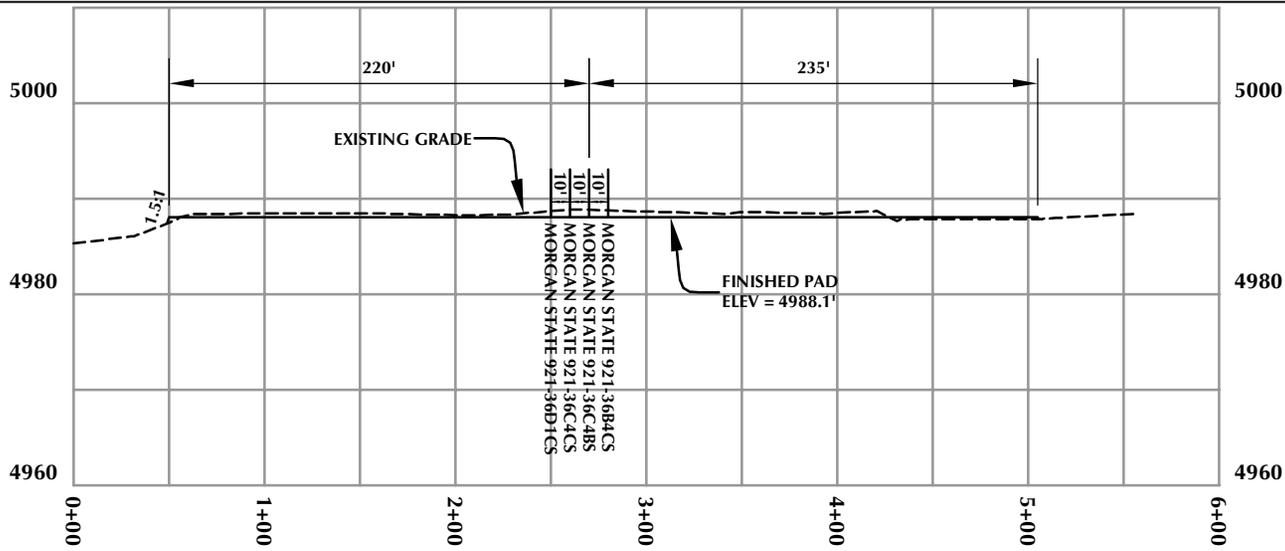
**COMPLETIONS PIT QUANTITIES**  
 TOTAL CUT FOR COMPLETIONS PIT  
 +/- 8,870 C.Y.  
 COMPLETIONS PIT CAPACITY  
 (2' OF FREEBOARD)  
 +/- 33,770 BARRELS

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

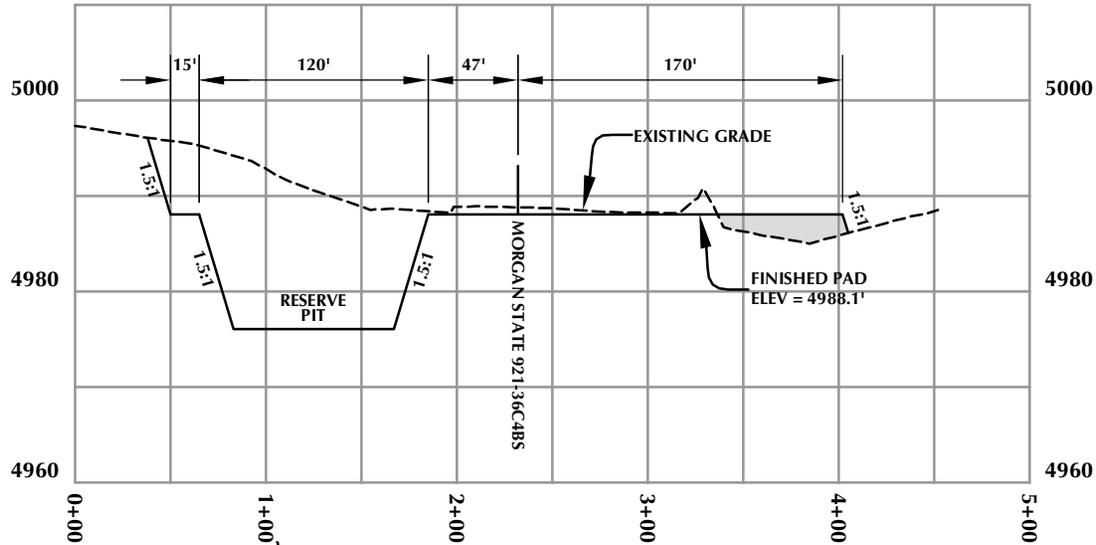


**TIMBERLINE** ENGINEERING & LAND SURVEYING, INC.  
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SCALE: 1"=60' DATE: 11/15/11 SHEET NO: **6B** 6B OF 16  
 REVISED:



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

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

**WELL PAD - MORGAN STATE 921-36C**

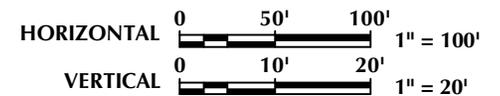
WELL PAD - CROSS SECTIONS  
MORGAN STATE 921-36B4CS,  
MORGAN STATE 921-36C4BS,  
MORGAN STATE 921-36C4CS &  
MORGAN STATE 921-36D1CS  
LOCATED IN SECTION 36, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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

(435) 789-1365



Scale: 1"=100'

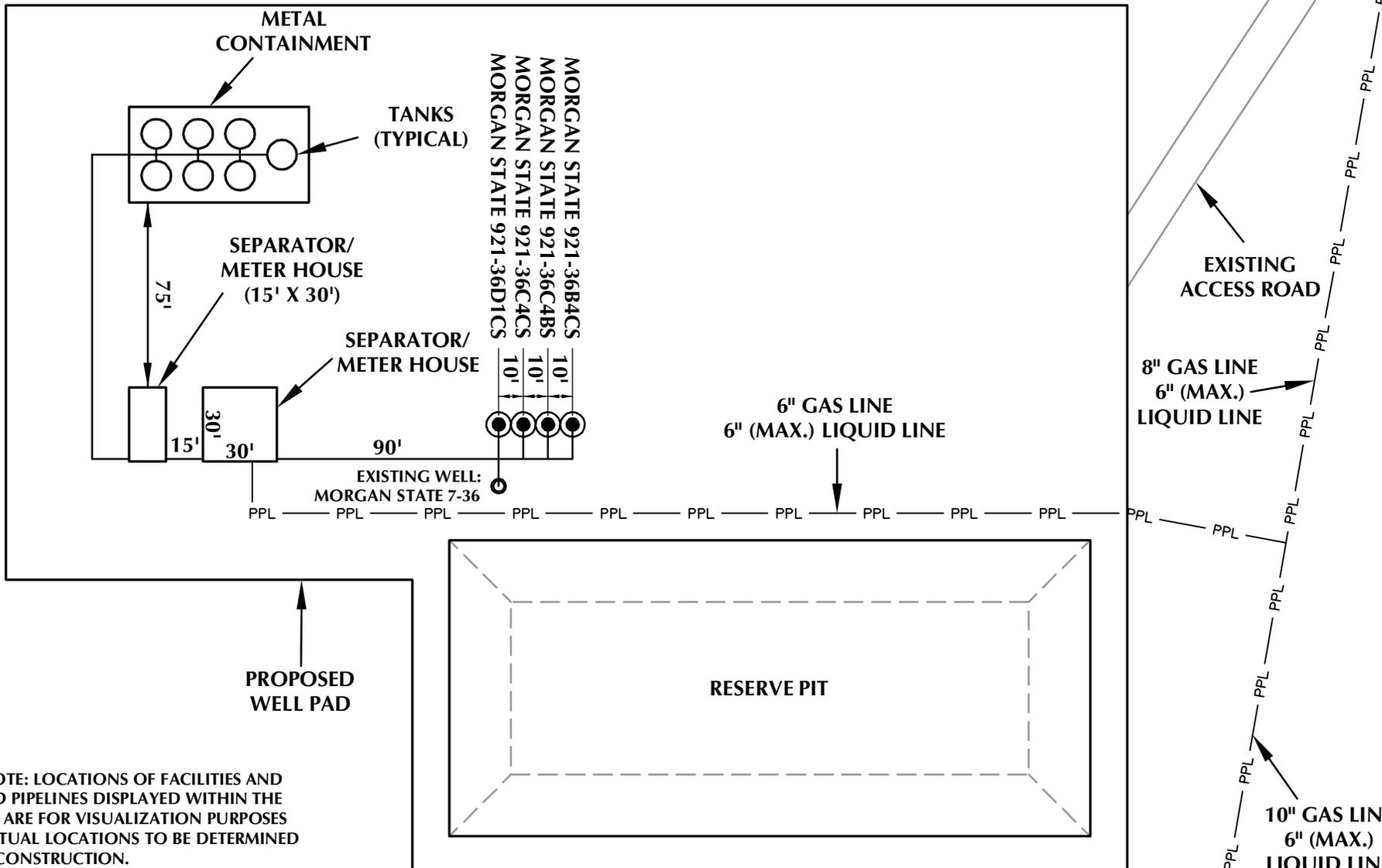
Date: 11/11/11

SHEET NO:

REVISED:

**7**

7 OF 16



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

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

**WELL PAD - MORGAN STATE 921-36C**

**WELL PAD - FACILITIES DIAGRAM**  
MORGAN STATE 921-36B4CS,  
MORGAN STATE 921-36C4BS,  
MORGAN STATE 921-36C4CS &  
MORGAN STATE 921-36D1CS  
LOCATED IN SECTION 36, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



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Sheridan, WY 82801  
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**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED PIPELINE
- EXISTING PIPELINE

**TIMBERLINE**  
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209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

Scale: 1"=60'

Date: 11/11/11

SHEET NO:

REVISED:

**8**

8 OF 16

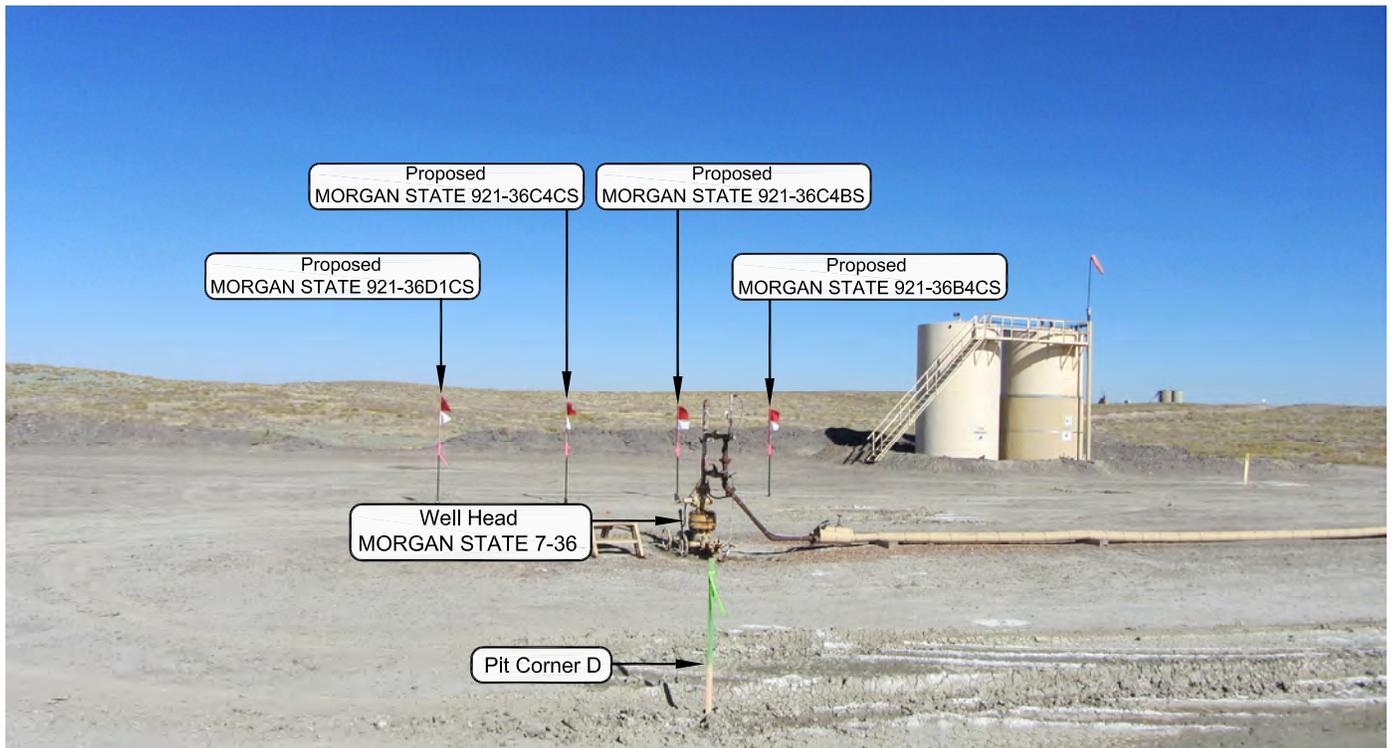


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHWESTERLY

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

**WELL PAD - MORGAN STATE 921-36C**

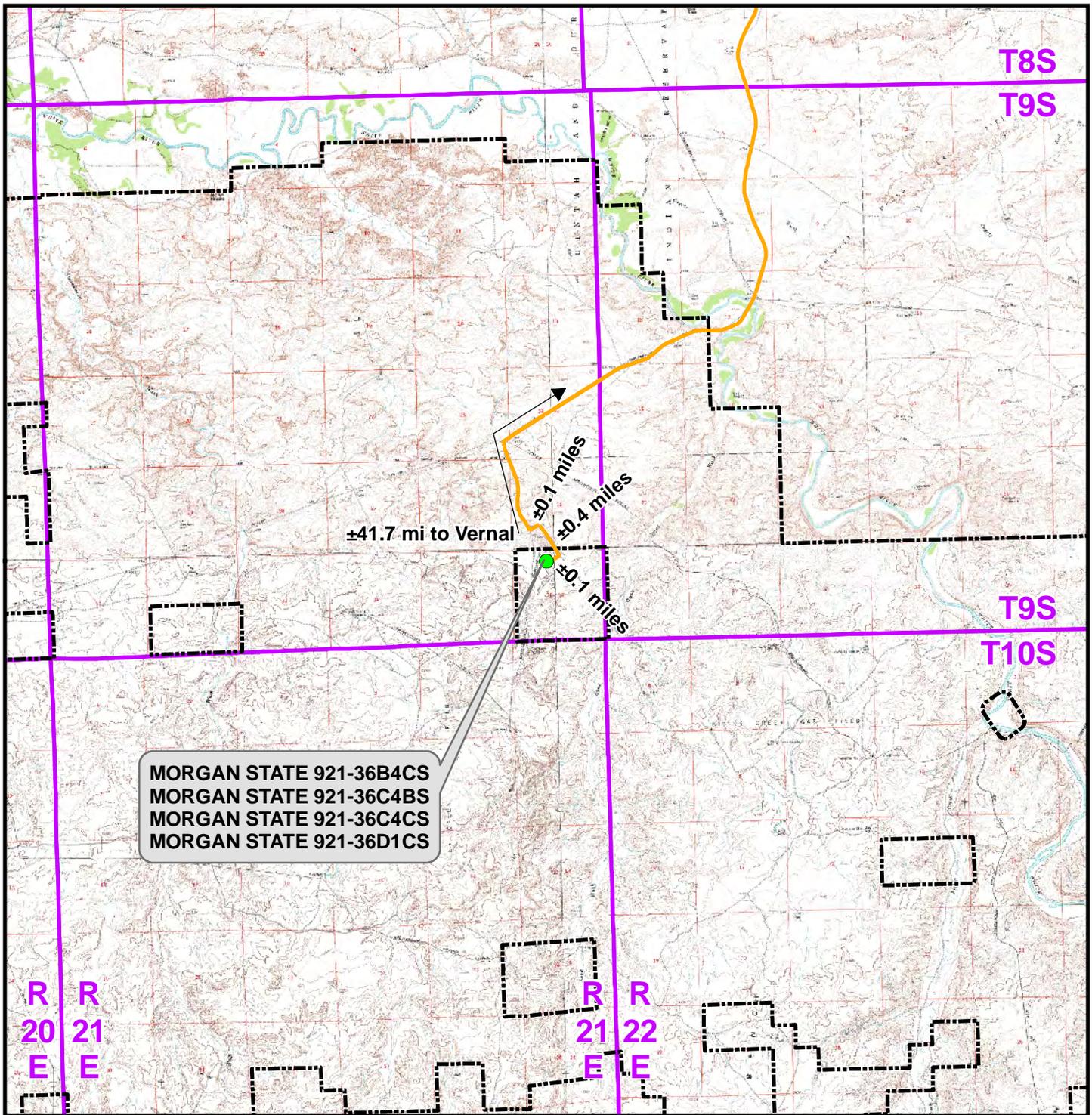
LOCATION PHOTOS  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., Uintah County, Utah.



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

DATE PHOTOS TAKEN: 10-13-11	PHOTOS TAKEN BY: J.W.	SHEET NO: <b>9</b> 9 OF 16
DATE DRAWN: 11-02-11	DRAWN BY: T.J.R.	
Date Last Revised:		



MORGAN STATE 921-36B4CS  
 MORGAN STATE 921-36C4BS  
 MORGAN STATE 921-36C4CS  
 MORGAN STATE 921-36D1CS

**Legend**

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

Distance From Well Pad - MORGAN STATE 921-36C To Unit Boundary: ±637ft

**WELL PAD - MORGAN STATE 921-36C**

TOPO A  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

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

1099 18th Street  
 Denver, Colorado 80202



**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
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SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

DATE: 11 Nov 2011

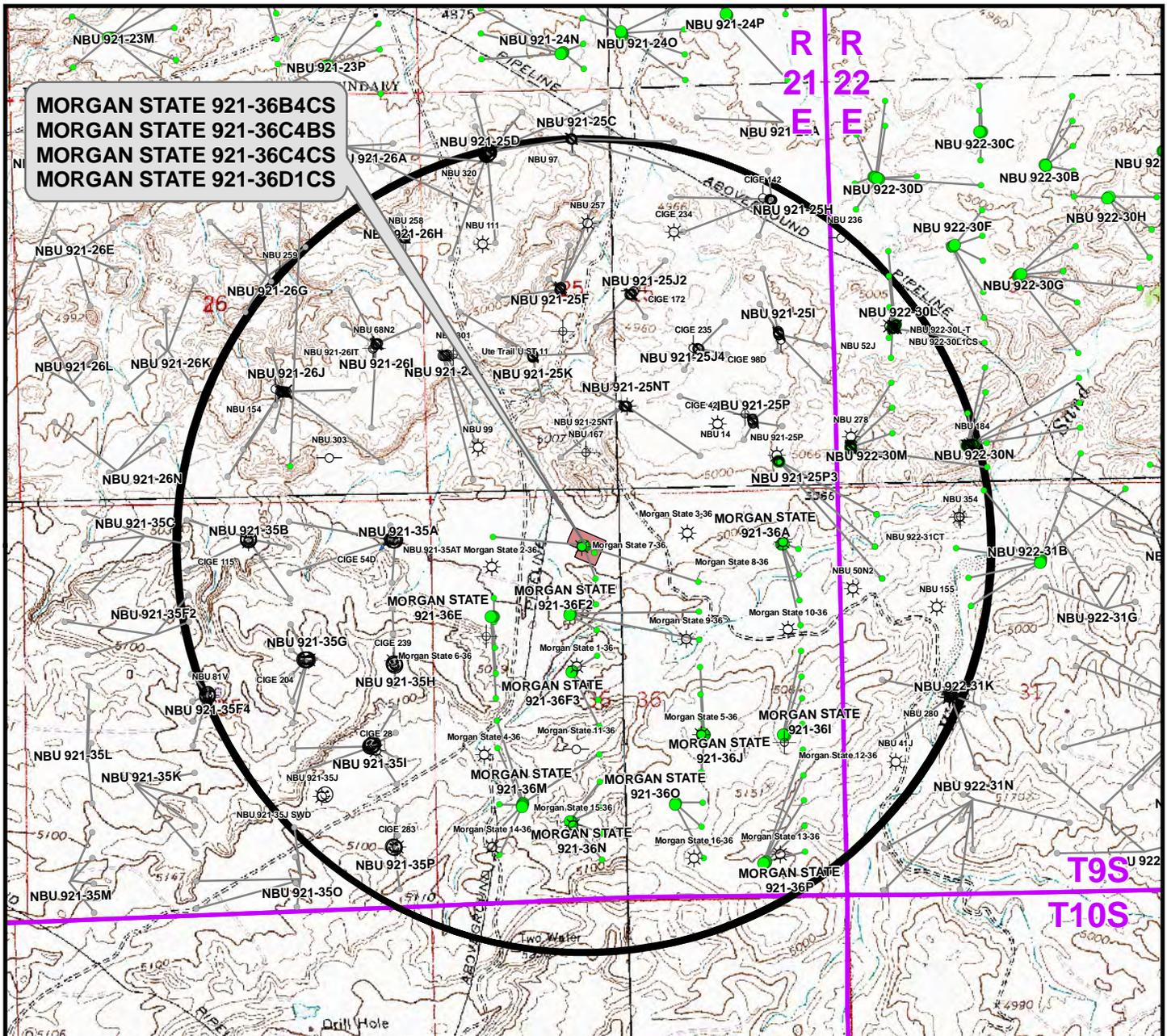
**10**

REVISED:

DATE:

10 OF 16





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

Proposed Well	Nearest Well Bore	Footage
MORGAN STATE 921-36B4CS	Morgan State 3-36	644ft
MORGAN STATE 921-36C4BS	Morgan State 7-36	185ft
MORGAN STATE 921-36C4CS	Morgan State 7-36	449ft
MORGAN STATE 921-36D1CS	Morgan State 2-36	396ft

**Legend**

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

**WELL PAD - MORGAN STATE 921-36C**

TOPO C  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., Uintah County, Utah

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

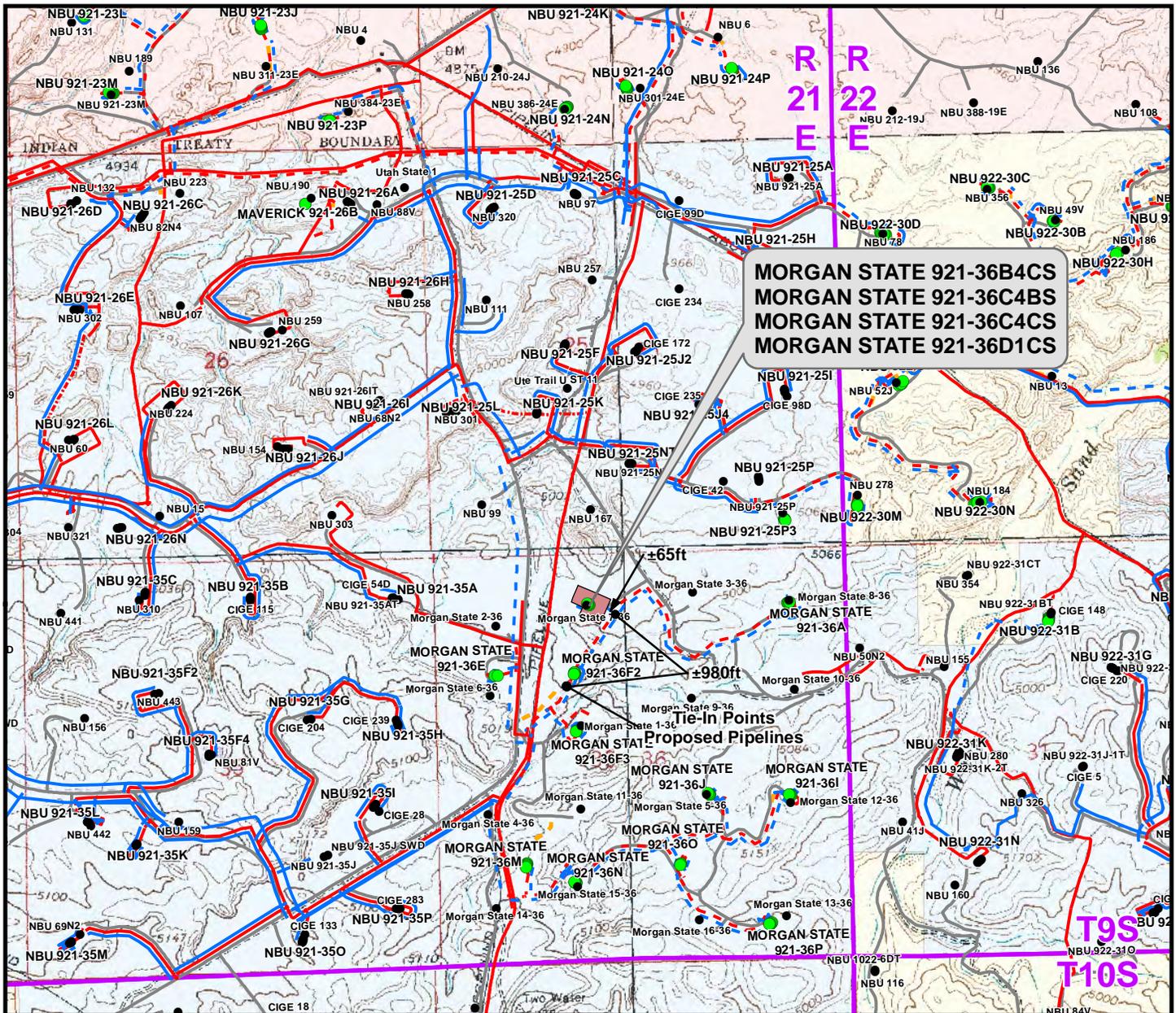
1099 18th Street  
 Denver, Colorado 80202

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N

SCALE: 1" = 2,000ft	NAD83 USP Central	<b>12</b>
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	

SHEET NO:  
12 OF 16



**MORGAN STATE 921-36B4CS  
MORGAN STATE 921-36C4BS  
MORGAN STATE 921-36C4CS  
MORGAN STATE 921-36D1CS**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±390ft	Buried 6" (Meter House to Edge of Pad)	±390ft
Buried 6" (Max.) (Edge of Pad to 36A Intersection)	±65ft	Buried 6" (Edge of Pad to 36A Intersection)	±65ft
Buried 6" (Max.) (36A Intersection to 36F2 Intersection)	±980ft	Buried 10" (36A Intersection to 36F2 Intersection)	±980ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,435ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,435ft</b>

**Legend**

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

**WELL PAD - MORGAN STATE 921-36C**

TOPO D  
MORGAN STATE 921-36B4CS,  
MORGAN STATE 921-36C4BS,  
MORGAN STATE 921-36C4CS &  
MORGAN STATE 921-36D1CS  
LOCATED IN SECTION 36, T9S, R21E,  
S.L.B.&M., Uintah County, Utah

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

1099 18th Street  
Denver, Colorado 80202

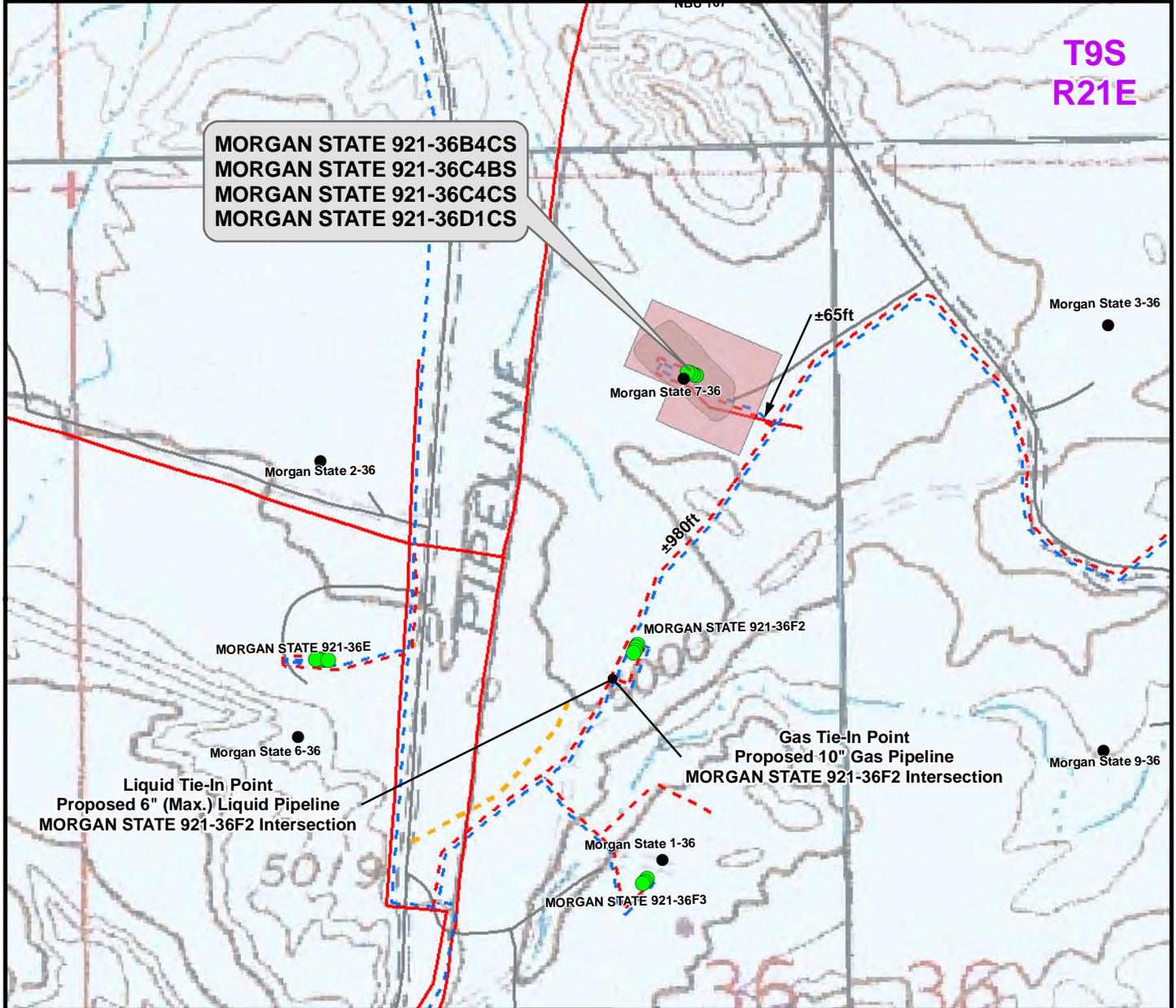


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Phone 307-674-0609  
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SCALE: 1" = 2,000ft	NAD83 USP Central	<b>13</b> 13 OF 16
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	

T9S  
R21E

MORGAN STATE 921-36B4CS  
MORGAN STATE 921-36C4BS  
MORGAN STATE 921-36C4CS  
MORGAN STATE 921-36D1CS



Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±390ft	Buried 6" (Meter House to Edge of Pad)	±390ft
Buried 6" (Max.) (Edge of Pad to 36A Intersection)	±65ft	Buried 6" (Edge of Pad to 36A Intersection)	±65ft
Buried 6" (Max.) (36A Intersection to 36F2 Intersection)	±980ft	Buried 10" (36A Intersection to 36F2 Intersection)	±980ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,435ft</b>	<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,435ft</b>

**Legend**

<span style="color: green;">●</span> Well - Proposed	<span style="background-color: #d9ead3; border: 1px solid #808080; padding: 2px;"> </span> Well Pad - Proposed	<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - Proposed	<span style="color: blue; font-weight: bold;">---</span> Liquid Pipeline - Proposed	<span style="color: orange; font-weight: bold;">---</span> Road - Proposed	<span style="background-color: #fff2cc; border: 1px solid #808080; padding: 2px;"> </span> Bureau of Land Management
<span style="color: black;">●</span> Well - Existing	<span style="background-color: #d9ead3; border: 1px solid #808080; padding: 2px;"> </span> Well Pad - Existing	<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - To Be Upgraded	<span style="color: blue; font-weight: bold;">---</span> Liquid Pipeline - Existing	<span style="color: gray; font-weight: bold;">---</span> Road - Existing	<span style="background-color: #f4cccc; border: 1px solid #808080; padding: 2px;"> </span> Indian Reservation
	<span style="color: red; font-weight: bold;">---</span> Gas Pipeline - Existing				<span style="background-color: #cfe2f3; border: 1px solid #808080; padding: 2px;"> </span> State
					<span style="border: 1px solid #808080; padding: 2px;"> </span> Private

**WELL PAD - MORGAN STATE 921-36C**

TOPO D2 (PAD & PIPELINE DETAIL)  
MORGAN STATE 921-36B4CS,  
MORGAN STATE 921-36C4BS,  
MORGAN STATE 921-36C4CS &  
MORGAN STATE 921-36D1CS  
LOCATED IN SECTION 36, T9S, R21E,  
S.L.B.&M., Uintah County, Utah

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

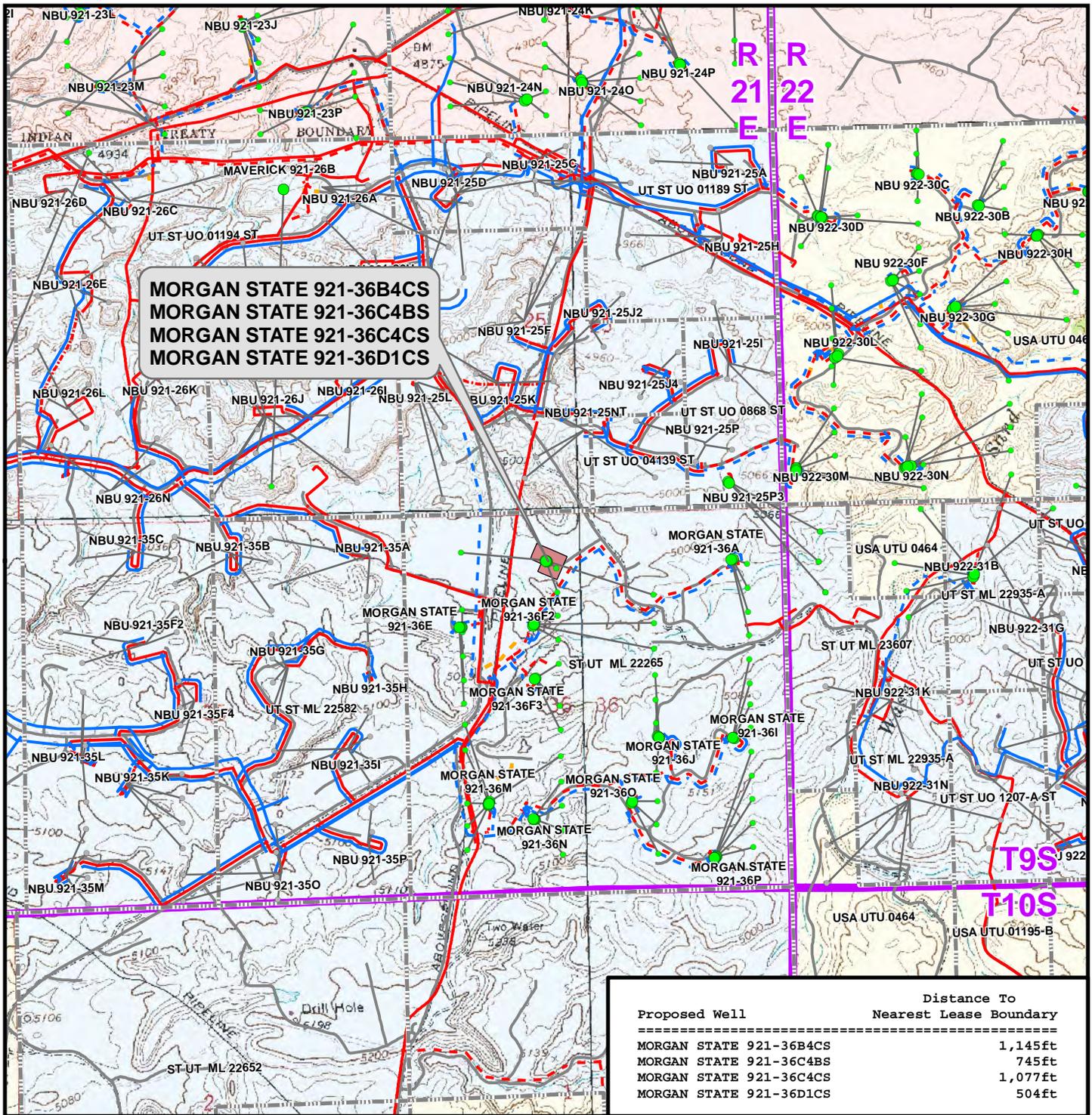
1099 18th Street  
Denver, Colorado 80202



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



SCALE: 1" = 500ft	NAD83 USP Central	<b>14</b> 14 OF 16
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	



Proposed Well	Distance To Nearest Lease Boundary
MORGAN STATE 921-36B4CS	1,145ft
MORGAN STATE 921-36C4BS	745ft
MORGAN STATE 921-36C4CS	1,077ft
MORGAN STATE 921-36D1CS	504ft

**Legend**

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

**WELL PAD - MORGAN STATE 921-36C**

TOPO E  
 MORGAN STATE 921-36B4CS,  
 MORGAN STATE 921-36C4BS,  
 MORGAN STATE 921-36C4CS &  
 MORGAN STATE 921-36D1CS  
 LOCATED IN SECTION 36, T9S, R21E,  
 S.L.B.&M., Uintah County, Utah

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

1099 18th Street  
 Denver, Colorado 80202

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

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 11 Nov 2011

DATE:

SHEET NO:  
15  
 15 OF 16

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – MORGAN STATE 921-36C**  
**WELLS – MORGAN STATE 921-36B4CS, MORGAN STATE 921-36C4BS,**  
**MORGAN STATE 921-36C4CS & MORGAN STATE 921-36D1CS**  
**Section 36, T9S, R21E, S.L.B.&M.**

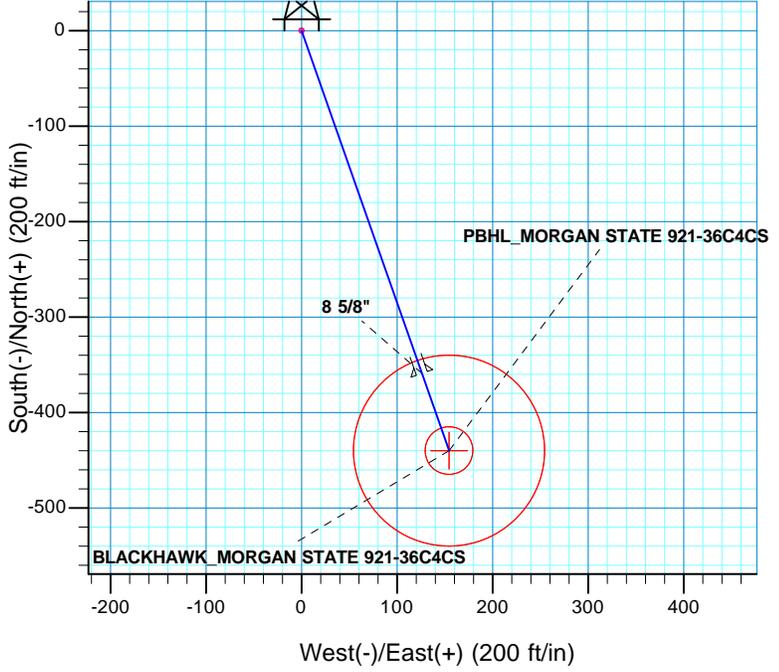
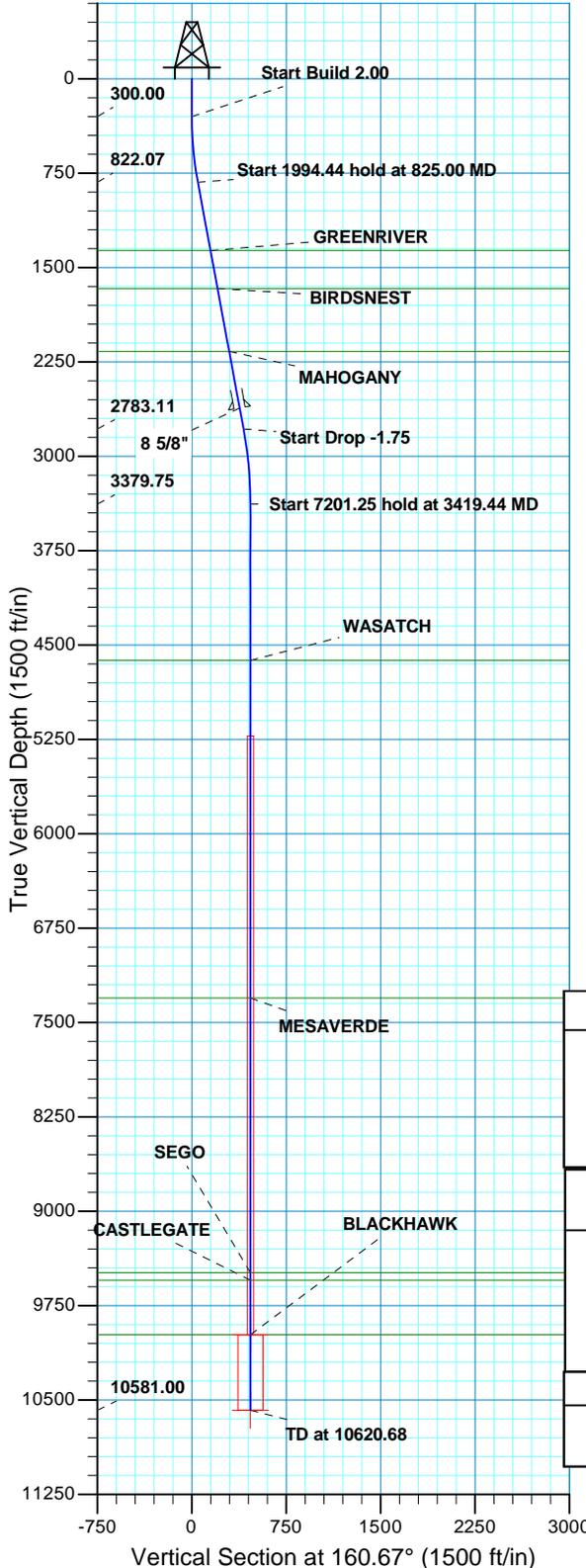
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.2 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 0.4 miles to a service road to the southwest. Exit right and proceed in a southwesterly direction approximately 0.1 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 42.3 miles in a southerly direction.

WELL DETAILS: MORGAN STATE 921-36C4CS								
GL 4988 & KB 4 @ 4992.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14528853.05	2060048.80	39° 59' 52.897 N	109° 30' 6.116 W			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BLACKHAWK	9981.00	-439.96	154.35	14528415.74	2060210.52	39° 59' 48.548 N	109° 30' 4.133 W	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10581.00	-439.96	154.35	14528415.74	2060210.52	39° 59' 48.548 N	109° 30' 4.133 W	Circle (Radius: 100.00)
- plan hits target center								

Azimuths to True North  
Magnetic North: 11.02°

Magnetic Field  
Strength: 52281.9snT  
Dip Angle: 65.85°  
Date: 2011/11/30  
Model: IGRF2010



SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
825.00	10.50	160.67	822.07	-45.27	15.88	2.00	160.67	47.97		
2819.44	10.50	160.67	2783.11	-388.23	136.20	0.00	0.00	411.43		
3419.44	0.00	0.00	3379.75	-439.96	154.35	1.75	180.00	466.25		
10620.68	0.00	0.00	10581.00	-439.96	154.35	0.00	0.00	466.25	PBHL_MORGAN STATE 921-36C4CS	
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N					FORMATION TOP DETAILS					
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 36 T9S R21E System Datum: Mean Sea Level					TVDPath	MDPath	Formation			
					1365.00	1377.18	GREENRIVER	1667.00	1684.32	BIRDSNEST
					4624.00	4663.68	WASATCH	7305.00	7344.68	MESAVERDE
					9488.00	9527.68	SEGO	9548.00	9587.68	CASTLEGATE
					9981.00	10020.68	BLACKHAWK			
CASING DETAILS										
		TVD	MD	Name	Size					
		2616.00	2649.48	8 5/8"	8.625					

RECEIVED :



**Scientific Drilling**  
Rocky Mountain Operations

# **US ROCKIES REGION PLANNING**

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

**MORGAN STATE 921-36C PAD**

**MORGAN STATE 921-36C4CS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**30 November, 2011**





**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Site:</b>	MORGAN STATE 921-36C PAD	<b>North Reference:</b>	True
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<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>	MORGAN STATE 921-36C PAD, SECTION 36 T9S R21E				
<b>Site Position:</b>	<b>Northing:</b>	14,528,840.77 usft	<b>Latitude:</b>	39° 59' 52.771 N	
<b>From:</b> Lat/Long	<b>Easting:</b>	2,060,076.45 usft	<b>Longitude:</b>	109° 30' 5.764 W	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	MORGAN STATE 921-36C4CS, 637 FNL 1989 FWL					
<b>Well Position</b>	<b>+N/-S</b>	12.75 ft	<b>Northing:</b>	14,528,853.05 usft	<b>Latitude:</b>	39° 59' 52.897 N
	<b>+E/-W</b>	-27.45 ft	<b>Easting:</b>	2,060,048.79 usft	<b>Longitude:</b>	109° 30' 6.116 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,988.00 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	2011/11/30	11.02	65.85	52,282

<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	160.67

<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	
825.00	10.50	160.67	822.07	-45.27	15.88	2.00	2.00	0.00	160.67	
2,819.44	10.50	160.67	2,783.11	-388.23	136.20	0.00	0.00	0.00	0.00	
3,419.44	0.00	0.00	3,379.75	-439.96	154.35	1.75	-1.75	0.00	180.00	
10,620.68	0.00	0.00	10,581.00	-439.96	154.35	0.00	0.00	0.00	0.00	PBHL_MORGAN ST/



SDI  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Site:</b>	MORGAN STATE 921-36C PAD	<b>North Reference:</b>	True
<b>Well:</b>	MORGAN STATE 921-36C4CS	<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	160.67	399.98	-1.65	0.58	1.75	2.00	2.00	2.00	0.00
500.00	4.00	160.67	499.84	-6.59	2.31	6.98	2.00	2.00	2.00	0.00
600.00	6.00	160.67	599.45	-14.81	5.20	15.69	2.00	2.00	2.00	0.00
700.00	8.00	160.67	698.70	-26.31	9.23	27.88	2.00	2.00	2.00	0.00
800.00	10.00	160.67	797.47	-41.07	14.41	43.52	2.00	2.00	2.00	0.00
825.00	10.50	160.67	822.07	-45.27	15.88	47.97	2.00	2.00	2.00	0.00
<b>Start 1994.44 hold at 825.00 MD</b>										
900.00	10.50	160.67	895.81	-58.16	20.41	61.64	0.00	0.00	0.00	0.00
1,000.00	10.50	160.67	994.14	-75.36	26.44	79.86	0.00	0.00	0.00	0.00
1,100.00	10.50	160.67	1,092.46	-92.56	32.47	98.09	0.00	0.00	0.00	0.00
1,200.00	10.50	160.67	1,190.79	-109.75	38.50	116.31	0.00	0.00	0.00	0.00
1,300.00	10.50	160.67	1,289.11	-126.95	44.54	134.53	0.00	0.00	0.00	0.00
1,377.18	10.50	160.67	1,365.00	-140.22	49.19	148.60	0.00	0.00	0.00	0.00
<b>GREENRIVER</b>										
1,400.00	10.50	160.67	1,387.44	-144.14	50.57	152.76	0.00	0.00	0.00	0.00
1,500.00	10.50	160.67	1,485.76	-161.34	56.60	170.98	0.00	0.00	0.00	0.00
1,600.00	10.50	160.67	1,584.09	-178.54	62.63	189.20	0.00	0.00	0.00	0.00
1,684.32	10.50	160.67	1,667.00	-193.04	67.72	204.57	0.00	0.00	0.00	0.00
<b>BIRDSNEST</b>										
1,700.00	10.50	160.67	1,682.41	-195.73	68.67	207.43	0.00	0.00	0.00	0.00
1,800.00	10.50	160.67	1,780.74	-212.93	74.70	225.65	0.00	0.00	0.00	0.00
1,900.00	10.50	160.67	1,879.07	-230.12	80.73	243.87	0.00	0.00	0.00	0.00
2,000.00	10.50	160.67	1,977.39	-247.32	86.77	262.10	0.00	0.00	0.00	0.00
2,100.00	10.50	160.67	2,075.72	-264.52	92.80	280.32	0.00	0.00	0.00	0.00
2,191.82	10.50	160.67	2,166.00	-280.31	98.34	297.05	0.00	0.00	0.00	0.00
<b>MAHOGANY</b>										
2,200.00	10.50	160.67	2,174.04	-281.71	98.83	298.55	0.00	0.00	0.00	0.00
2,300.00	10.50	160.67	2,272.37	-298.91	104.86	316.77	0.00	0.00	0.00	0.00
2,400.00	10.50	160.67	2,370.69	-316.10	110.90	334.99	0.00	0.00	0.00	0.00
2,500.00	10.50	160.67	2,469.02	-333.30	116.93	353.22	0.00	0.00	0.00	0.00
2,600.00	10.50	160.67	2,567.34	-350.50	122.96	371.44	0.00	0.00	0.00	0.00
2,649.48	10.50	160.67	2,616.00	-359.01	125.95	380.46	0.00	0.00	0.00	0.00
<b>8 5/8"</b>										
2,700.00	10.50	160.67	2,665.67	-367.69	129.00	389.66	0.00	0.00	0.00	0.00
2,800.00	10.50	160.67	2,763.99	-384.89	135.03	407.89	0.00	0.00	0.00	0.00
2,819.44	10.50	160.67	2,783.11	-388.23	136.20	411.43	0.00	0.00	0.00	0.00
<b>Start Drop -1.75</b>										
2,900.00	9.09	160.67	2,862.49	-401.16	140.74	425.13	1.75	-1.75	0.00	0.00
3,000.00	7.34	160.67	2,961.46	-414.65	145.47	439.42	1.75	-1.75	0.00	0.00
3,100.00	5.59	160.67	3,060.82	-425.27	149.20	450.68	1.75	-1.75	0.00	0.00
3,200.00	3.84	160.67	3,160.48	-433.03	151.92	458.90	1.75	-1.75	0.00	0.00
3,300.00	2.09	160.67	3,260.34	-437.91	153.63	464.07	1.75	-1.75	0.00	0.00
3,400.00	0.34	160.67	3,360.32	-439.91	154.33	466.19	1.75	-1.75	0.00	0.00
3,419.44	0.00	0.00	3,379.75	-439.96	154.35	466.25	1.75	-1.75	0.00	0.00
<b>Start 7201.25 hold at 3419.44 MD</b>										
3,500.00	0.00	0.00	3,460.32	-439.96	154.35	466.25	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,560.32	-439.96	154.35	466.25	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,660.32	-439.96	154.35	466.25	0.00	0.00	0.00	0.00



SDI  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Site:</b>	MORGAN STATE 921-36C PAD	<b>North Reference:</b>	True
<b>Well:</b>	MORGAN STATE 921-36C4CS	<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)
3,800.00	0.00	0.00	3,760.32	-439.96	154.35	466.25	0.00	0.00	0.00
3,900.00	0.00	0.00	3,860.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,000.00	0.00	0.00	3,960.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,100.00	0.00	0.00	4,060.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,200.00	0.00	0.00	4,160.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,300.00	0.00	0.00	4,260.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,400.00	0.00	0.00	4,360.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,500.00	0.00	0.00	4,460.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,600.00	0.00	0.00	4,560.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,663.68	0.00	0.00	4,624.00	-439.96	154.35	466.25	0.00	0.00	0.00
<b>WASATCH</b>									
4,700.00	0.00	0.00	4,660.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,800.00	0.00	0.00	4,760.32	-439.96	154.35	466.25	0.00	0.00	0.00
4,900.00	0.00	0.00	4,860.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,000.00	0.00	0.00	4,960.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,100.00	0.00	0.00	5,060.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,200.00	0.00	0.00	5,160.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,300.00	0.00	0.00	5,260.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,400.00	0.00	0.00	5,360.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,500.00	0.00	0.00	5,460.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,600.00	0.00	0.00	5,560.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,700.00	0.00	0.00	5,660.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,800.00	0.00	0.00	5,760.32	-439.96	154.35	466.25	0.00	0.00	0.00
5,900.00	0.00	0.00	5,860.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,000.00	0.00	0.00	5,960.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,100.00	0.00	0.00	6,060.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,200.00	0.00	0.00	6,160.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,300.00	0.00	0.00	6,260.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,400.00	0.00	0.00	6,360.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,500.00	0.00	0.00	6,460.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,600.00	0.00	0.00	6,560.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,700.00	0.00	0.00	6,660.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,800.00	0.00	0.00	6,760.32	-439.96	154.35	466.25	0.00	0.00	0.00
6,900.00	0.00	0.00	6,860.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,000.00	0.00	0.00	6,960.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,100.00	0.00	0.00	7,060.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,200.00	0.00	0.00	7,160.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,300.00	0.00	0.00	7,260.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,344.68	0.00	0.00	7,305.00	-439.96	154.35	466.25	0.00	0.00	0.00
<b>MESAVERDE</b>									
7,400.00	0.00	0.00	7,360.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,500.00	0.00	0.00	7,460.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,600.00	0.00	0.00	7,560.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,700.00	0.00	0.00	7,660.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,800.00	0.00	0.00	7,760.32	-439.96	154.35	466.25	0.00	0.00	0.00
7,900.00	0.00	0.00	7,860.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,000.00	0.00	0.00	7,960.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,100.00	0.00	0.00	8,060.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,200.00	0.00	0.00	8,160.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,300.00	0.00	0.00	8,260.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,400.00	0.00	0.00	8,360.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,500.00	0.00	0.00	8,460.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,600.00	0.00	0.00	8,560.32	-439.96	154.35	466.25	0.00	0.00	0.00
8,700.00	0.00	0.00	8,660.32	-439.96	154.35	466.25	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Site:</b>	MORGAN STATE 921-36C PAD	<b>North Reference:</b>	True
<b>Well:</b>	MORGAN STATE 921-36C4CS	<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)	
8,800.00	0.00	0.00	8,760.32	-439.96	154.35	466.25	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,860.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,960.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,060.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,160.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,260.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,360.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,460.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,527.68	0.00	0.00	9,488.00	-439.96	154.35	466.25	0.00	0.00	0.00	
<b>SEGO</b>										
9,587.68	0.00	0.00	9,548.00	-439.96	154.35	466.25	0.00	0.00	0.00	
<b>CASTLEGATE</b>										
9,600.00	0.00	0.00	9,560.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,660.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,760.32	-439.96	154.35	466.25	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,860.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,960.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,020.68	0.00	0.00	9,981.00	-439.96	154.35	466.25	0.00	0.00	0.00	
<b>BLACKHAWK - BLACKHAWK_MORGAN STATE 921-36C4CS</b>										
10,100.00	0.00	0.00	10,060.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,160.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,260.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,360.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,460.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,560.32	-439.96	154.35	466.25	0.00	0.00	0.00	
10,620.68	0.00	0.00	10,581.00	-439.96	154.35	466.25	0.00	0.00	0.00	
<b>PBHL_MORGAN STATE 921-36C4CS</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BLACKHAWK_MORGAI - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,981.00	-439.96	154.35	14,528,415.75	2,060,210.52	39° 59' 48.548 N	109° 30' 4.133 W	
PBHL_MORGAN STATI - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,581.00	-439.96	154.35	14,528,415.75	2,060,210.52	39° 59' 48.548 N	109° 30' 4.133 W	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,649.48	2,616.00	8 5/8"	8.625	11.000	



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 4988 & KB 4 @ 4992.00ft (ASSUMED)
<b>Site:</b>	MORGAN STATE 921-36C PAD	<b>North Reference:</b>	True
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,377.18	1,365.00	GREENRIVER			
1,684.32	1,667.00	BIRDSNEST			
2,191.82	2,166.00	MAHOGANY			
4,663.68	4,624.00	WASATCH			
7,344.68	7,305.00	MESAVERDE			
9,527.68	9,488.00	SEGO			
9,587.68	9,548.00	CASTLEGATE			
10,020.68	9,981.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
825.00	822.07	-45.27	15.88	Start 1994.44 hold at 825.00 MD	
2,819.44	2,783.11	-388.23	136.20	Start Drop -1.75	
3,419.44	3,379.75	-439.96	154.35	Start 7201.25 hold at 3419.44 MD	
10,620.68	10,581.00	-439.96	154.35	TD at 10620.68	

**MORGAN STATE 921-36B4CS**

Surface:	649 FNL / 2016 FWL	NENW	Lot
BHL:	1145 FNL / 1800 FEL	NWNE	Lot

**MORGAN STATE 921-36C4BS**

Surface:	645 FNL / 2007 FWL	NENW	Lot
BHL:	745 FNL / 2143 FWL	NENW	Lot

**MORGAN STATE 921-36C4CS**

Surface:	641 FNL / 1998 FWL	NENW	Lot
BHL:	1077 FNL / 2143 FWL	NENW	Lot

**MORGAN STATE 921-36D1CS**

Surface:	637 FNL / 1989 FWL	NENW	Lot
BHL:	504 FNL / 828 FWL	NWNW	Lot

**Pad: MORGAN STATE 921-36C PAD**

Section 36 T9S R21E  
Mineral Lease: ML-22265

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

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

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

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

**A. Existing Roads:**

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

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

**B. Planned Access Roads:**

No new access road is proposed. (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

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

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

**C. Location of Existing and Proposed Facilities:**

This pad will expand the existing pad for the Morgan State 7-36. The Morgan State 7-36 well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of December 5, 2011.

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

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

**Gathering Facilities:**

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

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,435'$  and the individual segments are broken up as follows:

- $\pm 390'$  (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 65'$  (0.01 miles) –New 6" buried gas pipeline from the edge of pad to the 921-36A intersection. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 980'$  (0.2 miles) –New 10" buried gas pipeline from the 921-36A intersection to the 921-36F2 intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,435'$  and the individual segments are broken up as follows:

- $\pm 390'$  (0.1 miles) –New 6” buried liquid pipeline from the separator to the edge of the pad.  
Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 65'$  (0.01 miles) –New 6” buried liquid pipeline from the edge of pad to the 921-36A intersection.  
Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 980'$  (0.2 miles) –New 6” buried liquid pipeline from the 921-36A intersection to the 921-36F2 intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

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

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

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

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

**D. Location and Type of Water Supply:**

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

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

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

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

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

**F. Methods for Handling Waste Materials:**

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

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

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

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

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

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum

trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

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

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

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

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

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

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

### **Materials Management**

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

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

**G. Ancillary Facilities:**

None are anticipated.

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

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

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

**I. Plans for Reclamation of the Surface:**

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

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

**Interim Reclamation**

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

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

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/

completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

### **Final Reclamation**

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

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

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

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

### **Seeding and Measures Common to Interim and Final Reclamation**

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

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

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

### **J. Surface/Mineral Ownership:**

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

### **L. Other Information:**

None

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

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

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

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

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

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

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

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



Danielle Piernot

December 19, 2011

Date



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

December 14, 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  
Morgan State 921-36C4CS  
T9S-R21E  
Section 36: NENW (Surface), NENW (Bottom Hole)  
Surface: 641' FNL, 1998' FWL  
Bottom Hole: 1077' FNL, 2143' 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 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

**From:** Jim Davis  
**To:** APD APPROVAL  
**CC:** Danielle Piernot; Julie Jacobson  
**Date:** 2/23/2012 3:22 PM  
**Subject:** APD Approval: the Kerr McGee Morgan State wells

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

4304752246 Morgan State 921-36G4BS  
4304752253 Morgan State 921-36G4CS  
4304752255 Morgan State 921-36J1CS  
4304752256 Morgan State 921-36J4BS  
4304752281 Morgan State 921-36F1BS  
4304752282 Morgan State 921-36F1CS  
4304752283 Morgan State 921-36G1BS  
4304752284 Morgan State 921-36G1CS  
4304752285 Morgan State 921-36F4BS  
4304752286 Morgan State 921-36K1BS  
4304752287 Morgan State 921-36K1CS  
4304752247 Morgan State 921-36P1BS  
4304752248 Morgan State 921-36P1CS  
4304752249 Morgan State 921-36I4BS  
4304752250 Morgan State 921-36I4CS  
4304752252 Morgan State 921-36P4BS  
4304752263 Morgan State 921-36K4CS  
4304752264 Morgan State 921-36N1BS  
4304752265 Morgan State 921-36N1CS  
4304752266 Morgan State 921-36N4BS  
4304752276 Morgan State 921-36D4CS  
4304752277 Morgan State 921-36E1BS  
4304752278 Morgan State 921-36E1CS  
4304752279 Morgan State 921-36E4BS  
4304752280 Morgan State 921-36E4CS  
4304752245 Morgan State 921-36O4CS  
4304752254 Morgan State 921-36O1CS  
4304752267 Morgan State 921-36O1BS  
4304752257 Morgan State 921-36K4BS  
4304752258 Morgan State 921-36L1BS  
4304752259 Morgan State 921-36L1CS  
4304752260 Morgan State 921-36M1BS  
4304752261 Morgan State 921-36M1CS  
4304752262 Morgan State 921-36M4BS  
4304752272 Morgan State 921-36B4CS  
4304752273 Morgan State 921-36C4BS  
4304752274 Morgan State 921-36C4CS  
4304752275 Morgan State 921-36D1CS

There are eight more wells on two pads in this section, the 36A pad and the 36I pad, that have not yet been approved. Anadarko is gathering reclamation cost figures on pads similar to those as part of the process of acquiring adequate SITLA bonds.

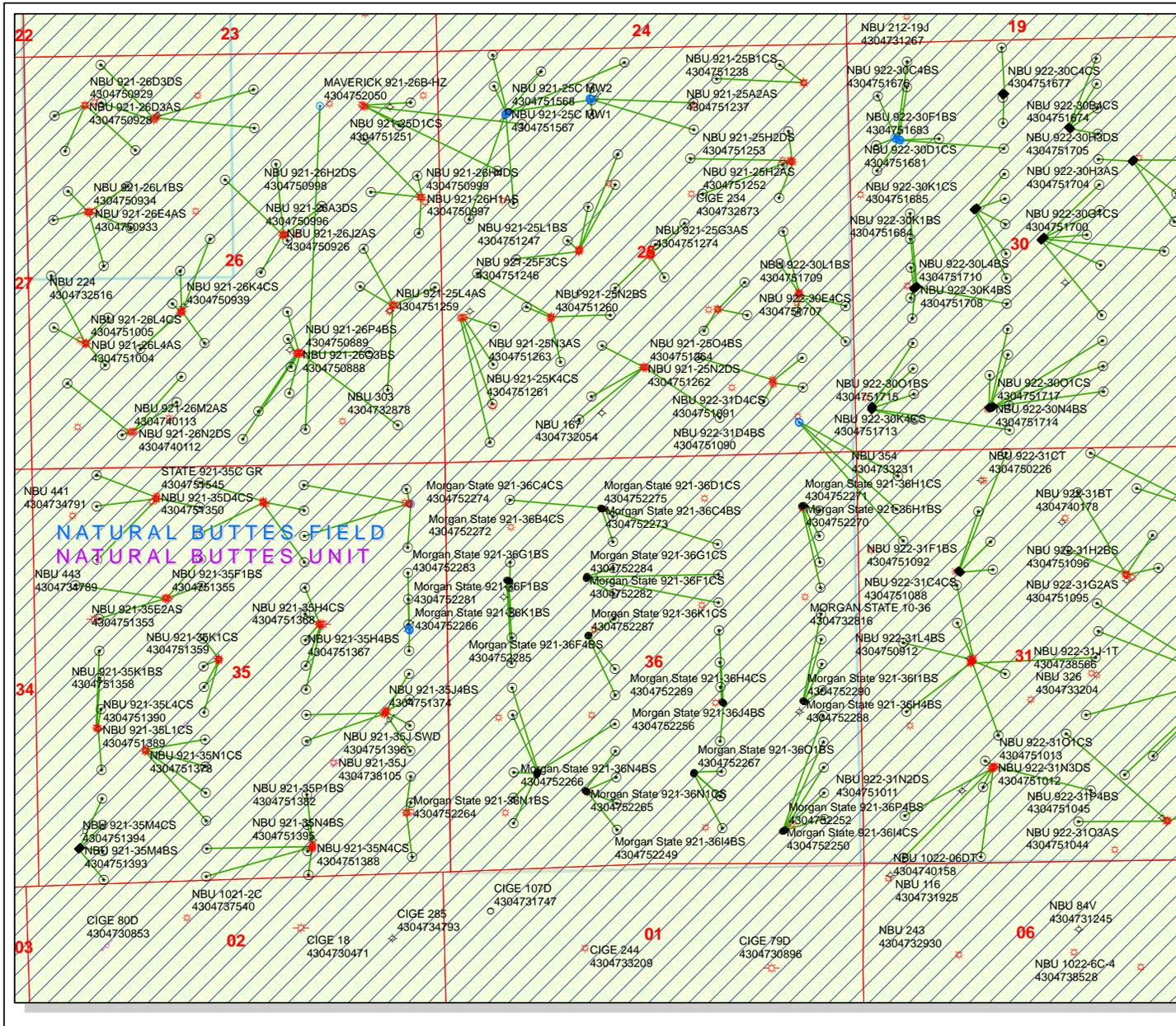
-Jim

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov

API Well Number: 43047522740000

Phone: (801) 538-5156

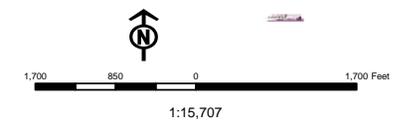
RECEIVED: February 23, 2012



**API Number: 4304752274**  
**Well Name: Morgan State 921-36C4CS**  
 Township T0.9 . Range R2.1 . Section 36  
**Meridian: SLBM**  
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
 Map Produced by Diana Mason

- |                      |                                    |
|----------------------|------------------------------------|
| <b>Units STATUS</b>  | <b>Wells Query Status</b>          |
| ACTIVE               | APD - Approved Permit              |
| EXPLORATORY          | DRL - Spudded (Drilling Commenced) |
| GAS STORAGE          | GIW - Gas Injection                |
| NF PP OIL            | GS - Gas Storage                   |
| NF SECONDARY         | LA - Location Abandoned            |
| PI OIL               | LOC - New Location                 |
| PP GAS               | OPS - Operation Suspended          |
| PP GEOTHERM.         | PA - Plugged Abandoned             |
| PP OIL               | PGW - Producing Gas Well           |
| SECONDARY            | POW - Producing Oil Well           |
| TERMINATED           | RET - Returned APD                 |
| <b>Fields STATUS</b> | SGW - Shut-in Gas Well             |
| Unknown              | SOW - Shut-in Oil Well             |
| ABANDONED            | TA - Temp. Abandoned               |
| ACTIVE               | TW - Test Well                     |
| COMBINED             | WDW - Water Disposal               |
| INACTIVE             | WIW - Water Injection Well         |
| STORAGE              | WSW - Water Supply Well            |
| TERMINATED           |                                    |



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36C4CS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2587	10581		
Previous Shoe Setting Depth (TVD)	0	2587		
Max Mud Weight (ppg)	8.4	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	6983	12.7		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1130	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	820	NO      air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	561	NO      Reasonable depth in area
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	561	NO
Required Casing/BOPE Test Pressure=		2373	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi      *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	7153	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5883	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4825	YES      OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5394	NO      Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2587	psi      *Assumes 1psi/ft frac gradient

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

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

# 430475227 40000 Morgan State 921-36C4CS

## Casing Schematic

Surface

12 1/2" 15 1/2"

Uinta

✓ Strip surf out.

8-5/8"  
MW 8.4  
Frac 19.3

100' @ 8% w/o, tail 3566'

TOC @ 788.  
± BMSW

1500' 1365' Green River

to 584' @ 0% w/o, tail 1399'

TOC @ 1512. 1667' Birds Nest

✗ S + V ✓

1955' tail

2166' Mahogany

Surface  
2620. MD  
2587. TVD

cmts. proposed to surf.

4235' tail

4624' Wasatch

7305' Mesaverde

9488' Sejo

9548' Castlegate

9981' MN5

4-1/2"  
MW 13.

Production  
10621. MD  
10581. TVD

641NL	1998WL
-440	154
1081FNL	2152FWL ✓

NENW Sec 36-9S-21E

Well name:	<b>430475227 40000 Morgan State 921-36C4CS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-52274
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 110 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft  
 Cement top: 1,512 ft

**Burst**

Max anticipated surface pressure: 2,277 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,587 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 2,294 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
 Departure at shoe: 375 ft  
 Maximum dogleg: 2 °/100ft  
 Inclination at shoe: 10.5 °

**Re subsequent strings:**

Next setting depth: 10,581 ft  
 Next mud weight: 13,000 ppg  
 Next setting BHP: 7,146 psi  
 Fracture mud wt: 19,250 ppg  
 Fracture depth: 2,587 ft  
 Injection pressure: 2,587 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2620	8.625	28.00	I-55	LT&C	2587	2620	7.892	103752
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1129	1880	1.665	2587	3390	1.31	72.4	348	4.80 J

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

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

Date: March 1, 2012  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2587 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	<b>430475227 ' 40000 Morgan State 921-36C4CS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Production	Project ID: 43-047-52274
Location:	UINTAH COUNTY	

**Design parameters:****Collapse**

Mud weight: 13.000 ppg  
Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 4,818 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP: 7,146 psi

No backup mud specified.

**Minimum design factors:****Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
Neutral point: 8,565 ft

Estimated cost: 159,082 (\$)

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 222 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 788 ft

**Directional Info - Build & Drop**

Kick-off point: 300 ft  
Departure at shoe: 466 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	HCP-110	DQX	4960	5000	3.875	132000
1	5621	4.5	11.60	HCP-110	LT&C	10581	10621	3.875	27082

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	3350	8122	2.425	5909	10690	1.81	122.7	367.2	2.99 B
1	7146	8650	1.210	7146	10690	1.50	65.2	279	4.28 J

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

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

Date: March 1, 2012  
Salt Lake City, Utah

**Remarks:**

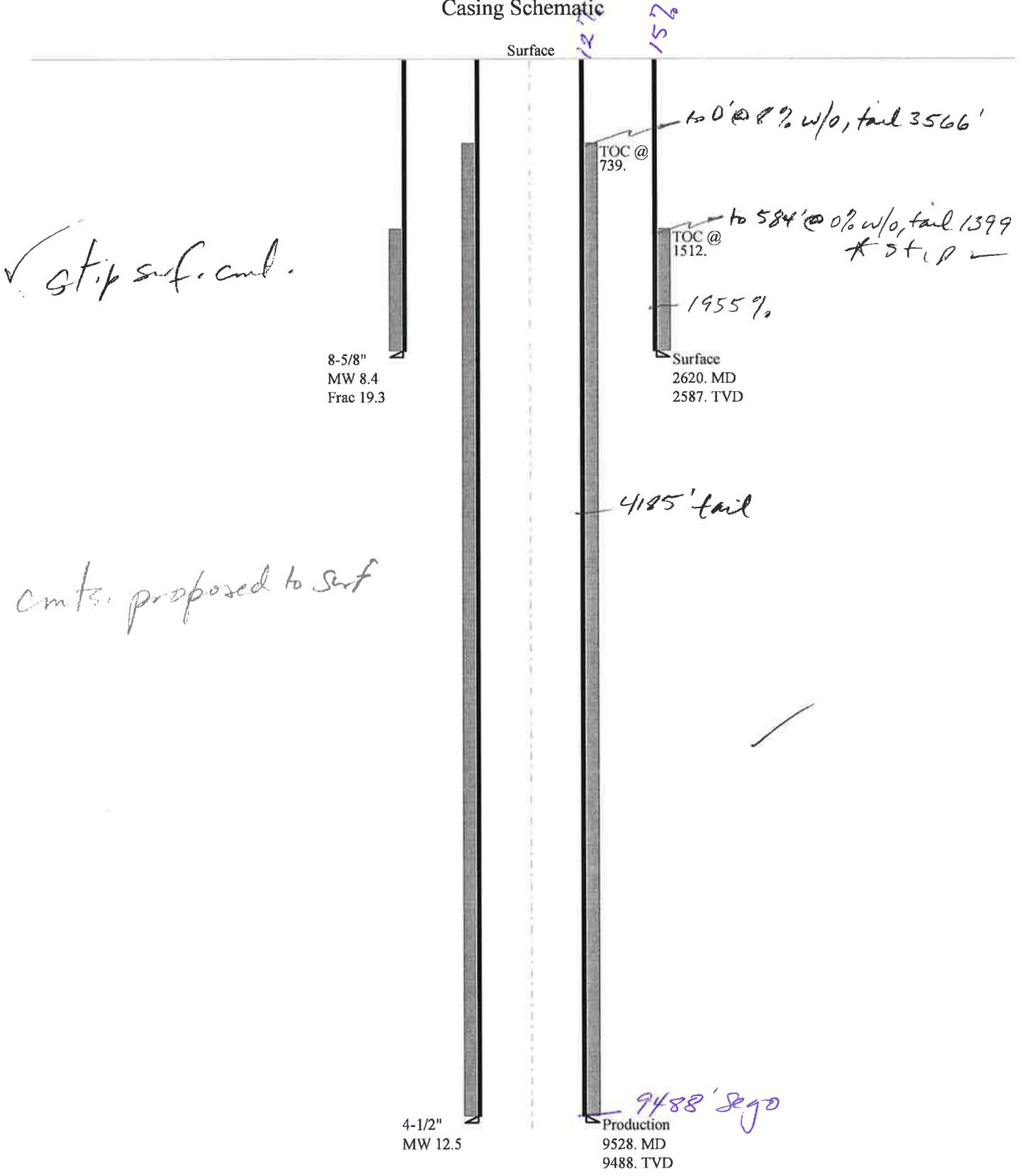
Collapse is based on a vertical depth of 10581 ft, a mud weight of 13 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# 43047522740000 Morgan State 921-36C4CS

## Casing Schematic



Well name:	<b>430475227 40000 Morgan State 921-36C4CS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-52274
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 110 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft  
 Cement top: 1,512 ft

**Burst**

Max anticipated surface pressure: 2,277 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP 2,587 psi

No backup mud specified.

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 2,294 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
 Departure at shoe: 375 ft  
 Maximum dogleg: 2 °/100ft  
 Inclination at shoe: 10.5 °

**Re subsequent strings:**

Next setting depth: 9,488 ft  
 Next mud weight: 12.500 ppg  
 Next setting BHP: 6,161 psi  
 Fracture mud wt: 19.250 ppg  
 Fracture depth: 2,587 ft  
 Injection pressure: 2,587 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2620	8.625	28.00	I-55	LT&C	2587	2620	7.892	103752
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1129	1880	1.665	2587	3390	1.31	72.4	348	4.80 J

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

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

Date: March 1, 2012  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2587 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	<b>430475227 40000 Morgan State 921-36C4CS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Production	Project ID: 43-047-52274
Location:	UINTAH COUNTY	

**Design parameters:****Collapse**

Mud weight: 12.500 ppg  
Internal fluid density: 1.500 ppg

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 207 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft  
Cement top: 739 ft

**Burst**

Max anticipated surface pressure: 4,074 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 6,161 psi

No backup mud specified.

**Tension:**

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

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 466 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.  
Neutral point: 7,755 ft

Estimated cost: 191,770 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	I-80	DQX	4960	5000	3.875	132000
1	4528	4.5	11.60	I-80	LT&C	9488	9528	3.875	59770

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2834	5910	2.085	5165	7780	1.51	110.1	267	2.43 J
1	5422	6360	1.173	6161	7780	1.26	52.5	212	4.04 J

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

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

Date: March 1, 2012  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9488 ft, a mud weight of 12.5 ppg. An internal gradient of .078 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.  
**Well Name** Morgan State 921-36C4CS  
**API Number** 43047522740000      **APD No** 5060    **Field/Unit** NATURAL BUTTES  
**Location: 1/4,1/4** NENW    **Sec** 36    **Tw** 9.0S    **Rng** 21.0E    641 FNL 1998 FWL  
**GPS Coord (UTM)** 627843 4428607      **Surface Owner**

### Participants

Sheila Wopsock, Charles Chase, Danielle Piernot, Doyle Holmes, (Anadarko). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Alex Hansen (DWR). Chris Jensen and David Hackford, (DOGMA).

### Regional/Local Setting & Topography

This site is on an existing location, and very little new construction will be necessary.

This location is within the Natural Buttes Unit but this section is not part of the Natural Buttes Unit. It is approximately 14 road miles southeast of Ouray, Utah. The general area is at the head of a long unnamed wash east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles to the north. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sandstone bedrock cliffs along the rims.

Four new directional wells will be drilled from this location which currently has one well, the Morgan State 7-36. The decision to PA or TA this existing well hasn't been made at this time.

### Surface Use Plan

#### **Current Surface Use**

Grazing  
Wildlife Habitat  
Existing Well Pad

#### **New Road Miles**

0

#### **Well Pad**

**Width** 352    **Length** 455

#### **Src Const Material**

Onsite

#### **Surface Formation**

UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?**      Y

### Environmental Parameters

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

### Soil Type and Characteristics

Rocky sandy clay loam.

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

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

### Reserve Pit

Site-Specific Factors		Site Ranking
<b>Distance to Groundwater (feet)</b>	>200	0
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>		20
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>		35

1 Sensitivity Level

### Characteristics / Requirements

The reserve pit is planned in an area of cut on the south corner of the location. Dimensions are 120' x 260' x 12' deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a layer of felt sub-liner.

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

### Other Observations / Comments

David Hackford  
Evaluator

1/11/2012  
Date / Time

# Application for Permit to Drill Statement of Basis

3/20/2012

## Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
5060	43047522740000	SITLA	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	Morgan State 921-36C4CS		<b>Unit</b>		
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NENW 36 9S 21E S 641 FNL (UTM) 627852E 4428609N		1998 FWL	GPS Coord	

### Geologic Statement of Basis

Kerr McGee proposes to set 2,620' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,500'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill  
APD Evaluator

2/7/2012  
Date / Time

### Surface Statement of Basis

The general area is in the central portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is six miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42.3 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Four wells will be directionally drilled from this location. They are the Morgan State 921-36B4CS, Morgan State 921-36C4BS, Morgan State 921-36C4CS and the Morgan State 921-36D1CS. The existing location currently has one well. This well is the Morgan State 7-36. The decision to PA or TA this well has not been made at this time. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

New construction will consist of approximately 75 feet on the south, 230 feet on the west, and 170 feet on the east side of the existing location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Alex Hansen with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford  
Onsite Evaluator

1/11/2012  
Date / Time

**RECEIVED:** March 20, 2012

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# Application for Permit to Drill Statement of Basis

3/20/2012

Utah Division of Oil, Gas and Mining

Page 2

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## Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the south side of the location.

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/19/2011

API NO. ASSIGNED: 43047522740000

WELL NAME: Morgan State 921-36C4CS

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

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NENW 36 090S 210E

Permit Tech Review: 

SURFACE: 0641 FNL 1998 FWL

Engineering Review: 

BOTTOM: 1077 FNL 2143 FWL

Geology Review: 

COUNTY: UINTAH

LATITUDE: 39.99800

LONGITUDE: -109.50227

UTM SURF EASTINGS: 627852.00

NORTHINGS: 4428609.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22265

PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 3 - State

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

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

Commingling Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 173-24
- Effective Date: 10/5/2009
- Siting: 460' Fr Exterior Lease Boundary
- R649-3-11. Directional Drill

Comments: Presite Completed

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



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

## Permit To Drill

\*\*\*\*\*

**Well Name:** Morgan State 921-36C4CS  
**API Well Number:** 43047522740000  
**Lease Number:** ML 22265  
**Surface Owner:** STATE  
**Approval Date:** 3/20/2012

### Issued to:

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

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-24. The expected producing formation or pool is the BLACKHAWK 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. 173-24, 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:

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

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

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

**Additional Approvals:**

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

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

**Notification Requirements:**

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

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

**Contact Information:**

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

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

**Reporting Requirements:**

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

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

plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers  
Associate Director, Oil & Gas

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> ML 22265																														
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>																														
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> Morgan State 921-36C4CS																															
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047522740000																															
<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> MATERIAL BUTTES																														
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E 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: 6/27/2012  <input type="checkbox"/> DRILLING REPORT Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><input type="checkbox"/> ACIDIZE</td> <td style="width: 33%;"><input type="checkbox"/> ALTER CASING</td> <td style="width: 33%;"><input type="checkbox"/> CASING REPAIR</td> </tr> <tr> <td><input type="checkbox"/> CHANGE TO PREVIOUS PLANS</td> <td><input type="checkbox"/> CHANGE TUBING</td> <td><input type="checkbox"/> CHANGE WELL NAME</td> </tr> <tr> <td><input type="checkbox"/> CHANGE WELL STATUS</td> <td><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS</td> <td><input type="checkbox"/> CONVERT WELL TYPE</td> </tr> <tr> <td><input type="checkbox"/> DEEPEN</td> <td><input type="checkbox"/> FRACTURE TREAT</td> <td><input type="checkbox"/> NEW CONSTRUCTION</td> </tr> <tr> <td><input type="checkbox"/> OPERATOR CHANGE</td> <td><input type="checkbox"/> PLUG AND ABANDON</td> <td><input type="checkbox"/> PLUG BACK</td> </tr> <tr> <td><input type="checkbox"/> PRODUCTION START OR RESUME</td> <td><input type="checkbox"/> RECLAMATION OF WELL SITE</td> <td><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION</td> </tr> <tr> <td><input type="checkbox"/> REPERFORATE CURRENT FORMATION</td> <td><input type="checkbox"/> SIDETRACK TO REPAIR WELL</td> <td><input type="checkbox"/> TEMPORARY ABANDON</td> </tr> <tr> <td><input type="checkbox"/> TUBING REPAIR</td> <td><input type="checkbox"/> VENT OR FLARE</td> <td><input type="checkbox"/> WATER DISPOSAL</td> </tr> <tr> <td><input type="checkbox"/> WATER SHUTOFF</td> <td><input type="checkbox"/> SI TA STATUS EXTENSION</td> <td><input type="checkbox"/> APD EXTENSION</td> </tr> <tr> <td><input type="checkbox"/> WILDCAT WELL DETERMINATION</td> <td><input type="checkbox"/> OTHER</td> <td>OTHER: <input style="width: 100px;" type="text"/></td> </tr> </table>		<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE	<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"/>
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.																																
MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 6/27/2012 AT 14:30 HRS.																																
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 02, 2012</b>																																
<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I																														
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/29/2012																															

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
 Submitted By CARA MAHLER Phone Number 720.929.6029  
 Well Name/Number MORGAN STATE 921-36C4CS  
 Qtr/Qtr NENW Section 36 Township 9S Range 21E  
 Lease Serial Number ML 22265  
 API Number 4304752274

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

Date/Time 06/27/2012 09:00 HRS AM  PM

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

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

Date/Time 07/11/2012 08:00 HRS AM  PM

BOPE

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

RECEIVED  
 JUN 27 2012  
 DIV. OF OIL, GAS & MINING

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

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

<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: ML 22265
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: Morgan State 921-36C4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522740000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0641 FNL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL 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 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: 7/11/2012	<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"/> 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 7/11/2012. DRILLED SURFACE HOLE TO 2675'. 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  
 July 20, 2012**

<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/18/2012	

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

FORM 6

**ENTITY ACTION FORM**

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6029

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752272	MORGAN STATE 921-36B4CS		NENW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	186601	6/27/2012			7/18/2012	
<b>Comments:</b> MIRU BUCKET RIG. <span style="float: right;">MVRD</span> SPUD WELL LOCATION ON 6/27/2012 AT 8:00 HRS. <span style="float: right;">BHL: hwnr</span>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752273	MORGAN STATE 921-36C4BS		NENW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	186602	6/27/2012			7/18/2012	
<b>Comments:</b> MIRU BUCKET RIG. <span style="float: right;">MVRD</span> SPUD WELL LOCATION ON 6/27/2012 AT 11:30 HRS. <span style="float: right;">BHL: nenw</span>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752274	MORGAN STATE 921-36C4CS		NENW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	186603	6/27/2012			7/18/2012	
<b>Comments:</b> MIRU BUCKET RIG. <span style="float: right;">MVRD</span> SPUD WELL LOCATION ON 6/27/2012 AT 14:30 HRS. <span style="float: right;">BHL: nenw</span>							

**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)

**RECEIVED**

**JUL 09 2012**

Cara Mahler

Name (Please Print)

Signature

Title

6/29/2012

Date

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
<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:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MORGAN STATE 921-36C4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522740000
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: MORGAN STATE BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0641 FNL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: UINTAH  STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input 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.

No Activity for the month of August 2012. Well TD at 2,675

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

<b>NAME (PLEASE PRINT)</b> Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/5/2012	

<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: ML 22265
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MORGAN STATE 921-36C4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522740000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0641 FNL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MATERIAL 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 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: 10/3/2012	<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
	<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.

No Activity for the month of September 2012. Well TD at 2,675.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 October 03, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 10/3/2012	

<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: ML 22265
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: MORGAN STATE 921-36C4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522740000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0641 FNL 1998 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE 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 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: 11/5/2012	<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.

No Activity for the month of October 2012. Well TD at 2,675.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
 FOR RECORD ONLY  
 November 05, 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> 11/5/2012	

<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>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22265
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047522740000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>5. PHONE NUMBER:</b> 720 929-6511		<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"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/3/2012	<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"/> CHANGE WELL NAME	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<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. No Activity for the month of November 2012. Well TD at 2,692.		
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          December 03, 2012</b>		
<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> 12/3/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<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>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22265	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b>	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047522740000	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> MATERIAL 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"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/19/2012	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input 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.			
FINISHED DRILLING TO 9,540' ON 12/17/2012. CEMENTED PRODUCTION CASING. RELEASED H&P 298 RIG ON 12/19/2012. DETAILS OF CASING AND CEMENT WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES			
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 27, 2012</b>			
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	<b>TITLE</b> Regulatory Analyst II	
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/26/2012		

<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> ML 22265
<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>
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047522740000
<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> MORGAN STATE BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E 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: 2/4/2013	<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.

No Activity for the month of January 2013. Well TD at 9,540

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 February 07, 2013

<b>NAME (PLEASE PRINT)</b> Laura Abrams	<b>PHONE NUMBER</b> 720 929-6356	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/4/2013	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<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>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22265	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b>	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>9. API NUMBER:</b> 43047522740000	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> MATERIAL 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"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 3/4/2013	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input 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.			
Started completing the well. Well TD at 9,540			
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 04, 2013</b>			
<b>NAME (PLEASE PRINT)</b> Laura Abrams	<b>PHONE NUMBER</b> 720 929-6356	<b>TITLE</b> Regulatory Analyst II	
<b>SIGNATURE</b> N/A		<b>DATE</b> 3/4/2013	

<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> ML 22265
<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>
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047522740000
<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> MORGAN STATE BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E 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: 4/4/2013	<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. Well TD at 9,540

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 April 05, 2013

<b>NAME (PLEASE PRINT)</b> Luke Urban	<b>PHONE NUMBER</b> 720 929-6501	<b>TITLE</b> Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/4/2013	

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> ML 22265
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>
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> MORGAN STATE 921-36C4CS	
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.	<b>9. API NUMBER:</b> 43047522740000	
<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> MATERIAL BUTTES
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0641 FNL 1998 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 36 Township: 09.0S Range: 21.0E 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 type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/12/2013	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <p style="text-align: center;">The subject well was placed on production on 4/12/2013. The            chronological well history will be submitted with the well completion            report.</p> <div style="text-align: right;"> <p><b>Accepted by the              Utah Division of              Oil, Gas and Mining              FOR RECORD ONLY              April 19, 2013</b></p> </div>		
<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/16/2013	

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME	
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: <b>MORGAN STATE 921-36C4CS</b>	
2. NAME OF OPERATOR: <b>KERR MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		9. API NUMBER: <b>4304752274</b>	
3. ADDRESS OF OPERATOR: <b>P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217</b>		PHONE NUMBER: <b>(720) 929-6000</b>	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>NENW 641 FNL 1998 FWL S36,T9S,R21E</b> AT TOP PRODUCING INTERVAL REPORTED BELOW: <b>NENW 1063 FNL 2130 FWL S36,T9S,R21E</b> AT TOTAL DEPTH: <b>NENW 1081 FNL 2153 FWL S36,T9S,R21E</b>		10 FIELD AND POOL, OR WILDCAT <b>NATURAL BUTTES</b>	
14. DATE SPUDDED: <b>6/27/2012</b>		15. DATE T.D. REACHED: <b>12/17/2012</b>	
16. DATE COMPLETED: <b>4/12/2013</b>		ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	
17. ELEVATIONS (DF, RKB, RT, GL): <b>5014 RKB</b>		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NENW 36 9S 21E S</b>	
18. TOTAL DEPTH: MD <b>9,540</b> TVD <b>9,504</b>		19. PLUG BACK T.D.: MD <b>9,484</b> TVD <b>9,448</b>	
20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD	
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) <b>CBL/GR/CCL/TEMP</b>		23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)	

**24. CASING AND LINER RECORD (Report all strings set in well)**

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,672		990		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,530		1,630		70	

**25. TUBING RECORD**

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,920							

**26. PRODUCING INTERVALS**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) WASATCH	6,168	7,328			6,168 7,328	0.36	72	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) MESAVERDE	7,392	9,372			7,392 9,372	0.36	192	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

**27. PERFORATION RECORD**

**28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.**

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6168-9372	PUMP 11,401 BBLS SLICK H2O & 258,707 LBS 30/50 OTTAWA SAND 11 STAGES

**29. ENCLOSED ATTACHMENTS:**

- |   |  |                                       |  |
|---|--|---------------------------------------|--|
| <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS                         | <input type="checkbox"/> GEOLOGIC REPORT | <input type="checkbox"/> DST REPORT   | <input checked="" type="checkbox"/> DIRECTIONAL SURVEY |
| <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION | <input type="checkbox"/> CORE ANALYSIS   | <input type="checkbox"/> OTHER: _____ |  |

**30. WELL STATUS:**

**PROD**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 4/12/2013		TEST DATE: 4/15/2013		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,644	WATER – BBL: 0	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 2,051	CSG. PRESS. 2,796	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,644	WATER – BBL: 0	INTERVAL STATUS: PROD

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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

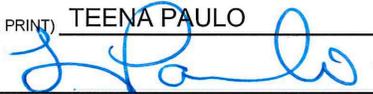
34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,387
				BIRD'S NEST	1,773
				MAHOGANY	2,192
				WASATCH	4,689
				MESAVERDE	7,378

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. A DV tool was placed in the well from 4126.5 feet – 4129.5 feet. DQX csg was run from surface to 4126.5'; LTC csg was run from 4126.5' to 9530'. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) TEENA PAULO TITLE STAFF REGULATORY SPECIALIST  
 SIGNATURE  DATE 5/1/2013

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining Phone: 801-538-5340  
 1594 West North Temple, Suite 1210  
 Box 145801 Fax: 801-359-3940  
 Salt Lake City, Utah 84114-5801

US ROCKIES REGION  
**Operation Summary Report**

Well: MORGAN STATE 921-36C4CS YELLOW			Spud Date: 7/11/2012		
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD		Rig Name No: H&P 298/298, CAPSTAR 310/310	
Event: DRILLING		Start Date: 6/25/2012		End Date: 12/19/2012	
Active Datum: RKB @5,014.00usft (above Mean Sea Level)			UWI: NE/NW/09/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/11/2012	2:00 - 6:30	4.50	MIRU	01	C	P		SKID RIG
	6:30 - 8:00	1.50	PRPSPD	01	B	P		WELD ON ROTATING HEAD, RIG UP FLOW LINE. AIR OUT PUMPS, PICK UP BTI AND BHA
	8:00 - 10:30	2.50	DRLSUR	02	D	P		SPUD DRILL 12.25" SURFACE HOLE F/ 49'-210' ROP= 161' @ 81 FPH WOB= 14/22K RPM= 55/105 SPP=720/500 GPM= 595 TRQ= 2600/1900 PU/SO/ROT = 32/28/30 NO LOSSES HOLE IN GOOD SHAPE
	10:30 - 11:30	1.00	DRLSUR	06	A	P		PULL OUT OF HOLE. LAY DOWN BIT AND DIRECTIONAL TOOLS
	11:30 - 13:00	1.50	DRLSUR	06	A	P		PICK UP 11.00" BIT AND DIRECTIONAL TOOLS, TRIP IN HOLE
	13:00 - 16:00	3.00	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/210'-520' ROP= 310' @ 110' FPH WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 900PSI OFF BTTM PUMP= 700 PSI GPM= 576 TRQ= 2200/1900 UP/DWN/ROT= 55/48/52  HOLE IN GOOD SHAPE
	16:00 - 0:00	8.00	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/520'-1370' ROP= 850' @ 102.5' FPH WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1055PSI OFF BTTM PUMP= 835 PSI GPM= 576 TRQ= 3100/2700 UP/DWN/ROT= 80/65/70  HOLE IN GOOD SHAPE

## Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW

Spud Date: 7/11/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36C PAD

Rig Name No: H&amp;P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 6/25/2012

End Date: 12/19/2012

Active Datum: RKB @5,014.00usft (above Mean Sea Level)

UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/12/2012	0:00 - 8:00	8.00	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/1370'-2050' ROP= 310' @ 110' FPH WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1140PSI OFF BTTM PUMP= 810 PSI GPM= 576 TRQ= 2800/1800 UP/DWN/ROT= 96/88/92  HOLE IN GOOD SHAPE ON AIR 1000 TO 1200 CFM AT 1442'
	8:00 - 13:30	5.50	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/2050'-2285' ROP= 235' @ 47" FPH WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1150PSI OFF BTTM PUMP= 850 PSI GPM= 576 TRQ= 2800/1800 UP/DWN/ROT= 101/89/94  HOLE IN GOOD SHAPE ON AIR 1000 TO 1200 CFM AT 1442'
	13:30 - 14:00	0.50	DRLSUR	22	L	Z		LOST AIR COMPRESSOR #1, ENGINE FAILURE. DRILLING AHEAD WITH COMPRESOR #2
	14:00 - 16:30	2.50	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/2285'-2347' ROP= 62' @ WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1150PSI OFF BTTM PUMP= 850 PSI GPM= 576 TRQ= 2800/1800 UP/DWN/ROT= 101/89/94  HOLE IN GOOD SHAPE ON AIR 1000 TO 1200 CFM AT 1442'
	16:30 - 22:30	6.00	DRLSUR	22	L	Z		ROP FALLING OFF, FRONT HYDRAULIC PUMP ***FAILURE: RIG EQUIPMENT-HYDRAULIC FRONT PUMP. 1630 AT 2346'
	22:30 - 0:00	1.50	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/2347'-2505' ROP= 62' @ WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1200PSI OFF BTTM PUMP= 930 PSI GPM= 576 TRQ= 3200/2700 UP/DWN/ROT= 120/88/100  HOLE IN GOOD SHAPE ON AIR 1000 TO 1200 CFM AT 1442'

## Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW

Spud Date: 7/11/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36C PAD

Rig Name No: H&amp;P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 6/25/2012

End Date: 12/19/2012

Active Datum: RKB @5,014.00usft (above Mean Sea Level)

UWI: NE/NW/09/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/13/2012	0:00 - 2:30	2.50	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/2505'-2675' ROP= 170' @ 68' PER HR WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 1200PSI OFF BTTM PUMP= 930 PSI GPM= 576 TRQ= 3200/2700 UP/DWN/ROT= 120/88/100  HOLE IN GOOD SHAPE ON AIR 1000 TO 1200 CFM AT 1442'
	2:30 - 3:30	1.00	DRLSUR	05	C	P		CIRCULATE AND CONDITON PRIOR TO TRIP
	3:30 - 6:00	2.50	DRLSUR	06	D	P		PULL OUT OF HOLE
	6:00 - 7:30	1.50	DRLSUR	06	A	P		LAY DOWN BIT AND DIRECTIONAL TOOLS
	7:30 - 10:00	2.50	CSGSUR	12	C	P		PJSM /// RUN 60 JT'S, 8-5/8", 28#, J-55, LT&C CSG /// SHOE SET @ 2646' /// BAFFLE @ 2600'
	10:00 - 17:00	7.00	CSGSUR	12	B	P		PJSM WITH PRO PETRO CMT CREW /// PUMP 150BBL'S WATER AHEAD FOLLOWED BY 20 BBL GEL WATER FLUSH /// LEAD = 350sx CLASS G CMT @ 12.0 WT & 2.78 YIELD /// TAIL = 200sx CLASS G CMT @ 15.8 WT & 1.15 YIELD /// DROP PLUG & DISPLACE W/ 159 BBL'S WATER /// PLUG DN @ 12:42 07/13/2012 /// BUMP PLUG W/ 560 PSI /// FINAL LIFT = 330 PSI /// CHECK FLOATS - FLOAT HELD NO CMT TO SURFACE, CUT OFF WELL HEAD 3 TOP OUTS W/ 440 sx TOTAL CLASS G CMT & 15.8 WT & 1.15 YIELD /// CMT TO SURFACE  RELEASE RIG AT 1700
12/14/2012	13:30 - 15:30	2.00	MIRU3	01	C	P		PREPARE & SKID RIG
	15:30 - 16:30	1.00	MIRU3	01	B	P		RIG UP AFTER SKID
	16:30 - 17:00	0.50	PRSPD	14	A	P		NIPPLE UP BOP'S & EQUIPMENT
	17:00 - 18:00	1.00	PRSPD	15	A	P		CHANGE OUT BAILS & MAKE UP TEST ASSY
	18:00 - 22:00	4.00	PRSPD	15	A	P		PJSM TEST BOP'S & EQUIPMENT AS PER PROGRAM 250/5000 ANNULAR 250/2500 CASING 1500 PSI
	22:00 - 23:30	1.50	PRSPD	15	A	P		PRESSURE TEST MI SWACO PRESSURE CONTROL EQUIPMENT
	23:30 - 0:00	0.50	PRSPD	14	B	P		INSTALL WEAR BUSHING
12/15/2012	0:00 - 2:00	2.00	PRSPD	06	A	P		PICK UP & MAKE UP DIRECTIONAL BHA WITH WEATHERFORD ,SCRIBE ,ORIENTATE, SURFACE TEST SAME
	2:00 - 4:00	2.00	PRSPD	06	A	P		TIH ,TAG CEMENT @ 2,577',CHECK FOR LEVEL ON DERRICK ,INSTALL ROTATING RUBBER
	4:00 - 4:30	0.50	DRLPRC	02	F	P		DRILL CEMENT & SHOE TRACK FROM 2,577' TO 2,663' CLEAN OUT RAT HOLE TO 2,692'

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING		Start Date: 6/25/2012	End Date: 12/19/2012
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 13:30	9.00	DRLPRC	02	B	P		DRILL /SLIDE / SURVEY/ F/ 2,692' TO 4,234' = 1,542' @171.33 FPH WOB 22-24000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2050/1750 TORQUE ON/OFF BTM 5,000/ 6,000 PICK UP WT 120,000 SLACK OFF WT 93,000 ROT WT 114,000 SLIDE 144' IN 95 MIN 9.34% OF FOOTAGE DRILLED, 17.59 %OF HRS DRILLED MUD WT 8.4 VIS 26, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 4% LCM NOV-D WATER SWACO OFF LINE NO FLUID LOST
	13:30 - 14:00	0.50	DRLPRC	07	A	P		SERVICE RIG @ 4,234'
	14:00 - 0:00	10.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 4,234' TO 6,020' = 1,786' @ 178.60 FPH WOB 22-24000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2230/1900 TORQUE ON/OFF BTM 11,000/ 8,000 PICK UP WT 165,000 SLACK OFF WT 119,000 ROT WT 139,000 SLIDE 106' IN 70 MIN 5.30% OF FOOTAGE DRILLED, 11.57 %OF HRS DRILLED MUD WT 8.4 VIS 26, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 4% LCM NOV-D WATER SWACO OFF LINE 250 BBL FLUID LOST

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING		Start Date: 6/25/2012	End Date: 12/19/2012
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/16/2012	0:00 - 6:00	6.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 6,020' TO 6,812' = 792' @ 132 FPH WOB 22-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2250/1950 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 183,000 SLACK OFF WT 127,000 ROT WT 155,000 SLIDE 30' IN 25 MIN 4.57% OF FOOTAGE DRILLED, 8.33 %OF HRS DRILLED MUD WT 8.5 VIS 26, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 4% LCM NOV-D WATER SWACO OFF LINE 120 BBL FLUID LOST
	6:00 - 14:30	8.50	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 6,812' TO 7,636' = 824' @ 96.94 FPH WOB 23-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2300/2000 TORQUE ON/OFF BTM 12,000/ 12,000 PICK UP WT 201,000 SLACK OFF WT 145,000 ROT WT 170,000 SLIDE 83' IN 70 MIN 9.76% OF FOOTAGE DRILLED, 12.39 %OF HRS DRILLED MUD WT 8.5 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 4% LCM NOV-D WATER SWACO OFF LINE NO FLUID LOST
	14:30 - 15:00	0.50	DRLPRV	07	A	P		SERVICE RIG @ 7,636'

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING		Start Date: 6/25/2012	End Date: 12/19/2012
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/09/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:00 - 0:00	9.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 7,636' TO 8,398' = 762' @ 84.66 FPH WOB 23-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2300/2050 TORQUE ON/OFF BTM 13,000/ 13,000 PICK UP WT 212,000 SLACK OFF WT 157,000 ROT WT 182,000 SLIDE 70' IN 130 MIN 18.52% OF FOOTAGE DRILLED,36.11 %OF HRS DRILLED MUD WT 8.5 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 4% LCM NOV-D WATER SWACO OFF LINE 70 BBL FLUID LOST 10' FLARE @ 7,900'
12/17/2012	0:00 - 3:30	3.50	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 8,398' TO 8,700' = 302' @ 86.28 FPH WOB 24-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2670/2350 TORQUE ON/OFF BTM 17,000/ 12,000 PICK UP WT 215,000 SLACK OFF WT 154,000 ROT WT 185,000 MUD WT 8.5 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 6% LCM NOV ON LINE SWACO OFFLINE NO FLUID LOST 10 TO 15' FLARE
	3:30 - 4:00	0.50	DRLPRV	05	A	X		CIRC BTM UP GAS @ 8,700' / MI SWACO 40TO 60' FLARE 450 TO 600 PSI ON BACK SIDE *** CIRCULATE BOTTOMS UP GAS ***

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36C PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310	
Event: DRILLING	Start Date: 6/25/2012	End Date: 12/19/2012	
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:00 - 8:30	4.50	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 8,700' TO 9,054' = 354' @ 78.66 FPH WOB 24-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 127 PUMPS 135 SPM= 607GPM PUMP PRESSURE ON/OFF BTM 2670/2350 TORQUE ON/OFF BTM 17,000/ 12,000 PICK UP WT 215,000 SLACK OFF WT 154,000 ROT WT 185,000 MUD WT 8.5 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND WITH 6% LCM NOV OFF SWACO ON LINE 120 BBL FLUID LOST 20' 50'FLARE 250 TO 600 PSI ON BACK SIDE
	8:30 - 9:00	0.50	DRLPRV	07	A	P		SERVICE RIG @ 9,054'
	9:00 - 12:00	3.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 9,054' TO 9,225' = 171' @ 57FPH WOB 24-26000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 104 PUMPS 110 SPM= 495GPM PUMP PRESSURE ON/OFF BTM 2350/2100 TORQUE ON/OFF BTM 14,000/ 12,000 PICK UP WT 210,000 SLACK OFF WT 154,000 ROT WT 188,000 MUD WT 10.7 VIS 41, 6% LCM NOV OFF SWACO ON LINE 30 BBL FLUID LOST 10-15'FLARE 250 TO 500 PSI ON BACK SIDE
	12:00 - 13:00	1.00	DRLPRV	22	K	Z		CLEAN LCM OUT FROM UNDER MUD PUMP VALVES / CHANGE OUT VALVES IN BOTH MUD PUMPS *** WORK ON MUD PUMPS ***

## Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW

Spud Date: 7/11/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36C PAD

Rig Name No: H&amp;P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 6/25/2012

End Date: 12/19/2012

Active Datum: RKB @5,014.00usft (above Mean Sea Level)

UWI: NE/NW/09/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:00 - 20:00	7.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 9,225' TO 9,540' TD = 315' @ 45 FPH WOB 24-28,000 TOP DRIVE RPM 60-75 MUD MOTOR RPM 100 PUMPS 100 SPM= 473GPM PUMP PRESSURE ON/OFF BTM 2540/2100 TORQUE ON/OFF BTM 14,000/ 12,000 PICK UP WT 220,000 SLACK OFF WT 161,000 ROT WT 188,000 MUD WT 11.6 VIS 41, 6% LCM NOV OFF SWACO OFF LINE 120 BBL FLUID LOST NO FLARE
	20:00 - 21:00	1.00	DRLPRV	05	C	P		CIRC & CLEAN HOLE
	21:00 - 22:30	1.50	DRLPRV	06	E	P		WIPER TRIP FROM 9,540' TO 8,000' TIH BACK TO BOTTOM WITH NO PROBLEMS - NO FILL
	22:30 - 23:30	1.00	DRLPRV	05	C	P		CIRC & CLEAN HOLE @ 9,540'- SPOT 12.0 PPG PILL WITH 10% LCM ON BOTTOM
	23:30 - 0:00	0.50	DRLPRV	06	A	P		TOOH FROM 9,540' TO 9,200'
12/18/2012	0:00 - 6:00	6.00	DRLPRV	06	A	P		TOOH F/ 9,200 TO 200' / WITH NO HOLE PROBLEMS
	6:00 - 8:00	2.00	DRLPRV	22	L	Z		HYDRAULIC CLAMP WOULD NOT RELEASE ON SMITH ROTATING HEAD.AFTER MANY TIMES OF FUNCTIONING IT RELEASED
	8:00 - 9:00	1.00	DRLPRV	06	A	P		LD BHA WITH WEATHERFORD
	9:00 - 9:30	0.50	CSGPRO	14	B	P		PULL WEAR BUSHING
	9:30 - 11:30	2.00	CSGPRO	12	A	P		PJSM RU FRANKS CASING EQUIPMENT
	11:30 - 19:00	7.50	CSGPRO	12	C	P		RUN 4 1/2" CASING TO 9,530' / SHOE @ 9,530' / FLOAT COLLAR @ 9,485.38' / MVerde Marker @ 7,324' / DV Tool @4,129.5' / X-O @ 4,126.5' / 217 TOTAL JTS RAN - LAND HANGER WITH 90K
	19:00 - 21:00	2.00	CSGPRO	05	A	P		CIRC & CONDITION MUD @ 9,530'
	21:00 - 0:00	3.00	CSGPRO	12	E	P		RIG UP BJ CEMENTERS / PRESSURE TEST SURFACE EQUIPMENT TO 5000 PSI /PUMP 1ST STAGE CEMENT, 25 BBLS SPACER ; CEMENT 1110 SKS -14.3PPG -1.32 YIELD / 261 BBL / DROP PLUG / DISPLACE WITH 90 BBL WATER FOLLOWED WITH 57 BBL 11.7 PPG MUD/ BUMP PLUG WITH 2606 PSI / FLOATS HELD 1 1/2 BBL BACK TO INVENTORY / NO CEMENT BACK / SPACER WATER BACK TO SURFACE
12/19/2012	0:00 - 4:00	4.00	CSGPRO	12	E	P		DROP OPENING BOMB LET GRAVITATE FOR 25 MINS BJ PRESSURE UP ON DV TOOL TO 680 PSI , OPEN TOOL / BREAK CIRC WITH BJ / PUMP 10 BBL OF MUD / SWITCH OVER TO RIG PUMP / PUMP 3 BPM @ 200 PSI WHILE WAITING ON CEMENT

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW			Spud Date: 7/11/2012		
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD		Rig Name No: H&P 298/298, CAPSTAR 310/310	
Event: DRILLING		Start Date: 6/25/2012		End Date: 12/19/2012	
Active Datum: RKB @5,014.00usft (above Mean Sea Level)			UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:00 - 7:00	3.00	CSGPRO	12	E	P		PUMP 2ND STAGE OF CEMENT, 25 BBL SPACER ; CEMENT 520 SKS 186 BBL -12.5 PPG - 2.01CEMENT / 50 SKS - 10 BBL 15.8PPG-1.16 YIELD/DROP PLUG / DISPLACE WITH 64 BBL WATER / LIFT PRESSURE 1080 PSI BUMP PLUG TO 2530 PSI FLOAT HELD / SPACER BACK TO SURFACE / 10 BBL CEMENT TO SURFACE / 3/4 BBL WATER BACK TO INVENTORY / RIG DOWN BJ CEMENTERS
	7:00 - 9:00	2.00	CSGPRO	14	A	P		FLUSH BOP'S & EQUIPMENT,DRAIN & BLOW DOWN EQUIPMENT , SET PACK OFF / NIPPLE DOWN BOP'S & RELEASE RIG @ 09:00 12/19/12

US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36C4CS YELLOW	Wellbore No.	OH
Well Name	MORGAN STATE 921-36C4CS	Wellbore Name	MORGAN STATE 921-36C4CS
Report No.	1	Report Date	3/4/2013
Project	UTAH-UINTAH	Site	MORGAN STATE 921-36C PAD
Rig Name/No.		Event	COMPLETION
Start Date	1/30/2013	End Date	4/12/2013
Spud Date	7/11/2012	Active Datum	RKB @5,014.00usft (above Mean Sea Level)
UWI	NE/NW/09/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0		

1.3 General

Contractor		Job Method	Supervisor
Perforated Assembly		Conveyed Method	

1.4 Initial Conditions

Fluid Type	Fluid Density	Gross Interval	6,168.0 (usft)-9,372.0 (usft)	Start Date/Time	3/4/2013 12:00AM
Surface Press	Estimate Res Press	No. of Intervals	77	End Date/Time	3/4/2013 12:00AM
TVD Fluid Top	Fluid Head	Total Shots	264	Net Perforation Interval	85.00 (usft)
Hydrostatic Press	Press Difference	Avg Shot Density	3.11 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL			Final Press Date	

1.5 Summary

Diameter	0.360 (in)	Carr Type /Stage No	
Misfires/ Add. Shot		Carr Size (in)	3.375
Shot Density (shot/ft)	3.00	Phasing (°)	120.00
MD Base (usft)	6,170.0	Charge Desc /Charge Manufacturer	23.00 PRODUCTIO
MD Top (usft)	6,168.0		N
CCL-T S (usft)			
CCL@ (usft)			
Formation/ Reservoir			

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
3/4/2013 12:00AM	WASATCH/			6,168.0	6,170.0	3.00		0.360	EXP/	3.375	120.00	23.00	PRODUCTIO	N	

US ROCKIES REGION

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	Misruin
3/4/2013 12:00AM	WASATCH/			6,244.0	6,245.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,438.0	6,439.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,466.0	6,467.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,521.0	6,522.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,528.0	6,529.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,605.0	6,606.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,656.0	6,657.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,669.0	6,670.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,750.0	6,751.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,763.0	6,764.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,796.0	6,797.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,869.0	6,870.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			6,966.0	6,968.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			7,022.0	7,024.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			7,288.0	7,290.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	WASATCH/			7,326.0	7,328.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,392.0	7,394.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,413.0	7,414.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,441.0	7,442.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,605.0	7,606.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,674.0	7,675.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

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US ROCKIES REGION

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
3/4/2013 12:00AM	MESAVERDE/			7,686.0	7,688.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,719.0	7,720.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,761.0	7,762.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,789.0	7,790.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,805.0	7,806.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,859.0	7,860.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,864.0	7,865.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,871.0	7,872.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,909.0	7,910.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,980.0	7,981.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			7,995.0	7,996.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,057.0	8,058.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,079.0	8,080.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,157.0	8,158.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,175.0	8,176.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,250.0	8,251.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,310.0	8,311.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,359.0	8,360.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,378.0	8,379.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,400.0	8,401.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,454.0	8,455.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

RECEIVED: May. 01, 2013

US ROCKIES REGION

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
3/4/2013 12:00AM	MESAVERDE/			8,468.0	8,469.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,527.0	8,528.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,550.0	8,551.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,561.0	8,562.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,597.0	8,598.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,616.0	8,617.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,650.0	8,651.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,664.0	8,665.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,680.0	8,681.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,709.0	8,710.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,723.0	8,724.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,739.0	8,740.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,771.0	8,772.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,801.0	8,802.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,811.0	8,812.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,820.0	8,821.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,872.0	8,873.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,885.0	8,886.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,893.0	8,894.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,909.0	8,910.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			8,931.0	8,932.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

RECEIVED: May. 01, 2013

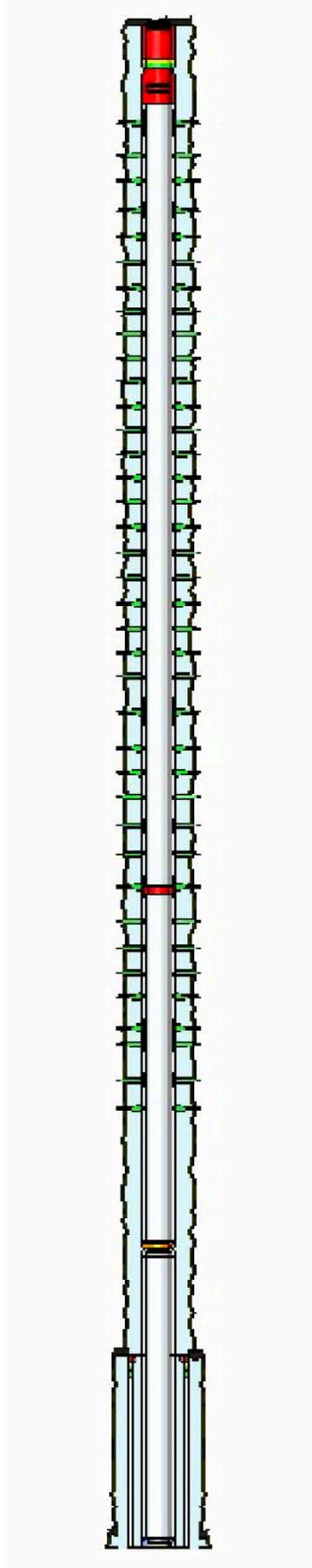
US ROCKIES REGION

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
3/4/2013 12:00AM	MESAVERDE/			8,947.0	8,948.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,002.0	9,003.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,048.0	9,049.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,071.0	9,072.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,080.0	9,082.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,090.0	9,091.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,260.0	9,261.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,278.0	9,279.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,311.0	9,312.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,347.0	9,348.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,354.0	9,355.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,363.0	9,364.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
3/4/2013 12:00AM	MESAVERDE/			9,371.0	9,372.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION  
**Operation Summary Report**

Well: MORGAN STATE 921-36C4CS YELLOW				Spud Date: 7/11/2012			
Project: UTAH-UINTAH			Site: MORGAN STATE 921-36C PAD			Rig Name No: SWABBCO 6/6	
Event: COMPLETION			Start Date: 1/30/2013		End Date: 4/12/2013		
Active Datum: RKB @5,014.00usft (above Mean Sea Level)				UWI: NE/NW/09/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/28/2013	8:00 - 18:00	10.00	SUBSPR	32	A	P		<p>8AM (DAY 1) MIRU CUDD COIL TBG UNIT. HELD JSA – SLIPPERY ROADS, RU EQUIPMENT.</p> <p>NDWH, NU FRAC VALVE &amp; CUDD EQUIPMENT. NU PTT MUD MOTOR &amp; 3-7/8" MILL. P.T. COIL &amp; LINES TO 2200#.</p> <p>RIH ON 2" COIL. TAG CEMENT STRINGERS @ 4071'. TAG DV TOOL @ 4125'. DRILL ON TOOL FOR 45 MINUTES. LOST SUCTION TO 400 WORK TANK. POOH W/ 2" COIL. DISPLACE COIL &amp; WELL HEAD W/ 10# BRINE. MILL HAD 3/8" COOPER WIRE WITH STRANDS BALLED UP ON BTM OF MILL?? HAVE NO IDEA HOW THE WIRE GOT IN THE WELL.</p> <p>6PM SWI-SDFN</p>
1/29/2013	- 7:00		SUBSPR	32	A	P		<p>7AM (DAY 2) HELD JSA</p> <p>WHP=0#. RIH W/ 3-7/8" PTT MILL &amp; MUD MOTOR ON 2" COIL. TAG DV TOOL @ 4125'. D/O TOOL IN 35 MINUTES. RIH TO 9482' AND CIRCULATE WELL CLEAN W/ 2% KCL WATER. POOH W/ COIL. NDFV &amp; CUDD STACK, NUWH. MOVE COIL OVER TO NEXT WELL ON PAD TO D/O DV TOOL. (M.S. 921-36C4BS) TTS MILL STILL LOOKED NEW.</p> <p>1:30PM SWI.</p>
1/30/2013	-							
2/27/2013	10:00 - 11:00	1.00	SUBSPR	33	C	P		<p>FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG &amp; FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 69 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.</p> <p>PRESSURE TEST 8 5/8 X 4 1/2 TO 560 PSI HELD FOR 5 MIN LOST -323 PSI,BLED PSI OFF, REINSTALLED POP OFF SWIFN</p> <p>COULDN'T PUMP DOWN SURFACE CSG HSM, HIGH PSI LINES &amp; WL AWAIRNESS.</p>
4/1/2013	6:45 - 7:00	0.25	FRAC	48		P		PSI TEST FRAC LINES T/ 9850 PSI. LOST 570 PSI.
	7:00 - 7:15	0.25	FRAC	52	B	P		GOOD TEST. BLEED OFF PSI.

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 1/30/2013	End Date: 4/12/2013
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/W/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 18:00	10.75	FRAC	36	B			<p>FRAC STG 1)WHP 1550 PSI, BRK 3002 PSI @ 4.8 BPM. ISIP 2250 PSI, FG. 0.68 ISIP 2911 PSI, FG. 0.75, NPI 661 PSI. SWI, XO T/ WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9121' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 2)WHP 1496 PSI, BRK 3182 PSI @ 4.7 BPM. ISIP 2322 PSI, FG. 0.7 ISIP 2813 PSI, FG. 0.75, NPI 491 PSI. SWI, XO T/ WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8920' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 3)WHP 2492 PSI, BRK 2834 PSI @ 3.8 BPM. ISIP 2484 PSI, FG. 0.72 ISIP 2714 PSI, FG. 0.75, NPI 230 PSI. SWI, XO T/ WL.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8750' P/U PERF AS PER DESIGN. POOH, SWIFN.</p>
4/2/2013	6:45 - 7:00	0.25	FRAC	48		P		HSM, HIGH PSI LINES.

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 1/30/2013	End Date: 4/12/2013
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 4)WHP 1943 PSI, BRK 3113 PSI @ 4.4 BPM. ISIP 2032 PSI, FG. 0.67 ISIP 2549 PSI, FG. 0.73, NPI 517 PSI. SWI, XO T/ WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8572' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 5)WHP 2038 PSI, BRK 3124 PSI @ 10.7 BPM. ISIP 2125 PSI, FG. 0.69 ISIP 2517 PSI, FG. 0.74, NPI 392 PSI. SWI, XO T/ WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8341' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 6)WHP 1528 PSI, BRK 2257 PSI @ 4.2 BPM. ISIP 1739 PSI, FG. 0.65 ISIP 2679 PSI, FG. 0.77, NPI 940 PSI. SWI, XO T/ WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7940' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 7)WHP 1334 PSI, BRK 2143 PSI @ 4.7 BPM. ISIP 1744 PSI, FG. 0.66 ISIP 2605 PSI, FG. 0.77, NPI 861 PSI. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7698' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 8)WHP 601 PSI, BRK 2242 PSI @ 3.7 BPM. ISIP 1249 PSI, FG. 0.6 ISIP 1960 PSI, FG. 0.7, NPI 711 PSI. SWI, XO T/ WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @7358' P/U PERF AS PER DESIGN. POOH, SWIFN.</p>
4/3/2013	6:45 - 7:00	0.25	FRAC	48		P		HSM. HIGH PSI LINES.

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36C PAD	Rig Name No: SWABBCO 6/6	
Event: COMPLETION	Start Date: 1/30/2013	End Date: 4/12/2013	
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 7:00	0.00	FRAC	36	B	P		<p>FRAC STG 9)WHP 614 PSI, BRK 1859 PSI @ 3.9 BPM. ISIP 984 PSI, FG. 0.58 ISIP 2485 PSI, FG. 0.79, NPI 1501 PSI. SWI, XO T/WL.</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 6900' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 10)WHP 1450 PSI, BRK 2657 PSI @ 4.7 BPM. ISIP 1669 PSI, FG. 0.69 ISIP 1960 PSI, FG. 0.73, NPI 291 PSI. SWI, XO T/ WL.</p> <p>PERF STG 11)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 6559' P/U PERF AS PER DESIGN.</p> <p>FRAC STG 11)WHP 759 PSI, BRK 2016 PSI @ 4.2 BPM. ISIP 1209 PSI, FG. 0.63 ISIP 1303 PSI, FG. 0.64, NPI 94 PSI. SWI, XO T/ WL.</p> <p>PU 4 1/ 2 8K HAL CBP. RIH SET KILL PLUG @ 6118'. POOH. SWI. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 258,707 LBS TOTAL CLFL = 11,401 BBLs</p>
4/11/2013	7:00 - 7:30	0.50	DRLOUT	48		P		TRIPPING TBG
	7:30 - 17:30	10.00	DRLOUT	31	I	P		<p>MOVE IN RIG UP, NDWH, NUBOPS, P/U 3 7/8 BIT, POBS, SN, TIH 150 J-55JNTS, 6' PUP JOINT AND 34 JTS L-80 JNTS , TAG CBP KILL PLUG @6118'. R/U POWER SWIVEL. CIRC HOLE. TEST BOPS @ 3000 PSI. WELLHEAD RING IS LEAKING. LAND WELL ON HANGER. NDBOP. X/O BAD WELLHEAD RING. NUBOP. PRESSURE TEST BOP'S GOOD @ 3000#. BREAK CIRC. D/O 4 CBP'S AS FOLLOWS:</p> <p>CBP #1) DRL OUT BAKER 8K CBP @ 6118' IN 11MIN. 100 #'S DIFF. PSI. RIH. C/O 30' OF SND. FCP = 100 PSI.</p> <p>CBP #2) DRL OUT BAKER 8K CBP @ 6559' IN 7MIN. 0#'S DIFF. PSI. RIH. C/O 20' OF SND. FCP = 0 PSI.</p> <p>CBP #3) DRL OUT BAKER 8K CBP @ 6900" IN 9MIN. 100 #'S DIFF. PSI. RIH. C/O 20' OF SND. FCP = 100 PSI.</p> <p>CBP #4) DRL OUT BAKER 8K CBP @ 7358' IN 11MIN. 150 #'S DIFF. PSI. RIH. C/O 30' OF SND. FCP = 100 PSI.</p> <p>RIH W/ TOTAL OF 236JTS 2-3/8" TBNG. LEAVE EOT @7450'. CIRC WELL CLEAN. SWIFN. WILL CONT D/O IN AM.</p>

Operation Summary Report

Well: MORGAN STATE 921-36C4CS YELLOW		Spud Date: 7/11/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-36C PAD	Rig Name No: SWABBCO 6/6
Event: COMPLETION		Start Date: 1/30/2013	End Date: 4/12/2013
Active Datum: RKB @5,014.00usft (above Mean Sea Level)		UWI: NE/NW/0/9/S/21/E/36/0/0/26/PM/N/641/NW/0/1998/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/12/2013	7:00 - 7:15	0.25	DRLOUT	48		P		SAFETY = JSA.
	7:15 - 14:00	6.75	DRLOUT	31		P		<p>SICP= 2200#. SITP= 0#. OPEN CSNG TO PIT. P/U SWIVEL. BREAK CIRC. CONT D/O LAST 7 CBP'S AS FOLLOWS:</p> <p>CBP #5) DRL OUT BAKER 8K CBP @ 7698' IN 7MIN. 150#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 450 PSI.</p> <p>CBP #6) DRL OUT BAKER 8K CBP @ 7940' IN 9MIN. 50#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 550 PSI.</p> <p>CBP #7) DRL OUT BAKER 8K CBP @ 8341' IN 7MIN. 100#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 550 PSI.</p> <p>CBP #8) DRL OUT BAKER 8K CBP @ 8572' IN 10MIN. 100#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 600 PSI.</p> <p>CBP #9) DRL OUT BAKER 8K CBP @ 8750' IN 9MIN. 50#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 750 PSI.</p> <p>CBP #10) DRL OUT BAKER 8K CBP @ 8920' IN 7MIN. 100#'S DIFF. PSI. RIH. C/O 50' OF SND. FCP = 950 PSI.</p> <p>CBP #11) DRL OUT BAKER 8K CBP @ 9121' IN 7MIN. 150#'S DIFF. PSI. RIH &amp; C/O 20' OF SND TO PBTD @9479' W/ 300 JTS 2-3/8" TBNG. CIRC WELL CLEAN. FCP = 950 PSI. L/D 19 JTS 2-3/8" L-80 TBNG. LAND WELL ON HANGER. R/D FLOOR. NDBOP. NUWH. PRESSURE TEST FLOWLINES GOOD @3000#. DROP BALL AND PUMP OFF BIT @2500#. RDMO. WELL LANDED AS FOLLOWS:</p> <p>KB= 26.00' HANGER= .83' 150JTS 2-3/8" J-55 TBNG = 4730.86' 2-3/8" L-80 PUP JT = 6.02' 131JTS 2-3/8" L-80 TBNG =4154.43' XN / POBS= 2.20' EOT @ 8920.34'</p> <p>TOTAL FRAC LOAD PUMPED = 11,401 BBLS RIG RECOVERED = 1500 BBLS TWLTR= 9901 BBLS.</p> <p>WELL ON SALES @1300 HRS. BEFORE WELL WAS BROUGHT ON LINE SICP= 2655# SITP= 2667#.</p>
	14:00 - 14:00	0.00	DRLOUT	50				<p>WELL TURNED TO SALES @ 1330 HR ON 4/12/2013. 2200 MCFD, 1920BWPD, FCP 2560#, FTP 2660#, 20/64" CK.</p>

API Well Number: 43047522740000

Project: UTAH - UTM (feet), NAD27, Zone 12N  
 Site: Uintah Morgan State 921-36C PAD  
 Well: MORGAN STATE 921-36C4CS  
 Wellbore: MORGAN STATE 921-36C4CS  
 Section: NE 1/4 NW 1/4 OF Sec.36-T9S-R21E  
 SHL:  
 Design: MORGAN STATE 921-36C4CS (wp01)  
 Latitude: 39.998015  
 Longitude: -109.501666  
 GL: 4988.00  
 KB: 26' RKB + 4988' GL @ 5014.00ft (H&P 298)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1365.00	1375.91	GREEN RIVER
1667.00	1681.54	BIRDS NEST
2166.00	2187.49	MAHOGANY MARKER
4624.00	4657.70	WASATCH
5231.00	5264.71	INTERCEPT
7305.00	7338.78	MESAVERDE
9488.00	9521.76	SEGO



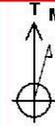
**Weatherford**

WELL DETAILS: MORGAN STATE 921-36C4CS

+N/-S	+E/-W	Northing	Ground Level: Easting	4988.00 Latitude	Longitude	Slot
0.00	0.00	14528848.83	2060058.11	39.998015	-109.501666	

CASING DETAILS

TVD	MD	Name	Size
2627.45	2655.45	8 5/8"	8-5/8



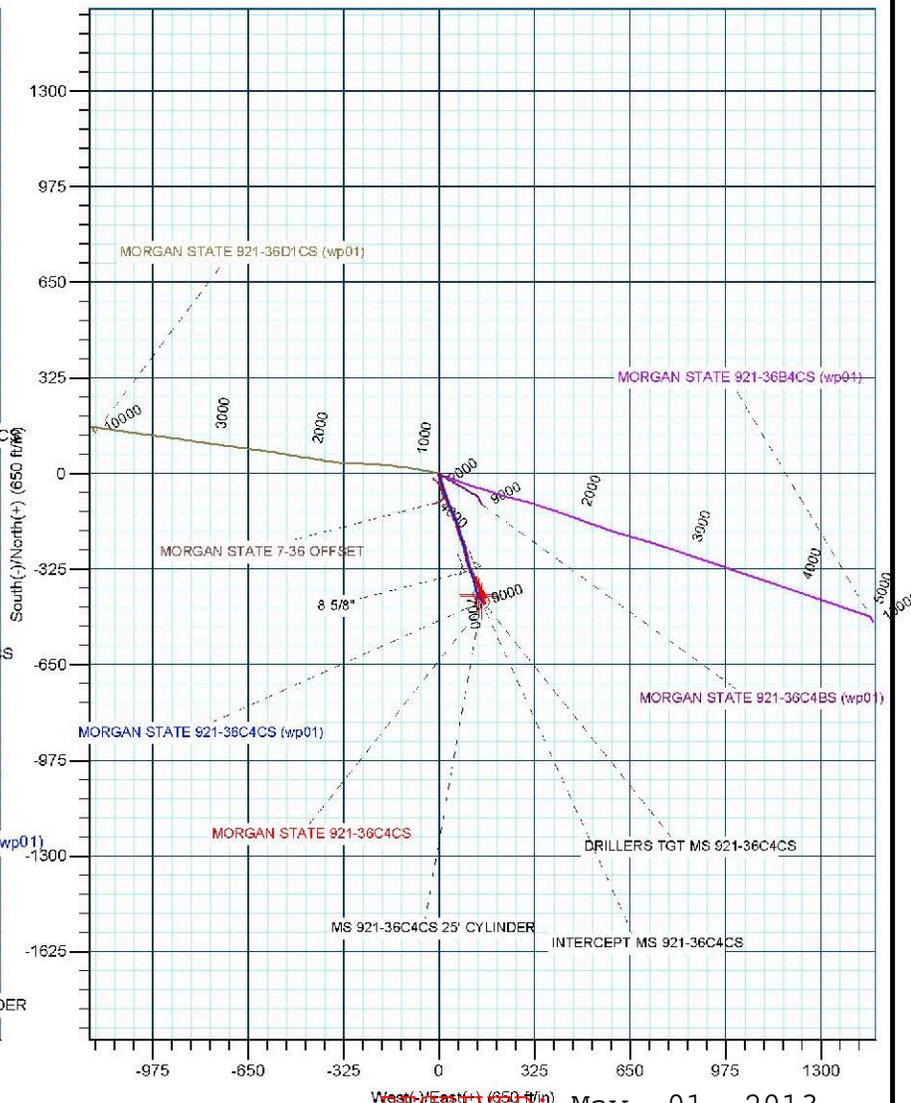
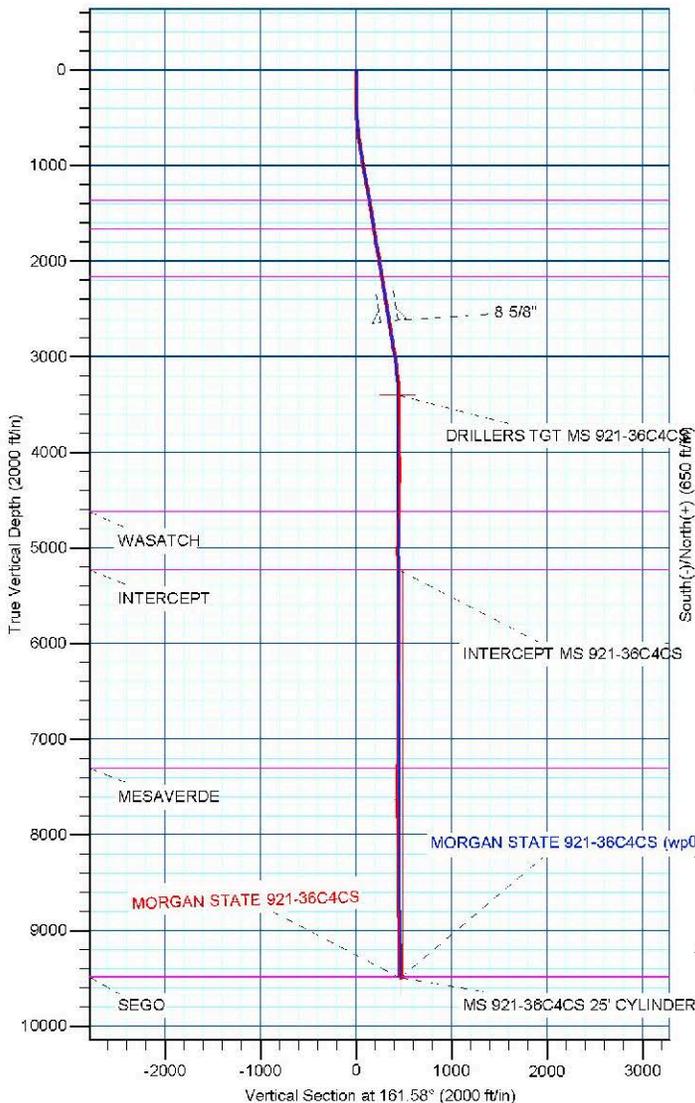
Azimuths to True North  
 Magnetic North: 10.90°  
 Magnetic Field  
 Strength: 52190.95nT  
 Dip Angle: 65.83°  
 Date: 10/29/2012  
 Model: IGRF2010

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DRILLERS TGT MS 921-36C4CS	3400.00	-410.50	130.50	14528440.59	2060195.49	39.996888	-109.501200	Circle (Radius: 15.00)
INTERCEPT MS 921-36C4CS	5231.00	-417.91	134.81	14528433.26	2060199.93	39.996868	-109.501185	Point
MS 921-36C4CS 25' CYLINDER	9495.00	-435.59	145.11	14528415.74	2060210.52	39.996819	-109.501148	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2636.00	9.41	156.49	2608.26	-325.64	105.45	0.00	0.00	342.27
2703.90	8.75	164.02	2675.32	-335.70	109.08	2.00	122.68	352.96
2996.14	8.75	164.02	2964.15	-378.44	121.32	0.00	0.00	397.38
3433.69	0.00	0.00	3400.00	-410.50	130.50	2.00	180.00	430.70
3525.36	0.27	149.80	3491.67	-410.69	130.61	0.30	149.80	430.92
9528.76	0.27	149.80	9495.00	-435.59	145.11	0.00	0.00	459.13



RECEIVED: May. 01, 2013



**Weatherford®**

## **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N  
UINTAH\_MORGAN STATE 921-36C PAD  
MORGAN STATE 921-36C4CS**

**MORGAN STATE 921-36C4CS**

**Design: MORGAN STATE 921-36C4CS**

## **Standard Survey Report**

**20 December, 2012**





<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Site:</b>	UINTAH_MORGAN STATE 921-36C PAD	<b>MD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	MORGAN STATE 921-36C4CS	<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_MORGAN STATE 921-36C PAD, NE 1/4 NW 1/4 OF Sec.36-T9S-R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,528,840.77 usft	<b>Latitude:</b>	39.997992
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,060,076.45 usft	<b>Longitude:</b>	-109.501601
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	MORGAN STATE 921-36C4CS					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,528,848.84 usft	<b>Latitude:</b>	39.998015
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,060,058.11 usft	<b>Longitude:</b>	-109.501666
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,988.00 ft

<b>Wellbore</b>	MORGAN STATE 921-36C4CS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/29/2012	10.90	65.83	52,191

<b>Design</b>	MORGAN STATE 921-36C4CS				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	17.00
<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	160.57	

<b>Survey Program</b>	<b>Date</b>	12/20/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
247.00	2,636.00	Survey #1 (MORGAN STATE 921-36C4CS)	MWD	MWD - STANDARD	
2,752.00	9,540.00	Survey #2 (MORGAN STATE 921-36C4CS)	MWD	MWD - STANDARD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00	
247.00	0.26	288.33	247.00	0.16	-0.50	-0.32	0.11	0.11	0.00	
339.00	1.14	181.10	338.99	-0.69	-0.71	0.41	1.35	0.96	-116.55	
429.00	2.20	165.45	428.95	-3.25	-0.29	2.97	1.27	1.18	-17.39	
522.00	3.78	160.62	521.82	-7.87	1.17	7.81	1.72	1.70	-5.19	
617.00	5.01	167.56	616.54	-14.88	3.10	15.06	1.41	1.29	7.31	
711.00	6.22	165.79	710.09	-23.82	5.24	24.21	1.30	1.29	-1.88	
804.00	8.27	165.54	802.34	-35.18	8.15	35.89	2.20	2.20	-0.27	
900.00	9.76	161.41	897.16	-49.58	12.46	50.91	1.69	1.55	-4.30	
993.00	11.87	158.69	988.50	-65.97	18.45	68.35	2.33	2.27	-2.92	



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well MORGAN STATE 921-36C4CS
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Site:</b>	UINTAH_MORGAN STATE 921-36C PAD	<b>MD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	MORGAN STATE 921-36C4CS	<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)	
1,087.00	10.64	160.71	1,080.69	-83.17	24.83	86.69	1.37	-1.31	2.15	
1,183.00	11.08	161.50	1,174.97	-100.28	30.69	104.78	0.48	0.46	0.82	
1,279.00	10.09	153.60	1,269.34	-116.56	37.36	122.35	1.83	-1.03	-8.23	
1,372.00	8.40	154.84	1,361.13	-130.01	43.87	137.19	1.83	-1.82	1.33	
1,466.00	7.83	156.49	1,454.19	-142.09	49.34	150.41	0.65	-0.61	1.76	
1,557.00	9.50	158.42	1,544.15	-154.76	54.57	164.10	1.86	1.84	2.12	
1,653.00	9.41	161.68	1,638.84	-169.58	59.96	179.86	0.57	-0.09	3.40	
1,745.00	9.58	160.97	1,729.58	-183.95	64.82	195.04	0.22	0.18	-0.77	
1,837.00	9.46	163.37	1,820.32	-198.44	69.48	210.25	0.45	-0.13	2.61	
1,932.00	9.85	164.22	1,913.97	-213.74	73.92	226.15	0.44	0.41	0.89	
2,026.00	9.67	159.92	2,006.61	-228.89	78.82	242.07	0.80	-0.19	-4.57	
2,121.00	9.06	160.53	2,100.35	-243.43	84.05	257.53	0.65	-0.64	0.64	
2,214.00	9.23	167.92	2,192.17	-257.63	88.05	272.25	1.28	0.18	7.95	
2,308.00	9.50	169.06	2,284.91	-272.62	91.10	287.40	0.35	0.29	1.21	
2,403.00	9.94	167.92	2,378.55	-288.34	94.30	303.29	0.51	0.46	-1.20	
2,496.00	9.78	165.48	2,470.18	-303.83	97.96	319.12	0.48	-0.17	-2.62	
2,591.00	9.33	159.40	2,563.86	-318.85	102.70	334.85	1.16	-0.47	-6.40	
2,636.00	9.41	156.49	2,608.26	-325.64	105.45	342.17	1.07	0.18	-6.47	
<b>TIE ON TO SDI MWD SURVEY</b>										
2,752.00	9.46	153.25	2,722.69	-342.85	113.52	361.09	0.46	0.04	-2.79	
<b>FIRST WFT MWD SURVEY</b>										
2,848.00	9.05	152.61	2,817.44	-356.60	120.55	376.39	0.44	-0.43	-0.67	
2,942.00	9.06	147.78	2,910.27	-369.42	127.89	390.93	0.81	0.01	-5.14	
3,037.00	8.31	153.17	3,004.18	-381.88	134.98	405.03	1.16	-0.79	5.67	
3,131.00	7.38	153.42	3,097.30	-393.34	140.75	417.76	0.99	-0.99	0.27	
3,226.00	5.81	150.42	3,191.67	-402.98	145.85	428.54	1.69	-1.65	-3.16	
3,320.00	4.88	145.05	3,285.26	-410.39	150.49	437.08	1.12	-0.99	-5.71	
3,415.00	3.06	142.17	3,380.03	-415.71	154.36	443.38	1.93	-1.92	-3.03	
3,509.00	1.69	152.55	3,473.95	-418.92	156.54	447.13	1.52	-1.46	11.04	
3,604.00	0.69	266.67	3,568.93	-420.19	156.61	448.36	2.18	-1.05	120.13	
3,698.00	1.38	292.42	3,662.92	-419.80	155.00	447.45	0.87	0.73	27.39	
3,793.00	1.25	267.42	3,757.89	-419.41	152.91	446.39	0.61	-0.14	-26.32	
3,888.00	1.50	225.42	3,852.87	-420.33	150.99	446.61	1.07	0.26	-44.21	
3,983.00	0.38	230.17	3,947.85	-421.40	149.86	447.25	1.18	-1.18	5.00	
4,077.00	0.88	236.92	4,041.85	-421.99	149.02	447.53	0.54	0.53	7.18	
4,172.00	0.56	100.55	4,136.85	-422.48	148.86	447.94	1.41	-0.34	-143.55	
4,266.00	0.13	21.42	4,230.84	-422.46	149.35	448.08	0.59	-0.46	-84.18	
4,361.00	1.06	310.55	4,325.84	-421.79	148.72	447.24	1.08	0.98	-74.60	
4,455.00	2.13	316.05	4,419.80	-419.97	146.85	444.90	1.15	1.14	5.85	
4,550.00	1.31	304.67	4,514.76	-418.08	144.73	442.41	0.93	-0.86	-11.98	
4,644.00	0.63	284.30	4,608.74	-417.34	143.35	441.26	0.80	-0.72	-21.67	
4,739.00	1.50	320.67	4,703.73	-416.25	142.05	439.80	1.12	0.92	38.28	
4,833.00	0.88	299.92	4,797.71	-414.94	140.65	438.09	0.79	-0.66	-22.07	



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<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Site:</b>	UINTAH_MORGAN STATE 921-36C PAD	<b>MD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	MORGAN STATE 921-36C4CS	<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)	
4,928.00	0.65	274.92	4,892.70	-414.53	139.48	437.32	0.42	-0.24	-26.32	
5,022.00	0.50	251.42	4,986.69	-414.61	138.56	437.09	0.29	-0.16	-25.00	
5,117.00	0.50	186.80	5,081.69	-415.16	138.12	437.46	0.56	0.00	-68.02	
5,211.00	0.31	184.05	5,175.69	-415.82	138.05	438.06	0.20	-0.20	-2.93	
5,306.00	0.63	180.80	5,270.68	-416.59	138.03	438.78	0.34	0.34	-3.42	
5,400.00	0.81	184.55	5,364.68	-417.77	137.97	439.88	0.20	0.19	3.99	
5,495.00	1.19	189.05	5,459.66	-419.42	137.76	441.36	0.41	0.40	4.74	
5,589.00	1.06	181.17	5,553.64	-421.25	137.59	443.03	0.21	-0.14	-8.38	
5,684.00	1.38	182.17	5,648.62	-423.27	137.52	444.92	0.34	0.34	1.05	
5,778.00	0.56	207.67	5,742.61	-424.81	137.27	446.28	0.97	-0.87	27.13	
5,873.00	1.31	310.80	5,837.60	-424.51	136.23	445.65	1.62	0.79	108.56	
5,973.00	1.25	299.67	5,937.58	-423.22	134.42	443.84	0.26	-0.06	-11.13	
6,062.00	0.88	293.80	6,026.56	-422.47	132.95	442.64	0.43	-0.42	-6.60	
6,157.00	0.44	272.17	6,121.55	-422.16	131.92	442.00	0.52	-0.46	-22.77	
6,251.00	0.38	247.92	6,215.55	-422.26	131.27	441.88	0.19	-0.06	-25.80	
6,346.00	1.19	327.17	6,310.54	-421.55	130.44	440.94	1.24	0.85	83.42	
6,441.00	1.00	319.30	6,405.53	-420.10	129.36	439.21	0.25	-0.20	-8.28	
6,535.00	0.75	39.05	6,499.52	-419.00	129.22	438.12	1.21	-0.27	84.84	
6,630.00	0.63	65.92	6,594.51	-418.30	130.09	437.75	0.36	-0.13	28.28	
6,724.00	0.63	73.67	6,688.51	-417.94	131.05	437.74	0.09	0.00	8.24	
6,818.00	0.81	107.92	6,782.50	-418.00	132.18	438.17	0.49	0.19	36.44	
6,913.00	0.94	106.80	6,877.49	-418.44	133.57	439.04	0.14	0.14	-1.18	
7,007.00	0.81	120.80	6,971.48	-419.00	134.88	440.00	0.27	-0.14	14.89	
7,102.00	1.63	32.55	7,066.46	-418.20	136.18	439.69	1.89	0.86	-92.89	
7,196.00	1.69	356.17	7,160.42	-415.69	136.81	437.53	1.10	0.06	-38.70	
7,291.00	1.56	4.80	7,255.39	-413.01	136.82	435.00	0.29	-0.14	9.08	
7,385.00	0.81	39.55	7,349.37	-411.22	137.35	433.49	1.07	-0.80	36.97	
7,480.00	0.56	353.92	7,444.36	-410.24	137.73	432.69	0.61	-0.26	-48.03	
7,574.00	0.38	37.80	7,538.36	-409.54	137.87	432.08	0.41	-0.19	46.68	
7,668.00	0.69	62.92	7,632.35	-409.03	138.57	431.83	0.41	0.33	26.72	
7,763.00	1.06	106.80	7,727.34	-409.03	139.92	432.28	0.78	0.39	46.19	
7,858.00	1.25	120.17	7,822.32	-409.80	141.65	433.58	0.35	0.20	14.07	
7,952.00	1.63	137.92	7,916.29	-411.31	143.44	435.60	0.62	0.40	18.88	
8,046.00	2.06	144.44	8,010.24	-413.68	145.32	438.46	0.51	0.46	6.94	
8,141.00	0.81	164.17	8,105.21	-415.71	146.49	440.77	1.40	-1.32	20.77	
8,235.00	1.31	193.05	8,199.20	-417.40	146.43	442.34	0.76	0.53	30.72	
8,330.00	1.38	212.30	8,294.17	-419.42	145.57	443.96	0.48	0.07	20.26	
8,424.00	0.75	182.05	8,388.16	-420.99	144.95	445.23	0.88	-0.67	-32.18	
8,519.00	0.81	159.30	8,483.15	-422.24	145.16	446.48	0.33	0.06	-23.95	
8,613.00	0.75	161.42	8,577.14	-423.45	145.59	447.76	0.07	-0.06	2.26	
8,708.00	0.75	160.17	8,672.13	-424.62	146.00	449.01	0.02	0.00	-1.32	
8,802.00	0.56	148.05	8,766.12	-425.59	146.45	450.07	0.25	-0.20	-12.89	
8,897.00	0.75	164.30	8,861.12	-426.58	146.87	451.14	0.28	0.20	17.11	
9,180.00	1.38	159.42	9,144.07	-431.56	148.57	456.40	0.22	0.22	-1.72	



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<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Site:</b>	UINTAH_MORGAN STATE 921-36C PAD	<b>MD Reference:</b>	26' RKB + 4988' GL @ 5014.00ft (H&P 298)
<b>Well:</b>	MORGAN STATE 921-36C4CS	<b>North Reference:</b>	True
<b>Wellbore:</b>	MORGAN STATE 921-36C4CS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	MORGAN STATE 921-36C4CS	<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)
9,478.00	1.96	132.92	9,441.94	-438.39	153.56	464.50	0.32	0.19	-8.89
<b>LAST WFT MWD SURVEY</b>									
9,540.00	1.96	132.92	9,503.91	-439.83	155.11	466.38	0.00	0.00	0.00
<b>PROJECTION TO TD</b>									

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