APD

ATTACHED:

FORM C101 STATE OF NEW MEXICO

APPLICATION FOR PERMIT TO DRILL

(SURFACE LOCATION)

FORM 2 STATE OF COLORADO

APPLICATION FOR PERMIT TO DRILL

(BOTTOM HOLE LOCATION)

LETTER OF ATTACHMENTS

1000 Rio Brazos Rd., Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

State of New Mexico

Form C-101 Permit 106093

Energy, Minerals and Natural Resources

Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

ROLDGECETE OLL COKS. DEV.

9151.8

APP	LICATION	V FOR PER	<u>RMIT T</u>	O DRILL,	RE-ENTI	<u>टR, DEE</u>	PEN, I	<u>PLUGBA</u>	<u>.CK, OR A</u>	ADD A ZONE
		•		e and Address			_	_	2 OGRID N	
	BUKLIN			OIL & GAS C I STREET	COMPANY	LP	_		1453	8
}				NM 87402				_	3. API Nu	(
				<u>+(</u>	COAPIC	05.067	M810	<u>}_30.</u>	-045-2	5044
4	4. Property Code	e			5. Property Na				6	6. Well No.
	6785			ALI	LISON UNI	ГСОМ				149 H
				7. S	Surface Lo	cation				
UL - Lot		Township	Range	Lot Idn	Feet From	N/S Li	ine	Feet From	E/W Line	County
Е	7	32N	06W		330	N		165	W	SAN JUAN
				8. P	ool Inforn	nation				
BASIN FI	RUITLAND	COAL (GAS)								71629
				Addition	nal Well II	nformati	on			
9. Wor	rk Type	10. Well Ty	уре	11. C	Cable/Rotary		12. L	ease Type	13. Grou	und Level Elevation
New '	Well	GAS	ĺ	İ	RoTary		P	rivate		6262
14 N	Multiple	15. Proposed	Depth		6. Formation		17.	Contractor		18. Spud Date
	N	6117	,	Fn	uitland Coal					*
Der	oth to Ground wa	ater		Distance f	from nearest fre	esh water we	:11		Distance to	nearest surface water
	: Synthetic		ıls thick	Clay Pit Vo	olume:		rilling Met			٤ إ
Close	d Loop System								Diesel/Oil-base	ed L_ Gas/Air L
		T		Proposed C						
Type	Hole Size	Casing Ty		Casing Weig	ht/ft S	Setting Dep	oth	Sacks of C		Estimated TOC
Surf	12.25 8.75	9.625		32.3		600		353		0
Int1 Liner2	6.25	4.5	-	11.6		2982 6096		580	-	0
Liner	6.25	4.5		11.6		6117		0		0
<u> </u>			~	······································			· C			
				/Cement Pr						
from New	Mexico coal:	s. NM will red	ceive the i	nned. Both pro normal Unit R Iaster Drilling	Royalities fro	om this wel	ll since t	this well bel	longs to the	oduction coming Allison Unit. This is proved.
<u> </u>			—— Pr	oposed Blo	wout Prev	ention P	'rogran	n		
	Туре			king Pressure			est Pressi		M	anufacturer
D	oubleRam			2000			2000			Schafer
	tify that the info knowledge and b		bove is true	e and complete to) the	OIL	. CON	SERVA'	TION DI	VISION
I further ce	rtify that the d	rilling pit will b	e construc	cted according to	.0			$-\Lambda$		
OCD-appro		general permit	i, or an (a	attached) altern		proved By:	: L	-L /L	m	
Printed N		tain (lus	1/2	Titl	le:		u	1	
Title:	SR. Regu	clatory -	Soclia	list	Apı	proved Dat	ie: 4/25	3/20101	Expiration Γ	Date: 4/23/2012
Email Ad		vas pteco	nocoph	rillips, con						,

DISTRICT I 1625 N. French Or., Hobbs, N.M. 88240

DISTRICT II 1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT IN 1000 Rio Bruzos Rd., Aztec, N.M. 87410

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87506

dedication

WELL LOCATION AND ACREAGE DEDICATION PLAT

		MONEY DEDICATION / EAT	
¹ API Number	*Pool Code	³ Pool Harne	
30-045-350	<u>94 97774 </u>	Colorado:	
*Property Code	*Pro	perty Hame	* Well Number
6785	ALLIS	SON UNIT COM	149 H
⁷ OGRID No.	*Ope	protor Name	* Elevation
14538	BURLINGTON RESOURC	ES OIL & GAS COMPANY LP	6262'

¹⁰ Surface Location

UL or lot no.	Section 7	32-N	Rungs 6W	Lot ldn	Feet from the 330	North/South line NORTH	Feet from the 165	Emst/West line WEST	County SAN JUAN	
	"Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County	
В	21	32-N	6-W		700	NORTH	1500	EAST	LA PLATA	
Colorad	o acre	age	¹³ Joint or i	n Mil	M Consolidation Co	de	⁶⁵ Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

CLOSSING COR. FD. 3 1/4" B. 1962 B.L.M.	COLORADO	S 89-51-33 W 4492.05' (W) BETWEEN MILE POSTS	MLE POST 245+12.10 CH 4" B.C. 1925
	NEW MEXICO	LOT 2	LOT 1
165° ME POST 246+00 CH 246+00 CH 3 1/2° S.C. 1925 C C C C C C C C C C C C C C C C C C C	SURFACE LOCATI LAT: 36.99918* LONG: 107.5085; LAT: 36'58,9508' N LONG: 107'30.4779	YOUNG, AD, ET AL ON N. (NAD 83) P W. (NAD 83) V. (NAD 27) V. (NAD 27)	ed RBDMS
LOT 6	USA NM-	-04207	
LOT 7	FIRST NAT. BA	NIK — SAN JAC	

see Colorado plat

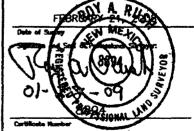
OPERATOR CERTIFICATION

In the end complete to the best of my investedge and bellef, and that this repenbation affirm onne a working intending the proposed bottom hale lacetion or has a right to dell this well at this location pursuent to a contract with an owner of such a nihered or working interest, or to a voluntary pooling agreement or a computery pooling order herefolders entered by the division.

Patsy Clugston

SURVEYOR CERTIFICATION

hereby cartify that the well location shows on this plot was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true



COMPANY: BURLINGTON RESOURCES OIL AND GAS COMPANY LP ALLISON UNIT COM No. 149H LEASE: _ FOOTAGE: SURFACE LOCATION IN N.M. BOTTOM HOLE LOC: 700 FNL 1500 FEL SEC .: 21 TWN: 32-N _ RNG: __6-W ____ NMPM, S.U.L., COUNTY: _LA PLATA STATE: COLORADO N/A **ELEVATION: _** FD. 3 1/4" AC. FD. 2" AC. S 89*35'44" W LS. No. 23894 LS. No. 17482 2815.53" (M) 1005 FD. 3 1/4" AC. प्रमाममाम LS. No. 23894 1995 200 90' EARL & SONS B.H.L. FEE LEASE 1500 şij THE **POLLOCK** R.P. FRYAR ET UX BERT R. KIRK FEE LEASE FEE LEASE FEE LEASE FD. 5 1/8" REBAR 1000 21 = SCALE: 1"-1000 LOT 4 LOT 3 LOT 2 LOT 1 32.17 AC. 32.12 AC. 32.08 AC. 32.03 AC. COLORADO, WITNESS CORNER FD. 1/2" REBAR NEW MEXICO MILE POST FD. 3 1/4" BC. FD. 3 1/4" AC. MILE POST BETWEEN MILE POSTS LS. No. 23894 245+12.10 CH 1962 B.L.M. 246+00 CH 4" BC. 1925 1995 3 1/2" BC, 1925 SURFACE HOLE LOCATION BOTTOM HOLE LOCATION NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON. LAT: 37.00816" N. (NAD 83) LONG: 107.50186" W. (NAD 83) LAT: 37'00.48922' N. (NAD 27) LONG: 107'30.07546' W. (NAD 27) NOTES: 1.) BASIS OF BEARING: BETWEEN FOUND MONUMENTS AT THE NORTHEAST CORNER AND THE NORTH QUARTER CORNER OF SEC. 21, T-32-N, R-6-W, N.M.P.M., LA PLATA COUNTY, COLORADO. LINE BEARS \$ 89"35'44" W A DISTANCE OF 2615.53 FEET AS MEASURED BY GPS OBSERVATION. 2.) BASIS OF ELEVATION: NOT APPLICABLE 3.) P.D.O.P. VALUE: N/A B.H.L. IS A CALCULATED POSITION. 4.) DATE OF SURVEY: MARCH 12, 2008 5.) SURFACE USE IS NOT APPLICABLE. SURFACE USE IS IN IN THE CABLE.

THIS IS TO SHATE IT THE ABOVE PLAT WAS PREPARED FROM FISCHISTOF ACTIVATION THE SAME ARE TRUE UNDER THE SAME ARE TRUE AND COMPANY TO THE SESTION OF KNOWLEDGE AND BELIEF TOUL HOUSE Daggett Enterprises, Inc. Surveying and Oil Field Services P. O. Box 610 Familiation, NM 87400 no (606) 323-1772 Pak (806) 320-8019 01-28-09 REGISTERED LAND SURVEYOR ROY A BURN LS. No. 20893 STATE OF SHIP SHADO COLORADO LS No. 205 DATE CAOFILE: BR877_W08 ROME: BR877 | DATE: 192907 PAGE 1 OF 1 DRAMM BY: A.Q.

Allison Unit 149T

Directional Plan Motherbore (Plan No. 3) accompanies this document Directional Plan Lower Lat (Plan No. 3) accompanies this document Directional Plan Upper Lat (Plan No. 3) accompanies this document GL 6262' KB 6277' (Aztec 730)

Surface location: (New Mexico)
BHL, motherbore (Colorado)
upper lateral, beginning of prod. interval (Colorado)
upper lateral, end of prod. interval (Colorado)
lower lateral, beginning of prod. interval (Colorado)

lower lateral, end of prod interval (Colorado)

State of Colorado
T32N, R06W, Section 7, 330' FNL, 165' FWL
T32N, R06W, Section 21, 636' FSL, 2394' FWL
T32N, R06W, Section 21, 391' FSL, 2247' FWL
T32N, R06W, Section 21, 700' FNL, 1500' FEL
T32N, R06W, Section 21, 561' FSL, 2349' FWL
T32N, R06W, Section 21, 700' FNL, 1500' FEL

TVD MD ft ft NA NA 3449' 2892' 7" casing depth 3126' 2729' slotted liner landed @ 90° in upper coal target 6096' 2676' lateral total depth & 4-1/2" casing depth 3344' slotted liner landed @ 90° in lower coal target 2821' 6117' 2761' lateral total depth & 4-1/2" casing depth

12-1/4" Hole and 9-5/8" Casing at 600' (tentative depth)

Casing description: 9-5/8" 32.3 #/ft, H-40, STC

cementing program: Cement to surface with 490 ft3 (353 sxs) (volume inloudes 150% excess in open hole), mixed at 14.6 ppg with calcium chloride to accelerate, compressive strength 500 psi after 8 hours.

centralizers: one at 10' above shoe and one on each casing collar

casing exits

8-3/4" Hole & 7" Casing (motherbore)
casing description: 7", 23#/ft, L-80, LTC

cementing program: Cement to surface with 1121 ft³ (volume includes 135% excess in open hole), to consist of 913 ft³ (429 sxs) lead slurry mixed at 12.1 ppg and 208 ft³ (151 sxs) tail slurry mixed at 14.6 ppg. Slurries are extended to achieve stated densities and may include various additives to control seepage.

TOC for tail: 100' MD above base of Kirtland Shale centralizers: one at 10' above shoe, one at 30' above shoe, one at 10' above

<u>centralizers:</u> one at 10' above shoe, one at 30' above shoe, one at 10' above float collar and one each on casing collars of the 2nd through 11th joints. Two Laterals, Upper and Lower

each consisting of 6-1/4" Hole & 4-1/2" Liner casing description: 4-1/2" 11.6#/ft, L-80, BTC

uncemented, pre-drilled and plugged, with two holes per joint

BOP program and drilling mud program will be per basin-wide standards for top-set coal wells.



San Juan County, NM Allison Unit Com #149† Motherbore

Plan: Plan #3

Lat Long Report

10 July, 2009



Burlington Resources Oil & Gas, LP 3401 E. 30th Street Farmington, NM 87401

December 4, 2009

Colorado Oil & Gas Conservation Commission 1120 Lincoln Street, Suite 801 Denver, CO 80203

Allison Unit Com #1497 Permit – Form 2

Dear Dennis Ahlstrand:

Attached you will find the APD Form 2 (3) for the horizontal Allison Unit Com #149T. Since we corresponded back and forth by email, I will refresh your memory about the particulars on this well. The surface location and the first part of the wellbore will be in New Mexico on a FEE surface. We will be horizontally drilling this well so that the productive interval ends up in Colorado. There will be no production coming from the New Mexico side. Surface owner agreements are in place. This well is designed as a FC well with two laterals and a motherbore section. The motherbore section is designed to have approx. 200' extension past the coal interval that will not be open-ended or perforated. This extra footage will be used as a sump and will help make dewatering of this well more efficient.

As discussed in our email dated 12/1/09 we will include the following paperwork that we felt would be most of the information that the COGGC would need to grant us permission to drill this horizontal well. When Mark Weems returns from leave and reviews the documents, he may require more information. If he does, we will expect a call right away so that we can comply and keep this permit moving toward approval. Included are the following:

- > Form 2 for the Motherbore
- Form 2 for the ST1 Lower Lateral which will be drilled first
- Form 2 for the ST2 Upper Lateral which will be drilled after the first
- > Copy of the Surface Owner Agreement for the surface location in New Mexico
- ➤ Colorado Plat shows the bottomhole location
- ➤ New Mexico plat shows the surface location

If you have questions or need additional information, please call me at 505-326-9518.

Sincerely,

Patsy Clugston

Sr. Regulatory Specialist

FORM

State of Colorado Oil and Gas Conservation Commission



E	EΤ	OE	ES	

Rev 1120 Lincoln S 12/05	Street, Suite 801, Denver, C	olorado 80205 Phone (303) 894-2100	Fax. (303) 894-2109	OILS	7			
	APPLICATION FOR PERMIT TO:							
1. 🔀 Drill,	Deepen,	Re-enter,	Recomplete	e and Operat	1808940 e			
2. TYPE OF WELL OIL GAS [SINGLE ZONE X	COALBED MULTIPLE ZONE	•	E ZONE	Refiling Sidetrack	Plugging Bond Surety			
3. Name of Operator:	BURLINGTON RE	SOURCES OIL & GAS LP	4.	COGCC Op	erator Number: 26580			
5. Address: PO BOX 42	289	,						
City: FARMINGTO	N State	: <u>NM</u> Z	ip: <u>87499</u>					
6. Contact Name: PAT	SY CLUGSTON	Phone: (505)	326-9518 Fax	(505)599-4	062			
Email: <u>CLUGSPL@</u> C	CONOCOPHILLIPS	.COM						
7. Well Name: ALLISO	N UNIT COM	W	ell Number: 149T					
8. Unit Name (if appl): 1		Ur	nit Number: <u>NM</u>	104815				
9. Proposed Total Measu	ured Depth: 6	096						
WELL LOCATION INFORMATION RCUD MAR 15 '10 10. QtrQtr: NWNW Sec: 21 Twp: 32N Rng: 6W Meridian: N OIL CONS. DIV. Latitude: 36.999180 Longitude: -107.508570 OIL CONS. DIV.								
Ť	FOOTAGE at Surface: 330 FNL 165 FWL DIST. 3 11. Field Name: IGNACIO BLANCO Field Number: 38300							
14. GPS Data:								
Date of Measurement:	03/12/2008 PDOF	Reading: 1.0 Instrur	nent Operator's Nar	me: ROYA	. RUSH			
15. If well is Direction		tal (highly deviated) sub	mit deviated drilling tom Hole: FNL/FS		FEL/FWL			
56	81 FSL _	2349 FWL	700 FNL	1500	FEL			
Sec:	_21_ Twp: _3	82N Rng: <u>6W</u>	Sec: <u>21</u> T	wp: <u>32N</u>	Rng: <u>6W</u>			
17. Distance to the near	16. Is location in a high density area? (Rule 603b)? Yes XNo 17. Distance to the nearest building, public road, above ground utility or railroad: 140 ft 18. Distance to nearest property line: 140 ft 19. Distance to nearest well permitted/completed in the same formation: 2000 ft							
20.	LI	EASE, SPACING AND F	POOLING INFOR	MATION				
Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assign		Unit Configuration (N/2, SE/4, etc)			
FRUITLAND COAL	FRLDC		336					

21. Mineral Ow	nership:	🕱 Fee	State F	ederal	Indian	Lease #:			
22. Surface Ov	22. Surface Ownership: 🕱 Fee 🔯 State 🔯 Federal 🔯 Indian								
23. Is the Surfa	23. Is the Surface Owner also the Mineral Owner? Yes Surface Surety ID#:								
23a. If 23 is Yes	s: Is the Surfac	ce Owner(s) signatu	re on the lease?	ि Yes	X No				
23b. If 23 is No	Surface O	wners Agreement A	sttached or 🖫\$25,0	00 Blanket Surfa	ce Bon 🎑 \$2,000 \$	Surface Bond 📆\$5	,000 Surface Bond		
		Sec, Twp, Rng forn eet/map if you pref		neral lease desc	ription upon which	this proposed we	llsite is		
BH LOCATION SE/NW, SW/NE		O.,; SEC 21, T32N,	R6W, SEC. 21 LO	TS 1-3, SE/NE, S	W/NE, SE/NW, NE	/NE, NW/NE, NE/N	IW. LOT 3,		
25. Distance to	25. Distance to Nearest Mineral Lease Line: 0 26. Total Acres in Lease: 152								
		DF	RILLING PLANS	AND PROCE	DURES				
27. Is H2S ant	icipated?	Yes	X No	If Yes, attach co	ntingency plan.				
28. Will salt se	ctions be enc	ountered during dr	illing?	Yes 🔀	No				
29. Will salt (>	15,000 ppm T	DS CL) or oil base	ed muds be used o	luring drilling?	💹 Yes 🕱 N	o			
30. If questions	s 27 or 28 are	yes, is this location	n in a sensitive ar	ea (Rule 903)?	Yes 🔀 N	lo If 28, 29, or 30 permit may be	are "Yes" a pit		
31. Mud dispo	sal:	Offsite 🔀 On	site			permit may be	· required.		
Method:	Land Farm	ning 🔚 La	and Spreading	Disposa	al Facility	Other: RESERVE	PIT		
Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.									
Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bottom	Cement Top		
1ST	12+1/4	9+5/8	32.3	600	353	600	0		
2ND	8+3/4	7+2/2	23	3,449	580	3,449	0		
3RD	6+1/4	4+1/2	11.6	6,096					
32. BOP Equip	ment Type:	Annular Pre	eventer	Double Ram	Rotati	ng Head	None		
33. Comments	WILL NOT	L IS A HORIZON [*] FBE A PRODUCT ING INTERVALS A	IVE INTERVAL. T	HE SURFACE I	LOCATION OF TH	HIS WELL IS IN N	E INTERVAL M, BUT THE		
34. Location ID									
		 omprehensive Drill	ing Plan ?	Yes	No				
[submitted Oil and	· ,	sessment?	Yes 🔀	No			
I hereby certify	/ all statemen	ts made in this forr	n are, to the best o	of my knowledge	e, true, correct, and	d complete.	}		
Signed:	thy, (lugstrn	/	Print Name	E PATSY CLUGS	STON			
Title: REG	GULTORY		Date:	12/3/200	9 Email:	CLUGSPL@CON	OCOPHILLIP		
L									
				,					
		ovided herein, this	Application for Pe	rmit-to-Drill com	plies with COGCC	Rules and applica	able orders		
and is hereby a		Davil &	Markins	Director of (COGCC	Date: 3/12/201	0		
			•	_					
A	API NUMBER	Permit !	Number:		Expiration	on Date: 3/11/2	(011		
05 067 0	9810 00	CONDI	TIONS OF APPE	ROVAL. IF AN	Y :				

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

The State of Colorado will require all the usual forms be submitted. Including but not limited to the following: Drilling Completion Report (form 5); with attachments including As-Drilled GPS, Directional Survey, Logs Completed Interval Report (form 5A) Production Report (form 7) Certification of Clarence and/or Change of Operation (form 10) Well Abandonment Report (form 6) when applicable.

The State of Colorado will require all the usual forms be submitted. Including but not limited to the following: Drilling Completion Report (form 5); with attachments including As-Drilled GPS, Directional Survey, Logs Completed Interval Report (form 5A) Production Report (form 7) Certification of Clarence and/or Change of Operation (form 10) Well Abandonment Report (form 6) when applicable.

1)Run and submit 3D Directional Survey from kick-off point to TD 2)The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the well bore complies with setback requirements in Commission orders and/or rules prior to producing the well. 3)Sample and test two closest water wells located within a ¼ mile of the interval of where the directional wellbore intercepts the top bottom of the Fruitland Coal.Measure the distances from the line created when converting the wellbore's 3D directional coordinates to 2D surface coordinates.Contact mark.weems@state.co.usto obtain a drawing to clarify these instructions. 4)Operators are required to obtain a bottom hole pressure utilizing a bottom hole gauge after a minimum 48 hour shut-in period following completion and prior to

Attachment Check List

Att Doc Num	Name	Doc Description	
1808940	APD ORIGINAL	LF@2192312 1808940	
1808955	DEVIATED DRILLING PLAN	LF@2192316 1808955	
1808958	CORRESPONDENCE	LF@2192313 1808958	
1808959	WELL LOCATION PLAT	LF@2192314 1808959	
1808960	SURFACE AGRMT/SURETY	LF@2192315 1808960	
400021786	FORM 2 SUBMITTED	LF@2432289 400021786	

Total Attach: 6 Files



Project: San Juan County, NM Site: Allison Unit Com

Well: #149T

Wellbore: Motherbore Plan: Plan #3 (#149T/Motherbore) WELL DETAILS: #149T

FINDER

Ground Elevation: 6262.00 RKB Elevation: WELL @ 6277.00ft (Original Well Elev) Rig Name: Original Well Elev Easting Northing +N/-S +E/-W Latittude Longitude Slot 0.00 0.00 2183131.68 595013.68 36° 59' 57.03000 N 107° 30' 28.67400 W 1550-1600-1637 0 SECTION DETAILS Start Build 5.00 MD +N/-S **VSec Target** Inc Azi TVD +E/-W DLea TFace 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1700 1636.70 0.00 0.00 1636.70 0.00 0.00 0.00 0.00 0.00 2936.70 65.00 30.93 2675.25 567.54 340.07 5.00 30.93 661.63 1750 2891.90 578.87 1126.23 3449.33 65.00 30.93 966.08 0.00 0.00 1800-WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG) 1850 TVD +N/-S Northing Name +E/-W Easting Latitude Longitude Shape #149T Motherbore: PBHL 2891.90 966.08 578.87 2184099.73 595589.24 37° 0' 6.58290 N 107° 30' 21.53752 W Point T/Ojo Alamo 1950 PROJECT DETAILS: San Juan County, NM Geodetic System: US State Plane 1927 (Exact solution) Datum: NAD 1927 (NADCON CONUS) FORMATION TOP DETAILS 2000-**TVDPath** MDPath Formation Ellipsoid. Clarke 1866 T/Ojo Alamo 1913.00 1915.75 2050 Zone: New Mexico West 3003 2071.00 2082.13 T/ Kirtland 2211.00 2238.25 T/Lower Kirt Shale System Datum: Mean Sea Level 2100-2556.70 3075.71 3108.84 2461.00 2734.00 T/Fruitland Coal Local North: No north reference data is available **Top Upper Target Coal** 2748.00 **Base Upper Target Coal** : C 2150 Top Lower Target Coal 2832.00 3307.60 West(-)/East(+) (100 ft/in) 3326.53 Base Lower Target Coal T/Lower Kirt Shale Azimuths to True North #149T Motherbore: PBHL Magnetic North: 10.04° Magnetic Field Strength: 51187.3snT Dip Angle: 63.79° Date: 2009/07/08 Model: IGRF200510 South(-)/North(+) (100 ft/in) T/Fruitland Coal Start 512.63 hold at 2936.70 MD 2500 2550 2500-1 --2650 2675 Start 512.63 hold at 2936.70 MD 662 200 Top Upper Target Coal 100 Base Upper Target Coal 2800-Top Lower Target Coal #149T Motherbore: PBH -1DO Base Lower Target Coal 1126 Plan Plan #3 (#149T/Motherbore) Created By Matthew May Date: 18:06, July 10 2009 300 350 400 450 500 550 800 850 700 750 850 900 950 1000 1050 1100 1150 1200 1250 1300 200 250 Vertical Section at 30.93° (50 ft/in)



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site:

Allison Unit Com

Well: Wellbore: #149T Motherbore

Design:

Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

Minimum Curvature

1 Landmark Network DB

Project

San Juan County, NM

Map System:

US State Plane 1927 (Exact solution)

0.00 ft

Geo Datum: Map Zone:

NAD 1927 (NADCON CONUS)

New Mexico West 3003

System Datum:

Mean Sea Level

Allison Unit Com

Site Position:

Lat/Long

Northing: Easting:

Slot Radius:

2,183,131.68 1 595,013.68 ft

Latitude: Longitude:

Grid Convergence:

36° 59' 57.03000 N 107° 30' 28.67400 W

0.20

Well

From:

#149T

Well Position +N/-S

Position Uncertainty

Position Uncertainty:

+E/-W

0.00 ft 0.00 ft 0.00 ft

Northing: Easting:

Wellhead Elevation:

10.05

2,183,131.68 ft 595,013.68 ft Latitude: Longitude:

36° 59' 57.03000 N 107° 30' 28.67400 W

Ground Level:

6.262.00 ft

Wellbore

Motherbore

Magnetics

Model Name

2009/07/08

Declination

Field Strength

63.79

Design

Plan #3

IGRF200510

Audit Notes:

Version:

Phase:

PLAN

Tie On Depth:

0.00

Vertical Section:

Depth From (TVD)

0.00

+E/-W (ft) 0.00

Direction 30.93

Survey Tool Program

Date 2009/07/10

From (ft)

To

Survey (Wellbore)

Tool Name

Description

0.00

3,449.33 Plan #3 (Motherbore)

MWD

MWD - Standard



Lat Long Report



Company: Project:

ConocoPhillips

San Juan County, NM Allison Unit Com

Site: Well:

#149T

Wellbore: Design:

Motherbore Plan #3

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature 1 Landmark Network DB

(人がい) ニーケー	• •	1000 DA 1000	, , , ,			•	
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	V. Sec Latitude (ft)	Longitude	N/S (ft)	(ft)
0.00	0.00	0.00	0.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
100.00	0.00	0.00	100.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
200.00	0.00	0.00	200.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
300.00	0.00	0.00	300.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
400.00	0.00	0.00	400.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
500.00	0.00	0.00	500.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
600.00	0.00	0.00	600.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
700.00	0.00	0.00	700.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
800.00	0.00	0.00	800.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
900.00	0.00	0.00	900.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,000.00	0.00	< 0.00	1,000.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.0036° 59' 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0 00	0.00
1,636.70	0.00	0.00	1,636.70	0.0036° 59′ 57.03000 N	17° 30' 28.67400 W	0.00	0.00
1,700.00	3.17	30.93	1,699.97	1.7536° 59' 57.04483 N	17° 30' 28.66292 W	1.50	0.90
1,800.00	8.17	30 93	1,799.45	11.6236° 59′ 57.12853 N	17° 30' 28.60040 W	9.96	5.97
1,900.00	13.17	30.93	1,897.69	30.1236° 59' 57.28546 N	17° 30' 28.48317 W	25.83	15.48
1,915.75	13.95	30.93	1,913.00	33.8136° 59′ 57.31678 N	17° 30' 28.45977 W	29.00	17.38
T/Ojo Alamo	18,17	30.93	1,993.94	E7 4430° E0/ E7 E4444 N	17° 201 00 04042 141	40.00	00.05
2,000.00 2.082.13	22.27	30.93	2,071.00	57.1136° 59′ 57.51441 N		48.99	29.35
_,	22.21	30.83	2,071.00	85.4936° 59' 57.75513 N	W 30 28.13231 W	73.33	43.94
T/ Kirtland 2,100.00	23.17	30.93	2.087.48	92.3936° 59' 57.81366 N	17° 30' 28.08859 W	79.25	47.49

PathFinder Energy Services

Lat Long Report



Company: Project:

ConocoPhillips

San Juan County, NM

Site:

Allison Unit Com

Wellbore: Design:

#149T Motherbore

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

Minimum Curvature 1 Landmark Network DB

Planned Survey

MD (ft)	inc (°)	Azi (°)	TVD (ft)	V. Sec Latitud	e Longitude	N/S (ft)	E/W (ft)
2,200.00	28.17	30.93	2,177.59	135.6936° 59' 58.18	8091 N7° 30' 27.81424 W	116.39	69.74
2,238.25	30.08	30.93	2,211.00	154.3036° 59′ 58.33	8880 N7° 30' 27.69629 W	132.36	79.31
T/Lower Kirt							
2,300.00	33.17	30.93	2,263.58	186.6736° 59' 58.61	338 N7° 30' 27.49117 W	160.13	95.95
2,400.00	38.17	30.93	2,344.79	244.9636° 59' 59.10	778 N7° 30' 27.12184 W	210.12	125.91
2,500.00	43.17	30.93	2,420.62	310.1036° 59′ 59.66	6033 N7° 30′ 26.70906 W	266.00	159.39
2,556.70	46.00	30.93	2,461.00	349.8936° 59' 59.99	787 N7° 30' 26.45691 W	300.14	179.84
T/Fruitland C				004.00 070.04	,		
2,600.00	48.17	30.93	2,490.49		6684 N7° 30' 26.25597 W	327.34	196.14
2,700.00	53.17	30.93	2,553.85		2269 N7° 30' 25.76602 W	393.66	235.88
2,800.00	58.17	30.93	2,610.24		2289 N7° 30' 25.24294 W	464.47	278.31
2,900.00	63.17	30.93	2,659.21	628.62 37° 0' 2.36	3210 N7° 30' 24.69071 W	539.23	323.11
2,936.70	65.00	30.93	2,675.25	661.63 37° 0' 2.64	206 N7° 30' 24.48156 W	567.54	340.07
3,000.00	65.00	30.93	2,702.00	719.00 37° 0' 3.12	2869 N7° 30' 24.11802 W	616.76	369.56
3,075.71	65.00	30.93	2,734.00	787.62 37° 0' 3.71	1071 N7° 30' 23.68321 W	675.62	404.83
Top Upper T							
3,100.00	65.00	30.93	2,744.26	809.63 37° 0' 3.89	9743 N7° 30' 23.54372 W	694.50	416.14
3,108.84	65.00	30.93	2,748.00	817.64 37° 0' 3.96	5537 N7° 30' 23.49296 W	701.37	420.26
Base Upper	Target Coal						
3,200.00	65.00	30.93	2,786.53	900.26 37° 0' 4.66	6617 N7° 30' 22.96942 W	772.24	462.73
3,300.00	65.00	30.93	2,828.79	990.89 37° 0' 5.43	3491 N7° 30' 22.39511 W	849.98	509.31
3,307.60	65.00	30.93	2,832.00	997.78 37° 0' 5.49	9333 N7° 30' 22.35147 W	855.89	512.85
Top Lower 1 3,326.53	arget Coal 65.00	30.93	2,840.00	1,014.94 37° 0' 5.63	3885 N7° 30' 22.24275 W	870.61	521.67
Base Lower 3,400.00	Target Coal 65.00	30.93	2,871.05	1,081.52 37° 0′ 6.20	0365 N7° 30' 21.82080 W	927.73	555.89
3,449.33	65.00	30.93	2,891.90	1,126.23 37° 0' 6.58	3287 N7° 30' 21.53749 W	966.08	578.87



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site: Well: Allison Unit Com #149T

Wellbore:

Motherbore

Design:

Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature

1 Landmark Network DB

IBIGGG	
	-
T	شماه

- hit/miss target - Shape	Dip Angle (°)	Dip Dir.	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	B
#149T Motherbore. Pl - plan hits target - Point	0.00	0.00	2,891.90	966.08	578.87	2,184,099.73	595,589.24	37° 0' 6.58290 N 07° 30' 21.537	52 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Dip Lithology (°)	Dip Direction	
2,238.25	2,211.00	T/Lower Kirt Shale	0.00		
3,075.71	2,734.00	Top Upper Target Coal			
2,556.70	2.461.00	T/Fruitland Coal			
2,082.13	2,071.00	T/ Kırtland	0.00		
1,915.75	1,913.00	T/Ojo Alamo	•		
3,307.60	2,832.00	Top Lower Target Coal			
3,108.84	2,748.00	Base Upper Target Coal			
3,326.53	2,840.00	Base Lower Target Coal			

		· · · · ·	
Charlend Des	Approved Div	Date:	
Checked By:	Approved By:	Date:	
1		- -	



San Juan County, NM Allison Unit Com #149T Lower Lat

Plan: Plan #3

Lat Long Report

10 July, 2009





Project: San Juan County, NM

Site: Allison Unit Com Well: #149T

Wellbore: Lower Lat Plan: Plan #3 (#149T/Lower Lat)

WELL DETAILS: #149T

Ground Elevation: 6262.00

RKB Elevation: WELL @ 6277.00ft (Original Well Elev)
Rig Name: Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	2183131.68	595013.68	36° 59' 57.03000 N 107°	' 30' 28.67400 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	3218.67	65.00	30.93	2794.42	786.76	471.42	0.00	0.00	917.18	•
2	3343.67	90.00	30.93	2821.26	890.61	533.65	20.00	0.00	1038.25	
3	3406.64	91.26	30.93	2820.57	944.62	566.01	2.00	-0.21	1101.22	
4	6116.74	91.26	30.93	2761.00	3268.88	1958.45	0.00	0.00	3810.66	PBHL(#149T)Lower Lat

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL(#149T)Lower Lat	2761.00	3268.88	1958.45	2186407.23	596960.95	37° 0' 29.35320 N	107° 30' 4,52760 W	Point
Lower Lat (#149T) TGT@3000)'V\$2779.00	2573.39	1541.97	2185710.32	596546.85	37° 0' 22.47617 N	107° 30' 9.66303 W	Point
Lower Lat (#149T) TGT@2000	0°.VS2801.00	1715.59	1027.98	2184850.77	596035,79	37° 0′ 13.99421 N	107° 30' 16.00041 W	Point

TGT@2000'VS

FORMATION TOP DETAILS

PROJECT DETAILS. San Juan County	, NM
Geodetic System. US State Plane 1927 (Exa	
Datum: NAD 1927 (NADCON CON	(US)
Ellipsoid: Clarke 1866	
Zone: New Mexico West 3003	

System Datum Mean Sea Level
Local North. No north reference data is available

2400

TVDPath	MDPath	Formation
		Base Lower Target Coal
		Top Lower Target Coal
1913.00	1915.75	T/Ojo Alamo
2071,00	2082.13	T/Kirtland
2211,00	2238,25	T/Lower Kirt Shale
2461.00	2556.70	T/Fruitland Coal
2734.00	3075.71	Top Upper Target Coal
274R 00	3108 84	Rase Unner Tarnet Coal

West(-)/East(+) (200 ft/in)

			VV	est(-	//Easi	(+) (2	טו טט:	in)						
-600	-4 00	-200	0 200	400	600	800	1000	1200	1400	1600	1800	2000	2200	F
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						BHL	.(#14	91)L	ower	Lat		Ž* .	er e .	3200
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	Low	er Lat	#149T	TG	T@20	000'V	's ≯							1800
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											•			400
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PBHL(#149T)Lower Lat

3811



Azimuths to True North Magnetic North: 10.04°

Magnetic Field Strength: 51187.3snT Dip Angle: 63.79° Date: 2009/07/08 Model: IGRF200510

900 1000 1100 1200 1399 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 Vertical Section at 30.93° (100 ft/in)

Plan Plan #3 (#149T/Lower Lat) Created By Matthew May Date 15 56, July 10 2009



Lat Long Report



Company: Project: .~

ConocoPhillips

San Juan County, NM

Allison Unit Com

Well:

#149T

Wellbore: Design:

Lower Lat Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature 1 Landmark Network DB

Project :

San Juan County, NM

Map System: Geo Datum:

US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS)

Map Zone:

New Mexico West 3003

System Datum:

Mean Sea Level

Allison Unit Com

Site Position:

Position Uncertainty:

Position Uncertainty

From:

Lat/Long

0.00 ft

Northing: Easting:

Slot Radius:

2,183,131.68 ft

595,013.68 ft

Latitude:

Longitude:

Grid Convergence:

36° 59' 57.03000 N 107° 30' 28.67400 W

0.20 9

#149T

Well Position +N/-S +E/-W

0.00 ft 0.00 ft 0.00 ft Northing: Easting:

2,183,131.68 ft 595,013.68 ft Wellhead Elevation:

Latitude: Longitude:

36° 59' 57.03000 N 107° 30' 28.67400 W

Ground Level:

6,262.00 ft

Wellbore

Lower Lat

Magnetics:

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength (nT)

2009/07/08

10.05

51.187

IGRF200510 Plan #3

Design **Audit Notes:**

Version:

Phase:

PLAN

Tie On Depth:

3,218.67

Vertical Section:

Depth From (TVD) (ft) 🖫 0.00

+N/-S (ft) 0.00

+E/-W ·(ft) 0.00

Direction (°) 30.93



Lat Long Report



Company: Project:

ConocoPhillips

San Juan County, NM

Site: Well:

Allison Unit Com #149T

Wellbore: Design: Lower Lat Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature

1 Landmark Network DB

Survey Tool Program	Date	2009/07/10	. ,	# · · · · · ·
1	o ft)	Survey (Wellbore)	Tool Name	Description
0.00 3	,218.67	Plan #2 (Motherbore)	MWD	MWD - Standard
3,218.67 6	,116.74	Plan #3 (Lower Lat)	MWD	MWD - Standard

Planned Survey

MD (ft)		Azi (°)	TVD (n)	V. Sec (ft)	Latitude	Longitude	N/S (ft)	E/W (ft)
3,218.67	65.00	30.93	2,794.42	917.18	37° 0' 4.80970 N7	° 30' 22.86219 W	786.76	471.42
3,300.00	81.27	30.93	2,817.94	994.75	37° 0' 5.46766 N7	° 30' 22.37065 W	853.30	511.29
3,343.67	90.00	30.93	2,821.26	1,038.25	37° 0′ 5.83663 N7	° 30' 22.09499 W	890.61	533.65
3,400.00	91.13	30.93	2,820.70	1,094.58	37° 0' 6.31441 N7	° 30' 21.73808 W	938.93	562.60
3,406.64	91.26	30.93	2,820.57	1,101.22	37° 0′ 6.37073 N7	° 30' 21.69601 W	944.62	566.01
3,500.00	91.26	30.93	2,818.51	1,194.56	37° 0' 7.16246 N7	° 30' 21.10463 W	1,024.69	613.98
3,600.00	91.26	30.93	2,816.32	1,294.53	37° 0' 8.01050 N7	° 30' 20.47118 W	1,110.45	665.36
3,700.00	91.26	30.93	2,814.12	1,394.51	37° 0′ 8.85855 N7	° 30' 19.83773 W	1,196.22	716.74
3,800.00	91.26	30.93	2,811.92	1,494.48	37° 0' 9.70659 N7	° 30' 19.20427 W	1,281.98	768.12
3,900.00	91.26	30.93	2,809.72	1,594.46	37° 0' 10.55463 N7	° 30' 18.57080 W	1,367.74	819.50
4,000.00	91.26	30.93	2,807.52	1,694.44	37° 0' 11.40267 N7	° 30' 17.93734 W	1,453.51	870.88
4,100.00	91.26	30.93	2,805.33	1,794.41	37° 0′ 12.25071 N7	° 30' 17.30387 W	1,539.27	922.26
4,200.00	91.26	30.93	2,803.13	1,894.39	37° 0′ 13.09875 N7	° 30′ 16.67039 W	1,625.03	973.64
4,300.00	91.26	30.93	2,800.93	1,994.36	37° 0′ 13.94678 N7	° 30' 16.03691 W	1,710.80	1,025.02
4,400 00	91.26	30.93	2,798.73	2,094.34	37° 0′ 14.79482 N7	° 30' 15.40343 W	1,796.56	1,076.40
4.500.00	91.26	30.93	2,796.53	2,194.32	37° 0′ 15.64285 N7	° 30′ 14.76994 W	1,882.32	1,127.78
4,600.00	91.26	30.93	2,794.34	2,294.29	37° 0′ 16.49089 N7	° 30' 14.13645 W	1,968.08	1,179.16
4,700.00	91.26	30.93	2,792.14	2,394.27	37° 0′ 17.33892 N7	° 30' 13.50296 W	2,053.85	1,230.54
4,800.00	91.26	30.93	2,789.94	2,494.24	37° 0′ 18.18695 N7	° 30' 12.86946 W	2,139.61	1,281.92
4,900.00	91.26	30.93	2,787.74	2,594.22	37° 0' 19.03498 N7	° 30' 12.23596 W	2,225.37	1,333.30
5.000.00	91.26	30.93	2,785.54	2,694.19	37° 0' 19.88301 N7	° 30' 11.60245 W	2,311.14	1,384.68



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site:

Allison Unit Com

Well: Wellbore: #149T Lower Lat

Design:

Plan #3

Local Co-ordinate Reference: Well #149T

TVD Reference: MD Reference:

WELL @ 6277.00ft (Original Well Elev)
WELL @ 6277.00ft (Original Well Elev)

North Reference:

True

Survey Calculation Method:

Minimum Curvature

Database:

1 Landmark Network DB

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	V. Sec (ft)	Latitude	N/S (ft)	E/W (ft)
5,100.00	91.26	30.93	2,783.35	2,794.17	37° 0' 20.73104 N7° 30' 10.96894 W	2,396.90	1,436.06
5,200.00	91.26	30.93	2,781.15	2,894.15	37° 0' 21.57907 N7° 30' 10.33543 W	2,482.66	1,487.44
5,300.00	91.26	30.93	2,778.95	2,994.12	37° 0' 22.42710 N07° 30' 9.70191 W	2,568.42	1,538.82
5,400.00	91.26	30.93	2,776.75	3,094.10	37° 0′ 23.27513 N07° 30′ 9.06839 W	2,654.19	1,590.20
5,500.00	91.26	30.93	2,774.56	3,194.07	37° 0' 24.12315 N07° 30' 8.43486 W	2,739.95	1,641.58
5,600.00	91.26	30.93	2,772.36	3,294.05	37° 0' 24.97117 N07° 30' 7.80133 W	2,825.71	1,692.96
5,700.00	91.26	30.93	2,770.16	3,394.03	37° 0' 25.81920 N07° 30' 7.16780 W	2,911.48	1,744.34
5,800.00	91.26	30.93	2,767.96	3,494.00	37° 0' 26.66722 N07° 30' 6.53426 W	2,997.24	1,795.72
5,900.00	91.26	30.93	2,765.76	3,593.98	37° 0' 27.51524 N07° 30' 5.90072 W	3,083.00	1,847.10
6,000.00	91.26	30.93	2,763.57	3,693.95	37° 0' 28.36326 N07° 30' 5.26718 W	3,168.77	1,898.48
6,100.00	91.26	30.93	2,761.37	3,793.93	37° 0' 29.21128 N07° 30' 4.63363 W	3,254.53	1,949.86
6,116.74	91.26	30.93	2,761.00	3,810.66	37° 0' 29.35320 N07° 30' 4.52760 W	3,268.88	1,958.45

PathFinder Energy Services

Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site:

Allison Unit Com

Well: Wellbore: #149T

Design:

Lower Lat Plan #3

Local Co-ordinate Reference:

TVD Reference:

Well #149T

MD Reference:

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

North Reference:

True

Survey Calculation Method: Database:

Minimum Curvature

1 Landmark Network DB

Targets			. 9				u*		• •
Target Name - hit/miss target - Shape	Dip Angle	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude (
Lower Lat (#149T) TG - plan hits target - Point	0.00	0.00	2,801.00	1,715.59	1,027.98	2,184,850.77	596,035.79	37° 0′ 13.99421 N	07° 30′ 16.00041 W
PBHL(#149T)Lower L - plan hits target - Point	0.00	0.00	2,761.00	3,268.88	1,958.45	2,186,407.23	596,960.95	37° 0' 29.35320 N	107° 30' 4.52760 W
Lower Lat (#149T) TG - plan hits target - Point	0.00	0.00	2,779.00	2,573.39	1,541.97	2,185,710.32	596,546.85	37° 0′ 22.47617 N	107° 30' 9.66303 W

Formations		, s , j~.	· · · · · · · · · · · · · · · · · · ·					
	Measured	Vertical			Dlp	-		
	Depth (ft)	Depth (ft)	Name	Lithology	Dip Direction (°) (°)			
	3,075.71	2,734.00	Top Upper Target Coal	•			, APP	`
	2,238.25	2,211.00	T/Lower Kirt Shale		0.00			
		2,840.00 E	Base Lower Target Coal)				
	1,915.75	1,913.00	T/Ojo Alamo					
	2,082.13	2.071.00	T/Kirtland		0.00			
	3,108.84	2,748.00 E	Base Upper Target Coal				•	
	2,556.70	2.461.00	T/Fruitland Coal					
		2,832.00	Top Lower Target Coal					

		··· · · · · · · · · · · · · · · · · ·
01 1 10	A I D	<u> </u>
Checked By:	Approved By:	Date:
Officered by.	Approved by:	Date.
-		



San Juan County, NM Allison Unit Com #149T Upper Lat

Plan: Plan #3

Lat Long Report

10 July, 2009



Project: San Juan County, NM Site: Allison Unit Com Well: #149T Wellbore: Upper Lat Plan: Plan #3 (#149T/Upper Lat)



WELL DETAILS: #1	49T	West(-)/East(+) (200 ft/in)
Ground Elevation: 6262.00 RKB Elevation: WELL @ 6277.00	ft (Original Well Elev)	-800 -400 -200 0 200 400 800 800 1000 1200 1400 1600 1800 2000 2200
Rig Name: Original Well Ele		PBHL(#149T) Upper Lat
+N/-S +E/-W Northing Easting	Latittude Longitude Slot	32
0.00 0.00 2183131.68 595013.68 36°	59' 57.03000 N 107° 30' 28.67400 W	30
		J
SECTION DE	TAILS	Upper Lat (#149T) TGT@3000'VS
	Leg TFace VSec Target 9.00 0.00 719.64	Start 808.88 hold at 5287.24 MD
2 3125.52 90.00 30.93 2729.10 721.00 432.02 20	.03 0.00 840.53	Start DLS 2.00 TFO -23.80
	00 0.00 897.36 .00 0.00 1000.00 Upper Lat (#149T) TGT@1000'VS	
	.00 180.00 1009.61 .00 0.00 2000.00 Upper Lat (#149T) TGT@2000'VS	Upper Lat (#149T) TGT@2000'VS
7 4290.94 91.06 30.93 2709.90 1720.56 1030.96 2	.00 0.00 2005.79	20
	.00	Start 994.38 hold at 4290.94 MD
10 6096.13 91.10 30.91 2676.00 3268.88 1958.45 0	.00 0.00 3810.66 PBHL(#149T) Upper Lat	Start DLS 2.00 TFO 0.00
WELLBORE TARGET DETAILS (MAP CO-	ORDINATES AND LAT/LONG)	Start 994.38 hold at 4290.94 MD Start D_S 2.00 TFO 0.00 Start Drop -2.00 Start Drop -2.00
me TVD +N/-S +E/-W North		· / /
HL(#149T) Upper Lat 2676.00 3268.88 1958.45 2186407 per Lat (#149T) TGT@3000'VS 2691.50 2573.39 1541.97 2185710		
per Lat (#149T) TGT@2000'VS 2710.00 1715.59 1027.98 2184850 per Lat (#149T) TGT@1000'VS 2726.50 857.80 513.99 2183991	.77 596035.79 37° 0' 13.99421 N 107° 30' 18.00041 W Point	Start Drop 2.00
Ser Lat (#1451) 101@1000 V3 2120.50 657.60 513.55 2165551	.22 39324.74 37 0 5.51216 N 197 30 22.55140 W POINT	7 Start 990.53 Hold at 3294.62 MiD
		Upper Lat (#149T) TGT@1000'VS •• Start 102.67 hold at 3182.34 MD
	FORMATION TOP DETAILS	· · · · · · · · · · · · · · · · · · ·
PROJECT DETAILS: San Juan County, NM Geodetic System ¹ US State Plane 1927 (Exact solution)	TVDPath MDPath Formation Base Lower Target Coal	Start DLS 2.00 TFO 0.00
Datum. NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866	Base Upper Target Coal Top Lower Target Coal	Start DLS 20.03 TFO 0.00
Zone: New Mexico West 3003	Top Upper Target Coal 1913.00 1915.75 T/Ojo Alamo	
System Datum [.] Mean Sea Level Local North. No north reference data is available	2071,00 2082,13 T/ Kirtland 2211.00 2238,25 T/Lower Kirt Shale 2461.00 2556,70 T/Fruitland Coal	
,		
2200 2200 2200 2200 2200 2200 2200 220	Start DLS 2.00 TFO 0.00 at 4290.94 MD	
2200 2200 2200 Start DLS 20.03 TFO 0.00 Start DLS 20.03 TFO 0.00 Start DLS 2.00 TFO 0.00	Start DLS 2.00 TFO 0.00 Start DLS 2.00 TFO 7.23.80 Start DLS 2.00 TFO 7.23.80	
2000 00 TEO 13182.3 2294.62	Start DLS 2.00 TFO 0.00 Start 994.38 hold at 4290.94 MP. Start DLS 2.00 TFO .73.80	PEHLINIASTI UPPOT Lat
Start DLS 200 Thold at 370 hold at 370 hol	, 52.00 , 38 hold	1 5281.
Start 102.61 Drop 53 110	Stand DLS A. 88 hold	14 ¹ 49 ³ 1)
2500 Start Start Start	Star, Star,	PEHLL
2600	51%	· · · · · · · · · · · · · · · · · · ·
	, and a second s	Azimuths to True North
2700		Magnetic North: 10.04°
2800		Magnetic Field Strength: 51187.3snT
2900		Dip Angle: 63.79° Date: 2009/07/08
TGT@1000'VS	TGT@2000'VS TGT@3000'VS	Model: IGRF200810
3000		
\$160 500 500 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900	2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 34	00 3500 3600 3700 3800 3900 46 Plan #3 (#1497/Upper Lat)
500 500 700 800 900 1000 1100 12 00 1300 1400 1500 1600 1700 1800 1900	Vertical Section at 30.93° (100 ft/in)	00 3500 3700 3800 3900 40 Created By Matthew May Date 16 23, July 10 2009



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site: Well: Allison Unit Com

Wellbore: Design:

#149T Upper Lat Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature

1 Landmark Network DB

Project

San Juan County, NM

Map System: Geo Datum:

US State Plane 1927 (Exact solution)

Map Zone:

NAD 1927 (NADCON CONUS) New Mexico West 3003

System Datum:

Mean Sea Level

Site

Allison Unit Com

Site Position: From:

+N/-S

+E/-W

Lat/Long

Northing: Easting:

Slot Radius:

2,183,131.68 ft 595,013.68 ft

Latitude: Longitude:

36° 59' 57.03000 N 107° 30' 28.67400 W

0.20° **Grid Convergence:**

Well

#149T

Well Position

0.00 ft

0.00 ft 0.00 ft Northing: Easting:

2,183,131.68 ft

595,013.68 ft

Latitude: Longitude:

36° 59' 57.03000 N 107° 30' 28.67400 W

Position Uncertainty

Position Uncertainty:

0.00 ft

Wellhead Elevation:

Ground Level:

6,262.00 ft

Wellbore

Upper Lat

Magnetics

Model Name

Sample Date

Declination

Dip Angle (°)

Field Strength (nT)

IGRF200510

2009/07/08

10.05

63.79

51,187

Design

Plan #3

Audit Notes:

Version:

Phase:

PLAN

Tie On Depth:

3,000.70

Vertical Section:

Depth From (TVD) (ft) 0.00

+N/-S 0.00

+E/-W (ft) 0.00

Direction (°) · ^ 30,93



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site:

Allison Unit Com

Well: ≥

#149T

Wellbore: Design:

4.400 00

91.06

Upper Lat Plan #3

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method:

Well #149T

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature

Database: 1 Landmark Network DB

1,814.09

1,087.00

, ,		•		•	*	* '			
Survey Tool Program	n Date 2009	9/07/10							
From (ft)	To (ft) Surv	ey (Wellbore)		Tool Name	Descrip	tion			
0.00		#3 (Motherbore)		MWD	MWD - S		;~ · ,	, ,	
3,000.70	6,096.13 Plan	#3 (Upper Lat)		MWD	MWD - S	Standard			
Planned Survey	,		12	- w - +<-	,			, ,	
- MD - (ft)	Inc (°)	Aži	TVD (ft)	V. Sec	Latitude	Longitude	N/S	E/W (ft)	
3,000.70	65.00	30.93	2,702.30		37° 0' 3.13407 N7°	30' 24.11400 W	617.30	369.89	
3,100.00	84.89	30.93	2,727.96	815.05	37° 0' 3.94336 N7°	30' 23.50941 W	699.14	418.93	
3,125.52	90.00	30.93	2,729.10	840.53	37° 0' 4.15949 N7°	30' 23.34794 W	721.00	432.02	
3,182.34	91.14	30.93	2,728.54	897.35	37° 0' 4.64146 N7°	30' 22.98787 W	769.74	461.23	
3,200.00	91.14	30.93	2,728.19	915.01	37° 0' 4.79122 N7°	30' 22.87599 W	784.89	470.30	
3,285.01	91.14	30.93	2,726.50	1,000.00	37° 0' 5.51216 N7°	30' 22.33740 W	857.80	513.99	
3,294.62	90.94	30.93	2,726.33	1,009.61	37° 0' 5.59363 N7°	30' 22.27653 W	866.04	518.93	
3,300.00	90.94	30.93	2,726.24	1,014.99	37° 0' 5.63927 N7°	30' 22.24244 W	870.65	521.69	
3,400.00	-90.94	30.93	2,724.59	1,114.97	37° 0' 6.48737 N7°	30' 21.60884 W	956.42	573.09	
3,500.00	90.94	30.93	2,722.94	1,214.96	37° 0′ 7.33546 N7°	30' 20.97524 W	1,042.19	624.48	
3,600.00	90.94	30.93	2,721.29	1,314.95	37° 0' 8.18355 N7°	'30' 20.34164 W	1,127.95	675.87	
3,700.00	90.94	30.93	2,719.64	1,414.93	37° 0' 9.03164 N7°	' 30' 19.70803 W	1,213.72	727.26	
3,800.00	90.94	30.93	2,718.00	1,514.92	37° 0' 9.87974 N7°	30' 19.07442 W	1,299.49	778.65	
3,900.00	90.94	30.93	2,716.35	1,614.90 3	7° 0' 10.72783 N7'	30' 18.44080 W	1,385.26	830.05	
4,000.00	90.94	30.93	2,714.70	1,714.89 3	7° 0' 11.57591 N7'	' 30' 17.80718 W	1,471.03	881.44	
4,100.00	90.94	30.93	2,713.05	1,814.88 3	7° 0' 12.42400 N7°	30' 17.17356 W	1,556.79	932.83	
4,200.00	90.94	30.93	2,711.40	1,914.86 3	7° 0' 13.27209 N7°	30' 16.53993 W	1,642.56	984.22	
4,285.15	90.94	30.93	2,710.00	2,000.00 3	7° 0′ 13.99421 N7°	30' 16.00041 W	1,715.59	1,027.98	
4,290.94	91.06	30.93	2,709.90	2,005.79 3	7° 0′ 14.04332 N7°	' 30' 15.96372 W	1,720.56	1,030.96	
4,300.00	91.06	30.93	2,709.73	2,014.85 3	7° 0′ 14.12017 N7′	30' 15.90630 W	1,728.33	1,035.61	

2,114.83 37° 0' 14.96823 N7° 30' 15.27269 W

2,707.88

30.93



Lat Long Report



Company: Project:

ConocoPhillips

Site: Well:

#149T

Wellbore: Design:

Plan #3

San Juan County, NM

🔩 Allison Unit Com Upper Lat

Local Co-ordinate Reference: Well #149T

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:
Database:

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

True

Minimum Curvature 1 Landmark Network DB

Planned Survey

MD	Inc	Azi	TVD	V. Sec	Latitude	Longitude	N/S	EW
	(°) ,'	(°) - `	(ft)	(ft)		4.4	(ft)	(ft) -
4.500.00	91.06	30.93	2,706.03	2,214.8	2 37° 0′ 15.81628 N7° 3	30' 14.63908 W	1,899.86	1,138.39
4,600.00	91.06	30.93	2,704.18	2,314.8	0 37° 0' 16.66433 N7° 3	30' 14.00545 W	1,985.62	1,189.78
4,700.00	91.06	30.93	2,702.33	2,414.7	'8 37° 0' 17.51238 N7° 3	30' 13.37183 W	2,071.39	1,241.17
4,800.00	91.06	30.93	2,700.48	2,514.7	6 37° 0' 18.36044 N7° 3	30' 12.73820 W	2,157.15	1,292.56
4,900.00	91.06	30.93	2,698.63	2,614.7	5 37° 0′ 19.20849 N7° 3	30' 12.10457 W	2,242.92	1,343.96
5,000.00	91.06	30.93	2,696.78	2,714.7	'3 37° 0' 20.05653 N7° 3	80' 11.47093 W	2,328.68	1,395.35
5,100.00	91.06	30.93	2,694.93	2,814.7	'1 37° 0' 20.90458 N7° 3	30' 10.83729 W	2,414.45	1,446.74
5,200.00	91.06	30.93	2,693.08	2,914.7	'0 37° 0' 21.75263 N7° 3	80' 10.20365 W	2,500.21	1,498.13
5,285.32	91.06	30.93	2,691.50	3,000.0	0 37° 0′ 22.47617 N07°	30' 9.66303 W	2,573.39	1,541.97
5,287.24	91.10	30.91	2,691.46	3,001.9	2 37° 0′ 22.49250 N07°	30' 9.65083 W	2,575.04	1,542.96
5,300.00	91 10	30.91	2,691.22	3,014.6	8 37° 0′ 22.60069 N07°	30' 9.57004 W	2,585.98	1,549.51
5,400.00	91.10	30.91	2,689.31	3,114.6	6 37° 0′ 23.44887 N07°	30' 8.93668 W	2,671.76	1,600.88
5,500.00	91.10	30.91	2,687.40	3,214.6	4 37° 0′ 24.29704 N07°	30' 8.30332 W	2,757.54	1,652.25
5,600.00	91.10	30.91	2,685.48	3,314.6	2 37° 0′ 25.14521 N07°	30' 7.66996 W	2,843.31	1,703.61
5,700.00	91.10	30.91	2,683.57	3,414.6	1 37° 0' 25.99338 N07°	30' 7.03659 W	2,929.09	1,754 98
5,800.00	91.10	30.91	2,681.66	3,514.5	9 37° 0' 26.84155 N07°	30' 6.40321 W	3,014.87	1,806.34
5,900.00	91.10	30.91	2.679.75	3,614.5	7 37° 0' 27.68972 N07°	30' 5.76984 W	3,100.65	1,857.71
6,000.00	91.10	30.91	2.677.84	3,714.5	5 37° 0′ 28.53788 N07°	30' 5.13645 W	3,186.43	1,909.08
6,096.13	91.10	30.91	2,676.00	3,810.6	6 37° 0′ 29.35320 N07°	30' 4.52760 W	3,268.88	1,958.45



Lat Long Report



Company:

ConocoPhillips

Project:

San Juan County, NM

Site:

Allison Unit Com

Well: Wellbore: Design:

#149T Upper Lat Plan #3

Local Co-ordinate Reference: Well #149T

TVD Reference: MD Reference:

WELL @ 6277.00ft (Original Well Elev) WELL @ 6277.00ft (Original Well Elev)

North Reference:

Survey Calculation Method: Minimum Curvature Database:

🧎 😹 🥇 1 Landmark Network DB

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Target Name - hit/miss target - Shape	Dip Angle	Dìp Dìr. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Upper Lat (#149T) TG - plan hits target - Point	0.00	0.00	2,726.50	857.80	513.99	2,183,991.22	595,524.74	37° 0' 5.51216 N	07° 30' 22.33740 W
Upper Lat (#149T) TG - plan hits target - Point	0.00	0.00	2,710.00	1,715.59	1,027.98	2,184,850.77	596,035.79	37° 0′ 13.99421 N	07° 30′ 16.00041 W
PBHL(#149T) Upper l - plan hits target - Point	0.00	0.00	2,676.00	3,268.88	1,958.45	2,186,407.23	596,960.95	37° 0′ 29.35320 N	107° 30' 4.52760 W
Upper Lat (#149T) TG - plan hits target - Point	0.00	0.00	2,691.50	2,573.39	1,541.97	2,185,710.32	596,546.85	37° 0′ 22.47617 N	107° 30′ 9.66303 W

			_	٠.		
•	.0	rm	18	u	o	ПS

Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,840.00	Base Lower Target Coal	0,		
2,211.00	T/Lower Kirt Shale		0.00	
2,461.00	T/Fruitland Coal			
2,832.00	Top Lower Target Coal			
2,748.00	Base Upper Target Coal			
2,071.00	T/ Kirtland		0.00	
1,913.00	T/Ojo Alamo			
2,734.00	Top Upper Target Coal			
	2,840.00 2,211.00 2,461.00 2,832.00 2,748.00 2,071.00 1,913.00	Depth (ft) Name 2,840.00 Base Lower Target Coal 2,211.00 T/Lower Kirt Shale 2,461.00 T/Fruitland Coal 2,832.00 Top Lower Target Coal 2,748.00 Base Upper Target Coal 2,071.00 T/ Kirtland 1,913.00 T/Ojo Alamo	Depth (ft) Name Lithology 2,840.00 Base Lower Target Coal 2,211.00 T/Lower Kirt Shale 2,461.00 T/Fruitland Coal 2,832.00 Top Lower Target Coal 2,748.00 Base Upper Target Coal 2,071.00 T/ Kirtland 1,913.00 T/Ojo Alamo	Depth (ft) Name Lithology (°)

Checked By:	Approved By:		Date:
Officered by.	Approved by:	•	Dale.



Sterling Walker
Agent
Property Tax, Real Estate, ROW & Claims
505-324-6184
505-320-2444

ConocoPhillips Company 3401 East 30th Street Farmington, NM 87402

January 12, 2009

Betty Faverino Waggoner, Trustee under Trust Agreement dated February 3, 1984 640 Pioneer Street Aztec. NM 87410

John Faverino 640 Pioneer Street Aztec, New Mexico 87410

Billie Jean Walker 2170 Thyme Drive Corona, CA 92879

To Whom It May Concern:

Re: Surface Use and Compensation Agreement
Allison Unit Com 149T
Section 7, T32N, R6W
San Juan County, New Mexico

By this Surface Use and Compensation Agreement ("SUCA"), the undersigned, Betty Faverino Waggoner, Trustee under Trust Agreement dated February 3, 1984, whose mailing address is 640 Pioneer Street, Aztec, NM. 87410, John Faverino, whose mailing address is 640 Pioneer Street, Aztec, NM 87410, and Billie Jean Walker, whose address is 2170 Thyme Drive, Corona, CA 92879, hereinafter collectively referred to as ("Landowner"), grants to Burlington Resources Oil & Gas Company LP, an affiliate of ConocoPhillips Company, its successors and assigns, hereinafter referred to as ("Operator"), the exclusive rights and privileges to utilize lands owned by the Landowner in Section 7, T32N, R6W, N.M.P.M., San Juan County, State of New Mexico (the "Subject Property"), as may be reasonably necessary and convenient to perform the operations described below and in the exhibits attached hereto.

This SUCA complies with the New Mexico Surface Owners Protection Act, a copy of which is enclosed. By signing this SUCA, Landowner waives any notification or consultation requirements. Landowner represents that the undersigned is the owner of the surface estate of the Subject Property and is not aware of any equitable title to the Subject Property held by any other parties.

It is agreed that the Operator shall have the right to construct a well pad, install cathodic protection system(s), lay pipelines, install electric and communication lines, drill, complete, operate, maintain and abandon the above referenced well, and install equipment or facilities related to the operation of, or production of oil, gas and other hydrocarbons from, the referenced well located on the well pad (collectively, the "Planned Operations"), located on the Subject Property. The placement, specifications, maintenance and design of the Planned Operations

Landowner shall not use the well pad property occupied by the Operator for any purpose that could potentially interfere with the Operator's Planned Operations. Operator shall have use of the full disturbed area, up to and including the construction zone, in the future if needed. Operator shall tender to Landowners consideration in the amount of which shall be a one time, payment in full covering (i) the rights herein granted or confirmed and (ii) any of the following that may be applicable: loss of agricultural production and income, lost land value, lost use of and lost access to the land and lost value of improvements. Compensation for additional surface damages, if any, that may occur outside of the reasonable scope of operations contemplated by this SUCA shall be negotiated between Landowner and Operator, but shall not affect the term or validity of this SUCA.

The Operator, its contractors, agents, and assigns, shall have the non-exclusive right of ingress and egress to the location of the Planned Operations. Any newly constructed roadway surface shall be constructed from crushed sandstone and shall not exceed twenty (20') feet in width from edge to edge of such roadway. In addition, Landowner grants to the Operator the right, without any further compensation to Landowner, to clear and use up to four feet (4') on each side of such road surface for construction, maintenance, barrow ditches and other water diversions.

Upon completion (plugging and abandonment) of the Planned Operations, the Operator shall reclaim and restore disturbed areas as close to their original condition as reasonably practicable. A Bureau of Land Management recommended reseeding mixture shall be used for the onsite reclamation unless otherwise and reasonably specified by the Landowner; provided that, in the case of a well, the Operator shall only be required to reseed areas that are greater than ten feet outside of the established anchor pattern of the well and greater than ten feet outside of any equipment used by Operator in connection with the well.

To the extent circumstances are known at the time of signing this SUCA, and to the extent applicable to the Subject Property, the Operator agrees:

- To construct, maintain and place all pits and equipment generally as set forth in Exhibit "A":
- To utilize reasonable practices to control/manage noise, weeds, dust, litter, unnecessary interference with the Landowner's use of the surface, and possible trespass by Operator's contractors or third-parties;
- To prudently use/impound water on the surface of the land, if applicable;
- To perform any applicable interim and final reclamation;
- To limit and control, to the extent reasonably practical, precipitation runoff, erosion and surface water drainage changes;
- To remove and restore plant life where feasible and upon request of Landowner:
- To make reasonable attempts to minimize surface disturbance due to operations while complying with any applicable federal, state and local laws and regulations and providing for a safe operations area;

- To place gravel on roads and location as needed to minimize potential damage;
- To restore any existing roads to as close to the original condition as practically possible;
- When requested by Landowner, Operator shall install, at Operator's expense, a
 cattleguard and/or gate, at an intersection where fences cross any newly constructed
 roads. Furthermore, when requested by Landowner, Operator agrees to install locking
 devices, at Operator's expense, on gates that are being used in connection with its
 operations on the Subject Property;
- Operator shall promptly restore all fences which may have been damaged during Operator's operations on the Subject Property to as good as a condition as such fences were prior to such operations. When any fence upon the Subject property is required to be opened, such opening shall not be left unattended unless a good and sufficient gate or cattleguard capable of turning domestic livestock of ordinary disposition shall be installed. All openings in fences shall be made by using "H" braces six feet (6') in width, and constructed of pipe at least four inches (4") in diameter on both sides of such opening; and
- Operator shall not permit its agents, employees, guests, contractors, subcontractors, or service company personnel to carry alcoholic beverages, firearms, archery equipment, wildlife calls, weapons, spotting, optical or night vision equipment (other than as required for oil and gas operation), or to bring dogs or other animals on the Subject Property.

The Operator further agrees to the following site-specific stipulations and provisions:

- 10,000 cu. yds. of fill material will be purchased from the Landowner at the price of \$3.00 per cubic yard and will be removed from the site located at 725 FNL 1000 FWL of Section 7, T32N, R6W, N.M.P.M., San Juan County, New Mexico.
- Any additional fill material needed will be purchased from the Landowner at the price of \$3.00 per cubic yard and will be removed from the site located at 725 FNL 1000 FWL of Section 7, T32N, R6W, N.M.P.M., San Juan County, New Mexico.
- Notify landowner prior to construction so as to coordinate the removal of material.
- Remove and store 6" of topsoil at a site specified by Landowner.
- Fence the entire footprint, as follows:
 - Bottom strand barbed wire
 - Woven wire in middle
 - 2 strands barbed wire on top
- All water used for Planned Operations shall be purchased at the normal rate from Landowner, if water is available from Landowner's water hole.

The Operator does hereby covenant and agree to indemnify and hold Landowner free and harmless against and from any and all loss, damage, claims, demands and suits which the Landowner may suffer as a direct result of Operator's Planned Operations, expressly excluding from such indemnity/hold harmless obligation any claim or cause of action, or alleged or threatened claim or cause of action, damage, judgment, Interest, penalty, or other loss arising or

resulting from the negligence or willful acts or omissions of the Landowner, its agents, invitees, or licensees, or third parties.

This SUCA is a clarifying and confirming document and shall not be construed as a waiver of any rights Operator has under any other agreement or instrument pertaining to the Subject Property. If it becomes necessary or desirable to utilize locations different from those agreed upon due to regulatory requirements or otherwise, the parties will negotiate a modification of this SUCA. In the event the parties are unable to agree to such modification, both parties reserve their respective rights under any existing and applicable leases, contracts, rules and regulations pertaining to the use of the surface of the Subject Property.

The terms, conditions and provisions of this SUCA shall extend to and be binding upon the heirs, executors, administrators, personal representatives, successors and assigns of the parties hereto.

If the Landowner finds the terms and conditions contained herein acceptable and agreeable, please execute and date this SUCA in the space provided below.

Operator shall have the right to record, in the public records of the county in which the Subject Property is located, the Memorandum of Surface Use and Compensation Agreement in the form attached as Exhibit "B" hereto.

The terms of this SUCA shall be effective as of the date it is fully executed, and shall continue for so long as Operator conducts the operations described hereunder, provided, however, that any obligation or liability of either party hereunder that arises or accrues during the term of this SUCA shall survive such termination.

Landowner hereby warrants and represents that Landowner shall not disclose or publish in any form or fashion the amounts or details of the SUCA reached between the parties herein, it being understood that such warranty and representation forms part of the consideration in this SUCA.

This SUCA may be assigned in whole or in part by Operator; provided, however, that it is understood and agreed between Landowner and Operator that all rights, interests, obligations and liabilities under this SUCA shall be specifically applicable to Operator's affiliate, Burlington Resources Oil & Gas Company LP ("Burlington") to the extent Burlington conducts any of the Planned Operations hereunder, without further documentation, consent or compensation to Landowner, precisely as if Burlington was an original signatory to this SUCA. Any assignee shall be bound by and subject to the terms and provisions of this SUCA.

Thank you,

Sterling Walker

LANDOWNER

July Javino Aggorer

Betty Faverino Waggoner, Trustee under

Trust Agreement dated February 3, 1984

Tax ID No.

John Faverino

Tax ID No.

Billie Jean Walker

AGREED TO AND ACCEPTED

Tax ID No.

Enclosures: Act Attachments: Exhibits

A - Project Information B - Memorandum

for Recording