1	•			
	14/98	m		NSL(NSP)
<u> </u>		ABOVE THIS LINE FOR DIVISION USE ON	LY	·
	$\langle \rangle //$	NEW MEXICO OIL CONSERVAT - Engineering Bureau -	ION DIVISION	
		ADMINISTRATIVE APPLICATIC	N COVERSHEE	Т
	THIS CON	VERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR	EXCEPTIONS TO DIVISION RULES A	ND REGULATIONS
Applic	ation Acronyms: [DHC- [F [EOR	: [NSP-Non-Standard Proration Unit] [NSL-No [DD-Directional Drilling] [SD-Simultan -Downhole Commingling] [CTB-Lease Commingling] PC-Pool Commingling] [OLS - Off-Lease Storage] [WFX-Waterflood Expansion] [PMX-Pressure] [SWD-Salt Water Disposal] [IPI-Injection R-Qualified Enhanced Oil Recovery Certification] [P	on-Standard Location] eous Dedication] g] [PLC-Pool/Lease Com [OLM-Off-Lease Measure Maintenance Expansion] Pressure Increase] PR-Positive Production R	imingling] ment] esponse]
[1]	TYPE OF A [A]	<b>PPLICATION</b> - Check Those Which Apply for Location - Spacing Unit - Directional DrillinImage: Structure of the structure	pr [A]	4 1998
	Checl	k One Only for [B] or [C]	OIL CONSERVAT	ION DIVISION
	[B]	Commingling - Storage - Measurement		
	[C]	Injection - Disposal - Pressure Increase - Enh	anced Oil Recovery	
[2]	NOTIFICAT	TION REGIURED TO Check Those Which	Apply or Does No	at Apply
[2]	[A]	Working, Royalty or Overriding Royalty	Interest Owners	л Арріу
	[B]	Diffset Operators, Leaseholders or Surface	Owner	
	[C]	Application is One Which Requires Publis	shed Legal Notice	
	[D]	Notification and/or Concurrent Approval 1 U.S. Bureau of Land Management - Commissioner of Publ	by BLM or SLO ic Lands, State Land Office	
	[E]	🖾 For all of the above, Proof of Notification	or Publication is Attac	hed, and/or,
	[F]	Waivers are Area will be forward	ded upon receipt.	
[3]	INFORMAT	TION / DATA SUBMITTED IS COMPLET	E - Statement of Under	standing

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

arol J. Garcia

Darcia

Production Records Manager 2/2/98 Title Date POST OFFICE DRAWER 1030 ROSWELL, NM 88202-1030



TELEPHONE (505) 622-1127 FACSIMILE (505) 623-3533

200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700 ROSWELL, NEW MEXICO 88201

February 2, 1998

Oil Conservation Division ATTN: Michael E. Stogner 2040 South Pacheco Street Santa Fe, New Mexico 87505

> Re: Nash Unit #36 Surface 1460' FSL and 1585' FWL Section 12-23S-29E Bottomhole 2270' FSL & 251' FEL Section 11-23S-29E Nash Draw Brushy Canyon Pool Eddy County, New Mexico

Dear Mr. Stogner:

Strata Production Company ("Applicant") hereby submits an Administrative Application pursuant to Rule 104.D.(2) for a Non-Standard Proration Unit, Rule 104.F for an Unorthodox Location, and Rule 111 for Directional Drilling regarding the Nash Unit #36 well, and in support thereof states:

- Applicant proposes to drill to a depth sufficient to test the Delaware formation at a surface location of 1460' FSL and 1585' FWL of Section 12, Township 23 South, Range 29 East, N.M.P.M., and at an unorthodox bottomhole location of 2270' FSL and 251' FEL of Section 11, Township 23 South, Range 29 East, N.M.P.M.
- As indicated on Exhibit "C", the surface location is located on Federal Lease NM-0556859. The bottomhole location is located on Federal Lease NM-0554221. Both leases are included in the Nash Unit Agreement, Delaware Formation Participation Area operated by the Applicant.
- 3. Applicant is the operator of Nash Unit Delaware Formation.
- 4. Due to the denial of all surface locations in Section 11 because of the Potash Area, and the playa lake and flood plane in the W/2W/2 of Section 12 as indicated on Exhibit "B", it will be necessary to directionally drill the Nash Unit #36 to develop the indicated reserves.

- 5. Approval of the Application will result in the production of hydrocarbons which otherwise will not be produced, will not adversely affect correlative rights and will be in the best interest of conservation.
- 6. Offset operators and/or lessees were simultaneously notified of the Application by Certified Mail. A distribution list is attached. Copies of the certified return receipts will be forwarded to the Oil Conservation Division upon receipt.

Submitted in Triplicate in conjunction with the Application, are the following documents:

- 1. Distribution List
- 2. Exhibit "A" Engineering Analysis
- 3. Exhibit "B" Topographic Plat
- 4. Exhibit "C" Land Plat indicating offset leases and wells
- 5. Exhibit "D" Vertical Plan View
- 6. Exhibit "E" Horizontal Plan View
- 7. Exhibit "F" Compensated Neutron Log section from the Nash Unit #13 identifying the top and bottom of the Delaware pool
- 8. Form 3160-3 Application for Permit to Drill
- 9. Form C-102 Well Location and Acreage Dedication Plat

Wherefore, Strata Production Company requests that the Application be reviewed and that, after proper notice and review as required by law and the rules of the Division, the Division approve the Non-Standard Proration Unit, Unorthodox Location, and Directional Drilling as hereinabove described.

Sincerely,

STRATA PRODUCTION COMPANY

arol Jarcia

Carol J. García Production Records Manager

CJG:ms Attachments as indicated DISTRIBUTION LIST ADMINISTRATIVE APPLICATION NASH UNIT #36 1460' FSL & 1585' FWL SECTION 12-23S-29E EDDY COUNTY, NEW MEXICO

Murchison Oil & Gas, Inc. ATTN: Michael S. Daugherty 1445 Ross Avenue, Suite 5300 Lock Box 152 Dallas, Texas 75202-2733 Bureau of Land Management ATTN: Tony L. Ferguson 2909 West Second Street Roswell, New Mexico 88201

Oil Conservation Division 811 South First Street Artesia, New Mexico 88210-2834

#### EXHIBIT "A"

# PECOS PETROLEUM ENGINEERING, Inc. 200 W. FIRST ST., SUITE 536 P.O. BOX 2885 ROSWELL, NEW MEXICO 88202 505-624-2800

January 29, 1998

Ms. Carol Garcia Strata Production Company P.O. box 1030 Roswell, New Mexico 88202

Re: Nash Draw #36 1585' FWL & 1460' FSL Section 12-T23S-29E Eddy County, New Mexico

Dear Ms. Garcia,

The Nash Draw Unit is located in an area with many constraints on surface locations for the drilling of vertical wells. The Potash Area is located to the west, in Section 11, and all surface locations in this area have been denied. Also, there is a playa lake and flood plane that the Bureau of Land Management has denied surface locations on, located in the W/2/W/2 of Section 12.

A 3-D seismic survey has indicated an amplitude anomaly located on either side of the section line between Sections 11 and 12. To develop this anomaly a directional well will be required to deviate from the closest surface location to intersect the anomaly under the playa lake. The well will then be drilled horizontally to reach the reservoir located in Section 11. Since this will be the only well to penetrate this portion of the reservoir it will be designed to drain approximately 100 acres.

The top of the "L" zone will be intersected at a location 752' FWL & 1873' FSL of Section 12. The horizontal section will continue from this point 1120' to a location 251' FEL and 2270' FSL of Section 11. This results in a deviation of 930' from the surface location to intersect the top of the formation and a 1120' horizontal section through the reservoir.

Sincerely,

Bruce A. Stubbs, P.E.



		23	24	19 is 19	20 BASS ENT (OPER) JAMES RANCH UNIT	21 1 Conac HRU 1 <sup>01953</sup>
23		2.5	EXHIBIT	"C"		11.5
P shardsen Dil 4 1 - 5"   364873   21	SR Bass ThruLine Inc. etal HBU 064028		Slare	11 1 PR Bass, etal HBU 06011	Phillips, et al Perry HBU Phone BU IHBU OCCIO	Richardson 019 HBU 04805
(R.) 28 1	27 1 Devan Ener 1 3-1 (1) 1 3-1 (1)	26 Mobil 1 19(2)	25	Ic.or 31 30	29	
		1		2018 X <sup>1</sup>		
US P.(hordsen Oil 1 4 · · CI(2) 1 064829 	SR Bass ThruLine Inc., etal HBU 064878	Richardson Oil Terra Res. 2   4 1 61/21 1 Beard Oil, 1/2   064829 1 035.75 6   1 0407.12 1 12.11	L'. 5 S stes Pet. etal   Yates Pet. etal   9   94   3 - 1 - 94   5   107   V-2055   46'-2   5612	Demonstration U 3 αr 2000	Vori Smith Sonsta	Getty Connec 9:1:74 Heu 0553798 02957
33	34	35	36	13 + 31 . ج الا اومز	32	33
<u>د</u>	<i>z</i> s	U. S. 23179	5		State	
2 60 27 2 4 6 2 5 dson Oil 2) 6 6 4 8 2 9 	A 22 3 - 24 22 1 - 54 22 53 - 54 120 53 Rick and Som Oil 2 - 4 - 51 - 7 - 56 48 23 	PR Boss HBP L-5232	Murchison OE.G Murchison OE.G 	(Marala Inc.) (Marala Inc.) Murchison OLG 19246	ле л лас ла 1/2:46 2/46 2) 1 (5+1+1) 1 НВР 05431277 1 -	Lord in material in samples of samples are so
A		- 2 -		ister et 6 pronogo	5	icity 17 174 =128
lesh (e	States -	the state		Honogan) Per Mi		मा US
ner. Amoco terenyre 33 (n) 11-1420 p.a.bar in	Sonto Fe Ener 9 : 19 : 93 6 19 : 03 301 : KúS	Murchism OEG	Streta Prod (Murchison OEG) Strata 1 00-1-81 (Murchison OEG) 0556859	Murchison Of.6 Marolo, Inc	Синнц НВР 0543877	Texaco HBP 2, 17, 13, 1 0543827 Ιος41381
9	     Exxon   fuita   60814   42622	STRATA PROD	UNIT 13 12 (OPER.)	MALAND	8	9
ash i'a	Kes Laboratoria	NASH UNIT #	36 Michael Mic	Ather Bry B 3		FORTI
Fe Ener	Frener. 6:13-96 Santa Frener. 1/5 7:1:91 Poloshico 66423	Petro Stialstood (Murchison) Synergy OGG, et al	15 Strata (Murchison etal) Maralo Divis Strata 0556859 Stoffer 1 @ PB3 bra bra bra bra bra bra bra bra bra bra	(Meso) (Hukadi Murchison DEG Mis (Lorenza Asher Res Hill Martini Asher Res	Santa Fe Ener 12 - 1 - 2003 92173 115 00	Texaco (Rich. 6, Bass)
6	935 ±° ×65	1 0554723 0556853 1 0556723 1 0556853 1 055685 1 05568585 1 05568585 1 055685	23 1236 1237 1236 1237 1236 1237 1236 1237 12 12 12 12 12 12 12 12 12 12 12 12 12 1	Verson (Story) (Story) (Story) Verson (Story) Verson (Micso) (Story) Story (Story) Story (Story)		1 05229
1040 - 2		16 056 060 169	1 (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)	46.23 066 Murchi: ton 066 (Pn:: ps : 500 066 (S56857	( (A 14) ()	Pize, O Disci (WO) '' (1744) (WO) '' (555)
23	29 <sub>U.S.</sub>	HIN FORCES	"Nash Unit" el "Nash Linit"	Bot 11 Managan P.+)	."	"Forty-Niner Ridge Unit" (Throco) 23
`e Ener. ● • 57	Santa Fe Envr 66425 Juli 1	Exxon 7 : 51 66426 353 : KG5	Texaco BK TERACO RK 2 Expl. Richardson Oils, ek Expl. etal 1/2 all sec. remute etal 1/2 all sec. remute e 5894 state	46 : 5 · 1 · 2 · 2	ol Getty HRP 25450;"	Tesoco 4 11:23 Januar 61 4 11:23 Januar 61 5438: 4 CS438: 4 Gettyl 2 1 77000 1 11:23 Januar 61 1 11:25 Januar 61 1 11:25 Januar 61 1 11:25 Januar 61 1
LA	(PID) 1.0 MIL 22 GUNA SALADO SO. UNIT	REMUDA	BK Explitexaco	E-5279'   <u>Remuda Basin-Fed</u> 30 A 11 0 40'   <u>9</u> bass [n] 0 • 7   Mesa Pet, 1/2 12 1 1	20	Disc   w07-4:  1053 *: 21 (2444)]
Santa Fel Santa Fe Frend L Ener 19166 12 191 19166 12 191 19166 12191	" Laguna Salado So. Ut." U.S.	V.S.	8 στιη μλ BK Εκρί. το 15141 etal P/B13335 (μα 0156.) (μα 0156.) (μα 157.) πτο 1.785 (μα.)	Remudu Basin St. U S	05568-4	Pase Last Party har
Bellis, Boyle / Slovan 67103	Exxon - 91 66428	Exvon 7 1 91 6647 236 54	Texaco BK Expl. Texaco BK Richardson Oils etal 1/2 allsec.	4019 i i   Texoco epits sMaralo r6   (Rich i, Dass,'/2) 6 i 2004 93205 23520   23520 23520 23520 23520	Santa Fe Farr 12 - 1 - 2003 97180 610 00	Exton etal Exton. R
VErron) Loguno 'Grande Unit Iterron	EXXON(OPER.)	NG5 DC	нер Е-5894	10.29 212 (Exxon, etal Mirdlo GR. 51 01 Horalo 93 81622 1250	sonta fe Eour (hurger fed	Santa Exxon, etal Fe Ener I 1-1 44 12-1-2003 1 016 22 92180 28 250 00
. () (P(1))		RAN <i>INE</i>	Expl. Texaco Expl.	10.39 3' Contraction Gold Rush Fed. (white P22) F126 F217 20.49 at F126 F217	23	510 <sup>™</sup> I
7 WO C 97	2 Laguna Grande 7 Toi 3800 U.S.	U.S.	State	state gr s.		
in	Е ж хол н8Р 19848	Yates Pet. etal [Sonio fe] 3 1 37 30533 85549 44500 32 0 Exxon 7 1 30	Richardson Oils, etal Texaco, <sup>1</sup> /2 E: 5834 HBP.	4059 A Experience Experience Figure ESperience ESperience Scotto For Esperience Scotto For Esperience For E	NASH UNIT 1460'FSL & 1	#36 Hudson vtal Hou 585'FWL
3	34	426 <sup>27,87</sup> 35	36	Continental HPU COTECA	EDDY COUNTY, N	S, R29E IEW MEXICO

### EXHIBIT "D" VERTICAL PLAN VIEW

NASH DRAW #36 1460' FSL & 1585' FWL SEC. 12-T23S-R29E EDDY COUNTY, N.M.





EXHIBIT "E" HORIZONTAL PLAN VIEW



Form 3160-3 (JULY 1989) (formerly 9-331C)					•	CON OFF OF ( (Oth	TACT RECEIVI ICE FOR NUMI COPIES REQUII or instructions or reverse side)	NG BER XED	BLM Ro Modified	swell Dist Form Ne	rict	
			UNITED S	TATI	ES				NM060-	3160-2		
		DE	PARTMENT OF	THE	INTERIO	R			5. LEASE D	ESIGNATI	ON AND S	ERIAL NO.
			BUREAU OF LAND	MAN	NAGEMENT				NM-	055685	59	
APPLIC	ATION F	OR PE	RMIT TO DRILL	DE	EPEN, OF	PLU	G BACK		6. IF INDIA	n, allot	FEE OR TI	RIBE NAME
1a. TYPE OF WORK	DBII	IX	DEEPEN	]		PL	UG BACK	[]	7. UNIT AG	REEMENT	NAME	
	0111						0000000		Nach	Unit	1.1.1.12	
5. TYPE OF WELL	<i>.</i>				CINCLE				RADM OF			
OIL WELL	X WE	ELL	OTHER		ZONE	X	ZONE		Nash	Unit	AMIS	
2. NAME OF OPERAT	FOR					3a. Area	Code & Phone No	• •	9. WELL NO	).		
		STF	ATA PRODUCTI	DN C	OMPANY	505	-622-11	27	#36			
3. ADDRESS OF OPE	RATOR	P. (	D. Box 1030						10. FIELD A	ND POOL	, OR WILL	САТ
		Ros	well, New Mexic	o 88	3202-103	0			Nash i	Draw Br	ushy Ca	nyon Oil Pool
4. LOCATION OF WE At surface	ELL (Report loc	cation clearly a	nd in accordance with any Stat	require	ments.*)				11. SEC., T., AND SU	R., M., OR	R BLK. AREA	· · · · · · · · · · · · · · · · · · ·
		146	0' FSL & 1585'	FWL	_							
At proposed prod. zoo	ne	227	0' FSL & 251'	FEL	, Section 1	1-23	S-29E		Secti	on 12-	-235-	29E
14. DISTANCE IN MIL	ES AND DIR	ECTION FR	OM NEAREST TOWN OR	POST C	DFFICE*	<u> </u>			12. COUNT	Y OR PAR	ISH	13. STATE
9.5 miles ea	ast of Lov	ving, Ne	w Mexico						Eddy	,		NM
15. DISTANCE FROM LOCATION TO NE PROPERTY OR LE	PROPOSED * AREST LASE LINE, FT			16. NC	D. OF ACRES IN	LEASE		17. NO. OF TO TH	ACRES ASS	GNED		
(Also to nearest drig.	unit line, if any)		1000'	10	880 Lse/	<u>5123 l</u>	<u>Jnit</u>	<b>20 D C C</b>		80.00		
18. DISTANCE FROM TO NEAREST WEL	PROPOSED LO L, DRILLING,	COMPLETE		19. PK	OPOSED DEPTH	1	-	20. ROTAR	Y OR CABL	TOOLS		
OR APPLIED FOR,	ON THIS LEAS	SE, FT.	<u> </u>		68	60' TN	/D		1	Rotar	У	
21. ELEVATIONS (She	ow whether DF,	RT, GR, etc.)							22. APPROX	L DATE W	ORK WILL	L START
2904 GH	,,		PROPOSED C	ASIN	G AND CEN	MENTIN		AM	<u></u>	Indici	120, 1	990
HOLE SIZE	CASING	G SIZE	WEIGHT/FOOT		GRADE		THREAD TYPE		SETTING DE	9714	OLIANTI	TY OF CEMENT
17 1/2"	13 3	3/8*	48#		H-40		8 RD STC		300'		Circ t	o Surface
11"	8 5	5/8"	24# & 32	¥	J-55		8 RD LTC		3110'		Circ t	o Surface
7 7/8"	5 1	/2*	17#		N-80		VAM		6860'	TVD	Tie b	ack to 300' 5/8" casing
Strata Pi If produc in a ma Gas Ord	roductior ctive, 51 nner cor ler #1 a	n Comp I/2" cas nsistent are outli	any proposes to ing will be set, with Federal Re ned in the follo	o dri If n egula wing	ll to a de on–produ tions. Sp attachme	pth s ictive, ecific nts:	ufficient to the well programs	o test will be as set	the Del pluggec out in	aware Land Onsho	forma abando ore Oil	tion. oned and

NMOCD Form C-102 Well Location and Acreage Dedication Plat Hole Prognosis Surface Use and Operating Plan Exhibit "A" Equipment Description Exhibit "B" Planned Access Roads Exhibit "C" One Mile Radius Map Exhibit "C" One Mile Radius Map Exhibit "D" Drilling Rig Layout Plan Exhibit "E" Vertical Plan View Exhibit "F" Horizontal Plan View Notifications to Area Potash Leaseholders

IN ABOVE SPACE [ give pertinent data on	DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plu subsurface locations and measured and true vertical depths. Give blo	ug back, give data o wout preventer pro	n present productive zone and proposed new productive zone. I gram, if any.	if proposal is to	drill or deepen directionally,
24. SIGNED	Carol J. Parcia	- TITLE	PRODUCTION RECORDS MANAGER	DATE	2/2/98
(This space f	or Federal or State office use)				
PERMIT NO.			APPROVAL DATE		
APPROVED BY CONDITIONS O	F APPROVAL, IF ANY:	_ TITLE		DATE	
		*See Instru	ctions On Reverse Side		F3160-3.WK3

District I PO Box 1980, Hobbs, NM \$3241-1980 District II PO Drawer DD, Artesia, NM \$8211-0719 District III 1000 Rio Brazos Rd., Artee, NM \$7410 District IV PO Box 2058, Santa Fe, NM \$7504-2088

ي م

#### State of New Mexico Energy, Macrals & Natural Resources Department

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088 Form C-102 Revised February 10, 1994 Instructions on back Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

	API Numb	×r		* Pool Cod	e			Pool N	8.034		*****
				47545	<u> </u>	<u> </u>	Nash Draw Br	ushy Canyo	on		
Property 010705	Code				100	perty	Name .			•	Well Number
010735		<u>NASH</u>	DRAW				N				36
021712		STRA	TA PRO	DUCTION	COMPANY	nuor. Z	. 1 8.00 4				2984
					10 Curr		Location				
	Suntan	Tomatio	Passa	Lat Ida	Sulle		Location Free	End from the	1 5		
UL OF IOL DO.	12	22_0	20.17	For 107			COLUMN		LAN WON	lû⊥e≪ ,	County
K	12	23-5	29-E		1400	. 16	SUUTH	1585	WEST		
	0	Transfer	Bot	iom Hol	e Locatio		Different Fro	om Surrace			
UL or lot no.	Section	10+03010	Radie	Lolida	Port from U	be	North/South Line	rect from the	East/West	∍منا	Cousty
I	11	23-S	29-Е	Code L N O	2270		SOUTH	251	EAST		EDDY
80.00	al longr	N			14EF 110.						
NOALLON	VARIE				S COMPLY	FTIO		NTERESTS U	AVE BES	NCON	ISOL TATED
NO ALLON		OR A	NON-ST	NDARD	UNIT HAS	5 BE	EN APPROVED	BY THE DIVL	SION		GOLDATED
16			5EC. 11	SEC	C. 12 0	. 6	•	17 OPER	ATOR	CERT	IFICATION
	ß		A		D			I hereby certif	y that the inf	ormation	consained heren is
								ince and comp	lese so she be	al of my l	providings and belief
	ſ			N							
								- ( a.	nd (	1. 2	LA LAND
					1	Elc		Signature		<u> </u>	Charles A.P.S
	6		Н	W		-   -		Carol J	, Garca	ia	
				ľ				Printed Name			
				40				Tule	ion Red	cords	Manager_
			ľ	13				Februar	y 2, 19	998	
	1		(	1				Dote			
5		Farmer	25	1	151 F54	4 1	κ	"SURVI	EYOR (	CERT	FICATION
-		LOCATION H	VLL OF		1813 FWC	'	•	I hardry carefy	, that the web	l location	shown on this plat
		20277707		``	$\sim$			was ploand fro me or under m	m field notes v supervision	of actival and that	surveys made by the same is true
	}	·			$\Theta_{\mathcal{F}}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}}_{\mathcal{F}_{\mathcal{F}}_{\mathcal{F}}_{\mathcal{F}}}}}}}}}}$		CHREACE	and correct to	the best of m	y belig.	
				15	85		Q LOCATION	MAY	2 <sub>9</sub> 1997	5	
								Dale of Support	N. N. L. D	0 r	
Ð		n	02	<u>  </u>	0	n	N	Signature and S	Schill of Project	isional Su 2	ntesee:
v	!		22						FAID.		~
								REC	5412		
							4	VA SA	in Jei	\$/\$	ha:
				I\				PED .	A- A	Rik	Khi
			SEC.II	SEC.1	2			Certificate Num	FESSIO	2	, Ý-

# HOLE PROGNOSIS FORM 3160-3 APPLICATION FOR PERMIT TO DRILL STRATA PRODUCTION COMPANY NASH UNIT #36 WELL 1460' FSL & 1585' FWL SECTION 12-23S-29E EDDY COUNTY, NEW MEXICO

In conjunction with Form 3160-3, Application for Permit to Drill, Strata Production Company submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

### 1. <u>Geologic Name of Surface Formation</u>:

Permian

### 2. <u>Estimated Tops of Geologic Markers</u>:

Rustler	Surface	"F-2" Sand	5788'
Salado	260′	"H" Sand	6180′
Castile	1730′	"K" Sand	6650′
Bell Canyon	3110′	"L" Sand	6770′
Cherry Canyon	4220'	Bone Spring	6860'
Brushy Canyon	5190')	GIFSL TD - TVD	6860'
	160	azi Full	
		1215	

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Surface	150′	Fresh Water
Delaware	3110' - 6860'	Oil or Gas

No other formations are expected to produce oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8" casing at 310' and circulating cement back to surface. Shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across the zone by inserting a cementing stage tool into the 5 1/2" production casing which will be run at TD.

, ¥-1

4. Casing Program:

<u>Hole Size</u>	Interval	<u>OD Csg</u>	Weight, Grade, Jt. Cond, Type
17 1/2" 11"	0- 310′ 0-3110′	13 3/8" 8 5/8"	48#, H-40, ST&C, New 24# & 32#, J-55, LT&C, New
7 7/8"	0- TD	5 1/2"	17#, N-80, VAM, New

### Cementing Program:

- Surface Casing: 13 3/8" casing will be set at approximately 310' and cemented with approximately 425 sacks of Premium Plus cement with 2% CaCL and additives per sack. The amount may be adjusted depending upon the fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.
- Intermediate Casing: 8 5/8" casing will be set at approximately 3110' and cemented with approximately 750 sacks of 35/65 Poz "C" with 10# salt and additives per sack, and 200 sacks Class "C" with 15# salt and additives per sack. The amount may be adjusted dependent upon fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.
- Production Casing: If appropriate, 5 1/2" casing will be set at Total Depth. Strata utilizes cement in sufficient quantities to circulate cement into the 8 5/8" intermediate casing in three (3) stages. The first stage to be cemented with approximately 250 sacks 50/50 Poz "C" with 5# salt and additives per sack. The second stage to be cemented with approximately 365 sacks of 50/50 Poz "H" with 5# salt and additives per sack. The third stage of be cemented with approximately 510 sacks 50/50 Poz "H" with 5# salt and additives per sack.

### 5. <u>Minimum Specifications for Pressure Control</u>:

The blowout preventer equipment (BOP) shown on Exhibit "A" will consist of a double ram-type (3000 psi WP) preventer and a bag-type (hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOPs will be nippled up on the 13 3/8" surface casing and used continuously until TD is reached. All BOPs and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 70% of rated working pressure (2100 psi).

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

#### 6. <u>Types and Characteristics of the Proposed Mud System</u>:

0' to 310'	Fresh water with lime and gel with paper and fiber for seepage will be used for drilling purposes.
310' to 3110'	Saturated brine water purchased from commercial sources with paper and fiber for seepage will be utilized.
3110' to 5100'	3% KCL water with 20-50 PPM Nitrates, caustic for PH control and paper for seepage with starch and XCD for Vis and WL will be utilized. Anticipated mud properties are as follows: MW 8.5, WL 15, PH 10, Vis 28, CL 70,000.
5100' to TD	3% KCL water with 20-50 PPM Nitrates, caustic for PH control and paper for seepage with starch and XCD for Vis and WL will be utilized. Anticipated mud properties are as follows: MW 8.8, WL <6, PH

10, Vis 30, CL 70,000.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

### 7. <u>Auxiliary Well Control and Monitoring Equipment:</u>

- A. A kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

### 8. <u>Testing, Logging and Coring Program</u>:

A two (2) man Mudlogging unit will be on location from the top of the Delaware formation to TD. Mudlogging unit will be employed from approximately 3110' (Top of Delaware) to 6860' TVD (Total Depth).

If indicated, DLL-MSFL, CNL-Density, Gamma Ray logs and Caliper logs will be run at TD. The Dual Laterolog will be run from TD back to the intermediate casing and the Compensated Neutron/Density Log will be run from TD back to surface. In some cases, Strata may elect to run rotary sidewall cores from selected intervals from approximately 3110' to 6860' dependent upon logging results.

### 9. <u>Abnormal Conditions, Pressures, Temperatures and Potential Hazards:</u>

No abnormal pressures or temperatures are anticipated. The anticipated bottomhole pressure is 2600# PSI.

Loss of circulation is possible in the Delaware section of the hole, however, no major loss circulation zones have been reported in offsetting wells.

Strata has drilled and completed eighteen (18) wells in the immediate area. To date, Hydrogen Sulfide has not been encountered. However, if Hydrogen Sulfide is encountered, a Hydrogen Sulfide alarm on the drilling rig would be activated. All personnel have had Hydrogen Sulfide training and appropriate breathing apparatus is located on site. If necessary, the well can be shut in utilizing the blow out preventer and other equipment to prevent the migration of Hydrogen Sulfide to the surface.

### 10. <u>Anticipated Starting Date and Duration of Operations</u>:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is March 23, 1998. Once commenced, the drilling operation should be completed in approximately 20 days. If the well is productive, an additional 15 days will be required for completion and testing before a decision is made to install permanent facilities.

# SURFACE USE PLAN FORM 3160-3 APPLICATION FOR PERMIT TO DRILL STRATA PRODUCTION COMPANY NASH UNIT #36 WELL 1460' FSL & 1585' FWL SECTION 12-23S-29E EDDY COUNTY, NEW MEXICO

Submitted with Form 3160-3, Application For Permit to Drill covering the above captioned well. The purpose of the plan is to describe the location, the proposed construction activities, the operations, the surface disturbance involved, and the rehabilitation of the surface after completion of said well so that an appraisal can be made of the environment affected by this well.

### 1. <u>Existing Roads</u>:

- A. The Well Location and Acreage Dedication Plat for the proposed well has been staked by Dan R. Reddy, Engineer, Carlsbad, New Mexico and is attached.
- B. All roads to the location are shown in Exhibit "B". The existing roads are illustrated in red and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the on-site inspection.
- C. Directions to location: From Loving, New Mexico, the well is located approximately 9 miles to the east off State Highway 128.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as operations continue on the lease.

### 2. <u>Proposed Access Road</u>:

A new access road of approximately 250' will be required as shown on Exhibit "B" and is illustrated in yellow. The road will be constructed from the existing north south road as follows:

- A. The average grade will be less than 5%.
- B. No turnouts will be necessary.
- C. No culverts, cattleguards, gates, low-water crossings or fence cuts are necessary.
- D. Surfacing material will consist of native caliche. If required, road across pad will be surfaced with a minimum of 6" of caliche. Caliche will be obtained from the nearest BLM approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

### 3. Location of Existing Wells:

All existing wells within a one mile radius of proposed well are shown on Exhibit "C". A list of the wells is shown on the Attachment to Exhibit "C".

### 4. Location of Existing and/or Proposed Facilities:

In the event the proposed well proves to be productive, Strata Production Company will furnish maps or plats showing On Well pad facilities and Off Well pad facilities (if necessary) by Sundry Notice before beginning the construction of the facilities.

### 5. Location and Type of Water Supply:

The well will be drilled with a combination of brine and fresh water mud systems as outlined in the Hole Prognosis. The water will be purchased from commercial water stations in the area and trucked to the location by transport over the existing and proposed access roads as shown on Exhibit "B". If a commercial fresh water source is nearby, fasline may be laid along existing road ROWs and fresh water pumped to the well. No water well will be drilled on the location.

### 6. <u>Source of Construction Materials</u>:

All caliche required for construction of the drill pad and the proposed new access road (approximately 5000 cubic yards) will be obtained from a BLM approved caliche pit. All roads and pads will be constructed of 6" rolled and compacted caliche.

### 7. <u>Methods of Handling Water Disposal</u>:

- A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit approximately 150' x 150' x 6' deep and fenced on three sides prior to drilling. It will be fenced on the fourth side immediately following rig removal. The reserve pit will be plastic lined (5-7 mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water. Drilling fluids will be allowed to evaporate in the reserve pits until dry.
- C. Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending upon rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass or steel) until transported via flowline or trucked to an approved disposal system or a separate disposal application will be submitted to BLM for approval. Produced oil will be collected in steel tanks until sold.
- D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations. Compliance with current laws and regulations pertaining to the disposal of human waste will be observed.

- E. Garbage and trash produced during drilling or completion operations will be disposed in a separate trash trailer on location. All waste material will be contained to prevent scattering by the wind. All water and fluids will be disposed into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by the operation.
- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and kept closed until dried. When the reserve pit is dry enough to breakout and fill, and as weather permits, the unused portion of the wellsite will be leveled and reseeded as per BLM specifications. Only that part of the pad required for production facilities will remain in use. In the event of a dry hole, only a dry hole marker will remain.

### 8. <u>Ancillary Facilities</u>:

No airstrip, campsite or other facility will be built as a result of the operations of the proposed well. No permanent living facilities are planned, however, a temporary foreman/toolpusher's trailer will be on location during drilling operations.

### 9. <u>Well Site Layout</u>:

- A. The drill pad layout with elevations, as staked by Dan R. Reddy, Engineer, is shown on Exhibit "D". Dimensions of the pad, pits and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. Since the pad is fairly level, no major cuts will be required.
- B. The planned orientation of the rig and associated drilling equipment, reserve pit, trash pit, pipe racks, turn-around and parking areas, and access road are shown on Exhibit "D".

C. The reserve pit will be lined with a high quality plastic sheeting (5-7 mil thickness).

### 10. Plan for Restoration of the Surface:

A. Upon completion of the proposed operations, should the well be abandoned, the pit area, after allowed to dry, will be broken out and leveled. The original top soil will be returned to the entire location, and leveled and contoured to the original topography as nearly as possible.

All trash, garbage and pit lining will be removed in order to leave the location in an aesthetically pleasing condition. All pits will be filled and the location leveled within 120 days after abandonment.

- B. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time the rig is removed, the reserve pit will be fenced on the rig (fourth) side to prevent livestock or wildlife from being entrapped. The fencing will remain in place until the pit area is cleaned and leveled. No oil will be left on the surface of the fluid in the pit.
- D. Upon completion of the proposed operations, should the well be productive, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from an area of the original drillsite not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank battery installation. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drillsite will be used to recontour the pit area and unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

### 11. Surface Ownership:

The wellsite and lease are located entirely on Federal surface.

### 12. <u>Other Information</u>:

.

- A. The topography around the wellsite is rolling terrain with vegetation of sagebrush and native grass. The vegetation cover consists of prairie grasses and flowers. Wildlife in the area includes those typical of semi-arid desert land.
- B. The soils are clayey sand over caliche base.
- C. There is no live water in the immediate area.
- D. There are no residences and other structures in the area.
- E. The land in the area is used primarily for grazing purposes.
- F. An archaeological study has been conducted for the location and new access road. The report has been submitted separately.
- 13. Lessee's and Operator's Representative:

RONNIE WILLIS P. O. BOX 1030 ROSWELL, NEW MEXICO 88202-1030 PHONE NUMBER: (505) 622-1127-OFFICE 626-3745-CELLULAR 396-6601-HOME

### 14. <u>Certification</u>:

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site which currently exists; that the statements made in the plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Strata Production Company and its contractors and sub-contractors in conformity with the plan, and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 USC 1001 for the filing of a false statement.

STRATA PRODUCTION COMPANY

Cance Ch. Durcio

CAROL J. GARCIA PRODUCTION RECORDS MANAGER DATE: February 2, 1998

#### EXHIBIT "A"

#### EQUIPMENT DESCRIPTION

All equipment should be at least 3,000 psi WP or higher unless otherwise specified.

1. Bell nipple

- 2. Hydril bag type preventer
- 3. Ram type pressure operated blowout preventer with blind rams.
- 4. Flanged spool with one 3"and one 2"(minimum) outlet.
- 5. 2"(minimum) flanged plug or gate valve.
- 6. 2"x 2"x 2"(minimum) flanged.
- 7. 3"gate valve.
- 8. Ram type pressure operated blowout preventer with pipe rams.
- 9. Flanged type casing head with one side outlet.
- 10. 2" threaded (or flanged) plug or gate valve. Flanged on 5000# WP, threaded on 3000# WP or less.
- 11. 3" flanged spacer spool.
- 12. 3"x 2"x 2"x 2" flanged cross.
- 13. 2" flanged plug or gate valve.
- 14. 2" flanged adjustable choke.
- 15. 2" threaded flange.
- 16. 2" XXH nipple.
- 17. 2" forged steel 90 Ell.
- 18. Cameron (or equal) threaded pressure gauge.
- 19. Threaded flange.
- 20. 2" flanged tee.
- 21. 2" flanged plug or gate valve.
- 22. 2 1/2" pipe, 300' to pit, anchored.
- 23. 2 1/2" SE valve.
- 24. 2 1/2" line to steel pit or separator.

#### NOT'ES:

- 1). Items 3,4 and 8 may be replaced with double ram type preventer with side outlets between the rams.
- 2). The two values next tho the stack on the fill and kill line to be closed unless drill string is being pulled.
- 3). Kill line is for emergency use only. This connection shall not be used for filling.
- 4). Replacement pipe rams and blind rams shall be on location at all times.
- 5). Only type U, LSW and QRC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.
- 6). Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.





5 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	Devon Ener J + Gill Ø(187)	2'3	24	פו ון איל	20 BASS ENT (OPER) JAMES RANCH UNIT	21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	US	. · S	EXHIBIT	"C"	U S	U.S.
(R.)	S R Bass Thru Line Inc. vial HBU 064828	l Suite	5197	1111 PR Ross, et al HBU 86811 1797 P Jarry Jarry	Phillips, etal Perry HBU IR Bach 0 (8 - C C C C C C C C C C C C C C C C C C	Richardson Oila HBU 06803
28 1 1	27 1 Devon Ener 3 1 (11) 1 (11) 1	26 Mobil 113(2) U 16(2)	- 25	20 18 X <sup>1</sup>	29	28 Janice Easterly 11-1 77 0307337
R chardson Oil	S.F. Boss	Richardson Oil Terro Res 7	L'. S Sates Pet, etal Yates Pet, etal		<i>u</i> s	
0 6 4 8 2 9	HDU HDU 0G4878	064029 035775 1 Anderson 1 A	e i 44 3 · 1 · 94 · 3072 V·2895 46 · 1 5612	2:33 - 2: 0377306	Vork Smith Sonst	0553798 02957
33	34	- 35	36	12. J+ 31	32	33
1	1 213	U.S. 178179	- vie 22 -	20 31 24		
1 40 27 2'40 25 0 50 n Oil	Richardson Oil	PR.Bass		(Marala Inc.)	and a stat an iteration of at an iteration of a state and a state	22.55 malos in malos is malos
WA SA		- 1 1 1 N/L HBC	L 10 2499922	Murchison OLG 1 19246	I н8р 0543827 Н	
18.cherdson Oil 1 9-1 - 61(2)	Riessean Oil 3 Gar	- 2 -		1) (1) (1) (1) (1) (1) (1) (1) (1) (1) (	5	
ierka r®		here a	C I	io to # Hanagan) Per SI		
ST Amoto Terrayon ST Ling Ling Ling St Ling St Ling	Sonta Fe Ener Fixani ອໍາ່າອໍ້ອີງ ເອົາອີງ ອ່າງປີງ ງພາສ kúS	Murchish Ofic	Strata Prod (Murchison OEG) Strata 1 10-1-81 (Murchison OEG) 14140 OSSE853	Murchison Of.G Marala, Inc R 15 75 12; j 1 19246	ران مران معم معمر مران	Техосо нар 17 0543827 Iолли
9		STRATA PROD	UNIT 12 12 (OPER.)	MAN 7 NAP	8	9
	KCS	NASH UNIT #	Amora Michann	Autor (1)		FOR
Te Ener	Franze 6-15 36 Santa Fe Ener	Petro I (Murchison) Sunergy 066, et al	(Murchron etal) (Mach Ut. Strate) (Murchron etal) (Maralul) + 6500 (Murchron etal) (Maralul) + 6500	Murchison Dim Marson Murchison DEG	Santa Fe Ener	
· 57 1075 · 50	Autoin(0) 66423 335 % KG 5	8554723 0556859 •74 •711	23 F136 F137 F136	1)1/4/1.4.1 5/07/10/01 5/07/10/01 5/07/07/01 5/07/07/01 5/07/07/01 5/07/07/01 5/07/07/01 5/07/07/01 5/07/07/07/01 5/07/07/07/07/07/07/07/07/07/07/07/07/07/	92179 115 ≌	05229
	15	4-0 Myrethisot 16 1-15 10356860 163	130 (5:07) (5:07) 101 (17) (5:07) 101 (17) (17) (17) 101 (17) (17) (17) 100 (17) (17) (17) 100 (17) (17) (17) (17) (17) (17) (17) (17)	JUST 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	17 Southwest 1 Avy. ( cron. Fed. 0 ( 19) 51	16 Gelfan Deld w Pita Ousci (woi'' (1784)) (F355)
23	29 <i>u.s.</i>	Foncesi testa	Nash Unit	Hole 027 Pisnogan P.T.	e <sup>H</sup>	"Forly-Niner Ridge Unit" Trocol 2
s Ener.	Santa Fe Ener 66475	Exxon 7 : 51 66426 352 -	Texaco BK Texaco RK T Expl. Texaco RK T Richardson Oils, ox Edol etal 1/2 all sec. Remut	12:13 130 1011 02 1700 Texaco 12:170 1754 01700 Texaco 12:1700 176400 17056	ol Getty HRP DS438;"	Texoco Mar Lore Sir
LA	(1) 22 GUNA SALADO SO. UNIT	23 23	E. 5894 State	(R.c.r. e. Rosev) E.5229 1	20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Santa te Isanta te Forra Ener Balka I Jan	" Laguna Salado So. Ut."	T NELT VI NI 1279	(Texaco) Remuag Amil. (2000) Basin (1 Bk Empl. Toisial Philipas (we disc.) (P12)	0 • 7 Meso Pet. 1/2 12 · · · 77 7 · · · · · · · · · · · · · · · · · · ·	i El Paso Tipi i S i 75 05560⊶4 i	Pase Lad State State
Bellis,	U.5.	U.S.	Texaco AK Texaco BK Expl. Texaco Expl.	40 19 1 1 1 Marslo 6	santafe Ener	Exampletal Estar. Arg(fr:
510401 : 67103 *Erron)	7 1 91 66478 3532 865	7 1 91 66427 735 24 865	Richardson Oils etal, 1/2 allsec. MBP	E 5229 93205 20.29 Et ===================================	12 . 1 . 2003 97180 610 00	150 - 300 - 5.0.
Grande Unit	EXXON(OPER.) 27	26	E-5894	Mardio (1 Mardio e 1) 66.51 (1) 1622 (1) 30	SontaficEnvr Charger-fid In ziese	Fe Ener 1 1.1 94 12.1.2003 1 01622 92180 28 250 00
	LAGUNA G		Expl.  Texoco   BK  Texoco	10.39 3 0 Gold Rush Fed. (weber 22) 010 015 0 4 F126 F211 F211		510 20 1
ere	Exxon Leguna Grande P Toi3800			30 43 at "Gold Aush"		
	U.S. Exxon	U.S. Yates Pet, etal Sogra Fe	Richardson Oils, etal	State U.S.		Hudson et.
	H8P 19848	B6549 19977 32 0 445 0 7 197 675 87 100 1	Техасо, <sup>1/</sup> 2 Е 5894 Н8Р	17065 TI	NASII UNIT 1460'FSL & 1 SEC 12 T239	#36 HOU 585'FWL 661108
3	34	35	36	2071 J Continental	EDDY COUNTY, N	EW MEXTCO

### Attachment to Exhibit "C"

#### STATUS OF WELLS WITHIN ONE MILE RADIUS

Nash Unit #36 Section 12-23S-29E Eddy County, New Mexico January 1998

Section 12-23S-29E Murchison Oil & Gas Strata Production Co. Strata Production Co.

Section 13-23S-29E Strata Production Co. Strata Production Co. Strata Production Co. Murchison Oil & Gas Strata Production Co. Strata Production Co.

Section 14-23S-29E Strata Production Co. Strata Production Co. Strata Production Co.

Section 07-23S-30E Strata Production Co.

Section 18-23S-30E Murchison Oil & Gas Strata Production Co. Murchison Oil & Gas Strata Production Co. Strata Production Co. Strata Production Co. Strata Production Co.

Well # Nash Unit #3 Nash Unit #11 Nash Unit #12 Nash Unit #13 Nash Unit #16 Nash Unit #19 Nash Unit #36 Well # Nash Unit #1 Nash Unit #4 Nash Unit #5 Nash Unit #8 Nash Unit #9 Nash Unit #10 Nash Unit #14 Nash Unit #15 Nash Unit #21 Nash Unit #23 Nash Unit #29 Nash Unit #30 Nash Unit #38

Well # Nash Unit #24 Nash Unit #25 Nash Unit #31

Well # Nash Unit #22

Well # Nash Unit #2 Nash Unit #6 Nash Unit #7 Nash Unit #17 Nash Unit #18 Nash Unit #20 Nash Unit #27

Footage Status/Formation 1980'FSL&1980'FWL 498'FSL&2000'FWL 918'FSL&2153'FEL 2315'FSL&1746'FWL 330'FSL& 990'FEL 2202'FSL&2201'FEL 1460'FSL&1585'FWL

Footage 1980'FNL& 660'FEL 990'FNL& 330'FEL 2310'FSL& 330'FEL 990'FSL& 990'FEL 860'FNL&2210'FEL 1750'FNL&1800'FEL 660'FNL& 500'FEL 10'FNL& 475'FWL 1650'FNL&1650'FEL 1605'FNL& 660'FWL 1980'FSL&2310'FEL 940'FSL& 760'FEL 330'FSL&2450'FWL

Atoka Delaware Delaware Delaware To be drilled Delaware Location Status/Formation Delaware SWD Delaware Abandon loc Delaware

Delaware

Delaware

Delaware

To be drilled Delaware Delaware To be drilled Delaware Footage 1650'FNL & 990'FEL 1650'FSL & 500'FEL 2425'FNL &1650'FEL

<u>Footage</u> 400'FSL&1150'FWL

Footage 1350'FNL&1980'FWL 1980'FNL& 330'FWL 685'FNL&1295'FWL 990'FNL& 330'FWL 2310'FSL& 330'FWL 1330'FNL&1330'FWL 575'FSL&2080'FWL

Status/Formation Delaware Delaware Abandoned loc

Status/Formation To be drilled

Status/Formation Morrow Delaware Morrow To be drilled To be drilled Delaware To be drilled



### EXHIBIT "E" VERTICAL PLAN VIEW

NASH DRAW #36 1460' FSL & 1585' FWL SEC, 12-T23S-R29E EDDY COUNTY, N.M.

΄.





١

EXHIBIT "F" HORIZONTAL PLAN VIEW POST OFFICE DRAWER 1030 ROSWELL, NM 88202-1030



TELEPHONE (505) 622-1127 FACSIMILE (505) 623-3533

200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700 ROSWELL, NEW MEXICO 88201 February 2, 1998

Western Ag-Minerals Company ATTN: Mr. Ben F. Zimmerly, Sr. Mining Engineer P. O. Box 511 Carlsbad, New Mexico 88221-0511

> Re: Application to Drill in Potash Area Nash Unit #36 Section 12-23S-29E Eddy County, New Mexico

Dear Mr. Zimmerly:

In accordance with the State of New Mexico Oil Conservation Division Rule R-111-PC (2)(3), enclosed herewith please find the following for your review and further action:

- 1. Form 3160-3 Application For Permit To Drill.
- 2. Form C-102 Well Location and Acreage Dedication Plat.

State of New Mexico Public Land records reflect Western Ag Minerals Corporation as a potash lessee covering lands in this area. Strata Production Company, a New Mexico corporation, hereby advises you of its intention to drill a well to 6860' TVD at a location 1460' FSL & 1585' FWL of Section 12, Township 23 South, Range 29 East, Eddy County, New Mexico.

If you are in agreement with Strata that drilling at the proposed location will not interfere with potash operations, please sign and return one copy of this letter within 10 days from receipt of said letter.

Should you have any questions or require additional information, please advise.

Sincerely,

STRATA PRODUCTION COMPANY arol J. Darun

Carol J. Garcia Production Records Manager

AGREED TO AND ACCEPTED THIS \_\_\_\_ DAY OF FEBRUARY, 1998.

BY:\_\_\_\_ TITLE:

xc: Bureau of Land Management, Carlsbad, NM

POST OFFICE DRAWER 1030 ROSWELL, NM 88202-1030



TELEPHONE (505) 622-1127 FACSIMILE (505) 623-3533

200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700 ROSWELL, NEW MEXICO 88201 February 2, 1998

IMC Kalium Carlsbad Potash Company ATTN: Mr. Peter N. Livingstone, Chief Mine Engineer P. O. Box 71 Carlsbad, New Mexico 88221-0071

> Re: Application to Drill in Potash Area Nash Unit #36 Section 12-23S-29E Eddy County, New Mexico

Dear Mr. Livingstone:

In accordance with the State of New Mexico Oil Conservation Division Rule R-111-PC (2)(3), enclosed herewith please find the following for your review and further action:

- 1. Form 3160-3 Application For Permit To Drill.
- 2. Form C-102 Well Location and Acreage Dedication Plat.

State of New Mexico Public Land records reflect IMC Global Operations, Inc. as a potash lessee in the area of the captioned lands. Strata Production Company, a New Mexico corporation, hereby advises you of its intention to drill a well to 6860' TVD at a location 1460' FSL & 1585' FWL of Section 12, Township 23 South, Range 29 East, Eddy County, New Mexico.

If you are in agreement with Strata that drilling at the proposed location will not interfere with potash operations, please sign and return one copy of this letter within 10 days of receipt of said letter.

Should you have any questions or require additional information, please advise.

Sincerely,

STRATA PRODUCTION COMPANY (and f. farcer Carol J. Garcia Production Records Manager

AGREED TO AND ACCEPTED THIS \_\_\_\_\_ DAY OF FEBRUARY, 1998.

BY:\_\_\_\_ TITLE:

cc: Bureau of Land Management, Carlsbad, NM



IMC Kalium Carlsbad Potash Company P.O. Box 71 1361 Potash Mines Road Carlsbad, New Mexico 88221-0071 505.887.2871 505.887.0589 Fax

February 8, 1998

Ms. Carol J. Garcia Production Records Manager Strata Production Company 200 West First Street Petroleum Building, Suite 700 Roswell, NM 88201

W OIL CONSERVATION DIVISION

RE: Nash Unit No. 36 1460' FSL and 1585' FWL of Section 12 T-23-S, R-29-E, Eddy County, New Mexico

Dear Ms. Garcia:

IMC Kalium Carlsbad Potash Company has received your notice that Strata Production Company intends to drill the above referenced oil well. IMC has no objection to Strata drilling a test well at this location.

Based on the best available information, the location of this well will not interfere with the development of our potash resources. As more information becomes available, our estimates of the extent of potash resources in the area may change. Therefore, please consider the "objection offered" or "no objection offered" to a well location to be valid for one year only. If you are still considering a well location that we have or have not objected to more than one year prior, notify us again at that time so we can make the decision on information current at that time. Do not consider a "no objection offered" or an "objection offered" decision to be permanent.

IMC Kalium submits this letter in lieu of the forms requested.

Sincerely. Peter N. Livingstone

Chief Mine Engineer

PNL/STRATA3.DOC

cc: Tim O'Brien

William Lemay Gary Bowers Charlie High Michelle Chaves Don Purvis

Ed Roberson Craig Cranston

Page 1	Order No. R-10817	Case No. 11762	Exhibit "B"	secondary, tertiary or pressure maintenance project.	outer boundaries of a spacing unit, a combination of complete spacing units, or an approved	(0) Project Area - an area designated on Form C-102 that is enclosed by the	vertical limits of a pool, between its penetration point and its terminus.	(8) Producing Interval - that portion of the wellbore drilled inside the	requirements from the outer boundary of a standard spacing unit for the applicable poorly).	inside of which a vertical wellbore can be drilled and produced in conformity with the setback	(7) Producing Area - the area that lies within a window formed by plotting the measured distance from the North, South, East and West boundaries of a project area,	DAN WARE A REASONAL & DANAGE A	(6) Penetration Point - the point where the wellbore penetrates the top of the most from which it is intended to produce.	(5) Lateral - any portion of a wellbore past the point where the wellbore has been intentionally departed from the vertical.		(4) Kick-off Point - the point at which the wellbore is intentionally deviated from vertical.	(3) Directional Well - a wellbore which is intentionally deviated from vertical with an intentional azimuth. Any directional well is subject to Rule 111.C.	(2) Deviated Well - any wellbore which is intentionally deviated from vertical but not with an intentional azimuth. Any deviated well is subject to Rule 111.B.		(1) Azimuth - the deviation in the horizontal plane of a wellbore expressed in terms of compass depress.	111.A. Definitions: The following definitions shall apply to this Rule only:	KULE III · DEVIATION LESTS AND DIRECTIONAL TREES	AND A SIA DEVIATION TESTS AND DIDECTIONAL WELLS	Case No. 11762 Order No. R-10817	Exhibit "B"	
Page 2	Order No. R-10817	Case No. 11762	Exhibit "B"		unerthedox location.	application with the Division Directory copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3) to obtain approval of the	be considered unorthodox. To obtain authority to produce such well, the operator shall file an	minimum setback requirements to the outer boundaries of the applicable unit, then the well shad	the producing interval is more than 50 feet from the approved surface location and closer than the	(3) Unorthodox Locations. If the results of the directional survey indicate that	run a directional survey to establish the location of the producing interval(s).	horizontal displacement of the hole. When the maximum possible horizontal displacement	(2) Excessive Deviation. When the deviation averages more than five degrees in any 500-foot interval, the operator shall include the calculations of the maximum possible	C-104, Request for Allowable and Authorization to Transport Oil and Natural Gas.	500 feet. A tabulation of all deviation tests run sworn to and notarized shall be filed with Form	(1) Deviation Tests Required. Any vertical or deviated well which is drilled or deepened shall be tested at reasonably frequent intervals to determine the deviation from the vertical Such tests that he made at least non-apple 500 frequent in the free bit there are the frequent.	111.B. Deviated Wellbores:	drilling, production, or injection operations are conducted.	(15) Wellborn - the interior surface of a cased or open hole through which	(14) Vertical Well - a well that does not have an intentional departure or course deviation from the vertical.	(12) Unormodox - any part of the producing interval which is located outside of the producing area.		(12) Terminus - the farthest point attained along the wellbore.	(11) Spacing Unit - the acreage that is dedicated to a well in accordance with Rule 104. Included in this definition is a "unit of proration for oil or gas" as defined by the Division and all non-standard such units previously approved by the Division.	(10) Project Well - any well drilled, completed, produced or injected into as either a vertical well, deviated well or directional well.	

•

1

•

.

.

.

Exhibit "B" Case No. 11762 Order No. R-10817 Page 3	(4) Directional Surveys Required. A directional survey shall be required on ach well drilled under the provisions of this section. The appropriate Division District Office hall be notified of the approximate time all directional surveys are to be conducted. All irectional surveys run on any well in any manner for any reason must be filed with the Division pon completion of the well. The Division shall not assign an allowable to the well until all such irectional surveys have been filed. If the directional survey indicates that any part of the orducing interval is outside of the producing area, or, in the case of an approved unorthodox ocation, less than the approved setback requirements from the outer boundary of the applicable unit, then the operator shall file an application with the Division Director, copy to the appropriate Division District Office, and shall otherwise follow the normal process outlined in Rule 104 (F) 3) to obtain approval of the unorthodox location.	(3) Allowables for Project Areas With Multiple Spacing Units. The naximum allowable assigned to the project area within a prorated pool shall be based upon the umber of standard spacing units (or approved non-standard spacing units) that are developed or raversed by the producing interval of the directional wellbore or wellbores. Such maximum flowable shall be applicable to all production from the project area, including any vertical vellbores on standard spacing units inside the project area.	(2) Unorthodox Wellbores. If all or part of the producing interval of any irectional wellbore is projected to be outside of the producing area, the wellbore shall be onsidered unorthodox. To obtain approval for such wellbore, the applicant shall file a written pplication in duplicate with the Division Director, copy to the appropriate Division District office, and shall otherwise follow the normal process outlined in Rule 104 (F) (3).	(1) Directional Dritting within a reject Area. A permit to directionally drill wellbore may be granted by the appropriate Division District Office if the producing interval is nurely within the producing area or at an unorthodox location previously approved by the bivision. Additionally, if the project area consists of a combination of spacing units and includes ny State or Federal acreage, a copy of the OCD Form C-102 shall be sent to the State Land office or the Bureau of Land Management.	111.C. Directional Wellbores:	)istrict Office shall be notified of the approximate time any directional surveys are to be onducted. All directional surveys run on any well in any manner for any reason must be filed rith the Division upon completion of the well. The Division shall not assign an allowable to the rell until all such directional surveys have been filed.	(4) Directional Survey Requirements. Upon request from the Division birector. any vertical or deviated well shall be directionally surveyed. The appropriate Division
Exhibit "B" Case No. 11762 Order No. R-10817 Page 4		·	(3) Permission to deviate or directionally drill any wellbore for any reason or in any manner not provided for in this rule shall be granted only after notice and opportunity for hearing.	(2) The Division Director, may, at his discretion, set any application for administrative approval whereby the operator shall submit appropriate information and give notice as requested by the Division Director. Unprotested applications may be approved administratively within 20 days of receipt of the application and supporting information. If the application is protested, or the Division Director decides that a public hearing is appropriate, the application may be set for public hearing.	(1) Directional surveys required under the provisions of this rule shall have shot points no more than 200 feet apart and shall be run by competent surveying companies that are approved by the Division Director. Exceptions to the minimum shot point spacing will be allowed provided the accuracy of the survey is still within acceptable limits.	111.D. Additional Matters:	(5) Re-entry of Vertical or Deviated Wellbores for Directional Drilling Projects. These wellbores shall be considered orthodox provided the surface location is orthc lox and the location of producing interval is within the tolerance allowed for deviated wellbores under Rule 111.B.(3).

1<sup>2</sup> ---

,

•

`

,

County Edu	dy	Pool Nas	h Draw-	-Brushy	Canyon.
TOWNSHIP 23	South	Range 29	East M	IMPM	
	5				
		4			
7	8	9	- 10	11	12
18	17	- 16	15		-13
*					
10	20	21	22	22	
	20	21	22	23	24
30	29	- 28	27	26	- 25
31	- 32	- 33	- 34	35	
Description	n'NEU Se	C. 1.3 (R-97	21.11-19-0	2)	
Ext; 5/2 Sec. 12	(R-9938-A.	11-23.93) Es	xt: SEU Ser		2-28-93)
Ext: NE/ Sec. 24	1 (R-10343, 4-	24-95) Ext: N	W/4 Sec. 13, NE	4 Sec. 14 [R-10	0420,7-17-95
Ext: SELY Sec.	14 (R-106)	64, 9-16-96)			

1.1 5

County E	ddy	Pool N	Canyon		
TOWNSHIP	23 South	Range	30 East	NMPM	
6	5	4	3	2	1
	8	9	10		-12
18	17	16	15	14	
→ 19	20	21	22	23	24
30-	29	28	27	26	25
31	2	- 33	34		36
Esti Nal Sec	18(B-10042 12	18-93) EV	w. W/ Sor 10 *	1/2 Sec. 20 (R.	10459 9-11-95

Ext: "14 Sec. 18 (R-10042, 12-28-93) Ext: "2 Sec. 19, "2 Sec. 30 (R-10459, 9-11-95) Ext: SW4 Sec. 30 (R-10590, 5-8-96) Ext: 5E/4.Sec. 30 (R-10642, 8-19-96) Ext: NE4 31, NW4 Sec. 32 (R-10938, 1-9-98)

Pool Nash Draw-Brushy	an	VON
	State State -	SAN STALLY

county Eddy

	¢∕ T	DWN:	SHIP	2	3	50	4	よ	R	an	ge	2	9	Eζ	<u>s</u> 7-		NM	PM			1999. 			
				縱						<b>A</b> N			彩					翻						
										编词			法的					A.S.	靈					쵏
				颜辞			5			Ŋ÷.					3	1. S.								
			CARDON CARDON														X							
1215 2215 1970 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1																				1		\$\$ \$	and	
	メートを		調整																					
			7				9. <u></u>				9			- 1	0			-1	1	<u>بة</u>	interes Refere	1	2	
	<b>溪</b>	観察												2.0% 	 		i parti (Lui) Lu	唐97 h						
ar in an				(2016) 2019: 1	1231. 5731.		輸送				税にす			erfiñ-s	finikatur.	1. A. A.		200 201		2894 1994 -		(198 985		
									が必要												潮行			
		-1	8			-1	7二			-1	6			1	5			1	<u> </u>				<b>3</b>	
												1340										2000 2000		
													A Starten		3. 									
- 14	*																							
			ġ.	S.		22	0			57				2.2	2			- 2	<u>ر</u>					
		<b>新闻</b>																						
									部時													關注		
1															46 16				職業					
4 C			0.=			2	9			<b>二</b> 2 [1]	8	獅		-2					6			~ 2	5	
															1	1					翻			
	9999 A												2 ¥.			·								
				A BOOK																				(9)2-4 (5)2-4
		-3	1			-3	2	<b>考察</b> 約24		-3	3			-3	4			- 3	5-			- 3	6	
										<b>建</b>									制化			902 (). 1986)	and The	
				朝朝	秘報							Sec.		ЖŖ¥:			自動於			<b>新</b> 教		<b>報告</b> :	和影	開始引

Description, 24 Sec. 13 (R-9771, 11-19-92) <u>Ext: 12 Sec. 12 (R-97838-A, 11-23, 93)</u> Ext: 54 Sec. 13 (R-10042, 12-28-93) <u>Ext: 24 CR-10343, 4-24-95</u>) Ext: <u>NWySec. 13, NE4 Sec. 14 (R-10420, 7-17-95</u>) Ext: <u>SE4 Soc. 14 (R-10684, 9-16-96</u>)