Form 3160-3 (July 1992)		D STATES		SUBMIT IN TRI (Other instruc reverse siu		• FORM APPROVED OMB NO. 1004-0136 Expires: February 28, 1995		
	DEPARTMENT	OF THE IN	TERIOR			5. LEASE DEBUNATION AND BERIAL NO.		
	BUREAU OF L					NM-77057		
APPLIC	ATION FOR PE			DEEPEN		G. IF INDIAN, ALLUTTEB OR TRIBE NAME		
IN TYPE OF WORK	.L X	DEEPEN	_			7. UNIT AGREEMENT NAME		
b. TIPE OF WELL OIL X 445			SINGLE			S. FARM OR LEASE NAME, WELL NO.		
WELL A WE						White Swan "9" Fed No. 5		
Santa Fe Energy Resou	irces, Inc.					D. AN WELL NO.		
ADDRESS AND TELEPHONE NO.						<u>30-025-34268</u>		
550 W. Texas, Suite 1: 4. LOCATION OF WELL (Re At surface	330; Midland, Texas 797 port location clearly and 1	01 (915)682-63 n accordance with	aur State reg	ulrements.*)		10. FIELD AND POOL, OR WILDCAT Livingston Ridge, E. (Delaware)		
(A) 660' FNL & 330'	FEL					11. SAC., T., R., M., OR BLK. AND BURVET OR AREA		
At proposed prod. zone						Sec. 9, T-22-S, R-32-E		
A HISTANCE IN MILES A	ND DIRECTION FROM NEAR	ST TOWN OR POST	OFFICE*			12. COUNTY OR PARISH 13. STATE		
	Ialfway Bar, New Mexic					Lea New Mexico		
15. DISTANCE FROM PROPU LOCATION TO NEAREST	SED*		10. NU. OF AU		17. NU. TU	OF ACKES ASSIGNED THIS WELL, 40		
PROPERTY OR LEASE L (Also to menrest drig	INE, FT. . unit line, if any)	330'		20		40		
13. DISTANCE FROM PROP	DSED LOCATION® MILLING, COMPLETED,	1361'	19. PROPOSED	00'	L _	tary		
OR APPLIED FOR, ON THE 21. ELEVATIONS (Show whe		1301				22. APPROL. DATE WORK WILL START"		
3800' GR	uner Dr. KI, GA, eu.)	Car	Isbad Cent	rolled Water B	osin	January 2, 1998		
3.	1	PROPOSED CASIN	IG AND CEME	NTING PROGRAM	4	Secretary's Potash		
SIZE OF HOLE	ORADE, SIZE OF CASINO	WEIGHT PER PO	0T	BETTING DEPTH		QUANTITY OF CEMENT		
17 1/2"	H-40 13 3/8"	48.0		600'		00 sx to circulate		
11"	K-55 8 5/8"	32.0		4500'		back to 4400'		
If productive, 5 1/2 th	to a depth sufficient to te casing will be run to TI ned in a manner consister shore Oil and Gas Order). If non-producti it with Federal Re	ve, the well v gulations. Sp	vill be ecific				
Drilling Program Exhibit A - Opera Exhibit B - BOP a Exhibit C - Drillin Exhibit D - Auxil Exhibit E - Topo	nd Choke Manifold ng Fluid Program iary Equipment		Exhibit Exhibit H2S Di	F - Map Showing F (A) - Plat of L G - Well Site La illing Operations Use and Operatio	ccation yout Plan			
Santa Fe Energy Re restrictions concern described above.	sources, Inc. accepts all a ing operations conducted	applicable terms, on the leased land	conditions, sti l or portion th	pulations and ereof, as		Contract Subject to Sectorial Contractions and Contract Contractions		
Bond Coverage: Bl This	APD was previously	waynest le la deeren	5-17-96	sent productive zone	יומן מנסט	nsed new productive zone. If proposal is to diill or		
deepen directionally, give per	linent data on subsurface locatio	ns and measured and t	rue vertical depth	s. Give blowout prev	enter progr	ลณุ II any.		
SIGNED STAND	P. Phil Ster	sen II	Agent for	Santa Fe Energy		11-25-94		
(This space for Fed	eral or State office use)	<u></u>				- <u> </u>		
PERMIT NO.			APPR)	IVAL DATE				
CONDITIONS OF APPROV.	AL, IF ANY:					ch would entitle the applicant to conduct operations the		
APPROVED BY	HARD A. WI	1176 y 1110	Here	9 STATE	Dire	(1) JATE 1.2 -30 - 4)		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		*See Instru	uctions On (	Reverse Side				
	on 1001, makes it a crim se, fictitious or fraudule	(	knowingly s	und willbully to r	13 K C 10	any department of agency of the		

P. O. Box 1 Hobbs, NM		980	Ene , Mi			New Mexico tural Resour	rces De ortme	nt	Revised	orm 0-102 02-10-94 ns on back
DISTRICT II P. O. Drawe Artesia, NM	r DD 88211-0	0719	OIL				DIVISION		Submit to the District Office State Lease — Fee Lease — 1	4 copies
1000 Rio B	DISTRICT III  P. 0. Box 2088    1000 Rio Brazos Rd.  Santa Fe, New Mexico 87504-2088    Aztec, NM 87410  AMENDED REPORT									
<u>DISTRICT IV</u> P. O. Box 2088 Santa Fe, NM 87507–2088 <b>WELL LOCATION AND ACREAGE DEDICATION PLAT</b>										
I API Number			² Pool Code			ol Name				j
	-	-34.5	8 393	66			Livingston	Ridge, E		
+ Property Co		⁵ Property N	ame	\./нття	- 5WA	N '9' FEI	τραι		• Well Number 5	•
222.	<u>50</u>	⁸ Operator N	ame	WILLIE					° Elevation	
2022	86		SAI	NTA FE	ENER	RGY RESOU	RCES, INC.		3800	•
				" SUI	RFACE	LOCATION				
UL or lot no.	Section	Township	Rang		Lot Ida		North/South line			County
A	9	22 SOUTH	32 EAST,	N.M.P.M.		660'	NORTH	330'	EAST	LEA
		"BOTTO	OM HOLE	LOCAT	ION IF	DIFFERE	NT FROM SU	JRFACE		
UL or lot no.	Section	Township	Rang	e	Lot Ida	Feet from the	North/South line	Feet from th	e East/West line	County
¹² Dedicated A		int or Infill	14 Consolidati	on Code	15 Order	No.				
40										
							I UNTIL ALL IN N APPROVED B			
16										ATTON
				1					<b>)R CERTIFIC</b> rtify that the ini	
				1			660'	contained he	erein is true and	complete
		1		i I					of my knowledge o	and Dellel.
		1				N	330	Signature 7	X Hibti	Man
		1		1			N.	Printed Nam	"Phil" Stin	
		+		+			[]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]	James P. Title	Phil Stin	son
									Santa Fe E	nergy
								Date 4-8-9	6	
								SURVEY	OR CERTIFIC	ATION
				 1 		   		I hereby	certify that t	he well
		+		+					hown on this p m field notes o	
								surveys m	ade by me of vision, and th	r under
		   						same is tr best of m	rue and correct	t to the
		1		1				Date of Surv	еу	
								Signature	RCH 26, 1996	
		+		+				Professional	BHITTEN MEXIS	Ø
								*	Y LYNN	, A
		1 1 1						ART	0.7920	
				1				Certification		. #7920
				l 		İ		JOB #4483	STITUTE SE	/ V.H.B.

# DRILLING PROGRAM SANTA FE ENERGY RESOURCES, INC. WHITE SWAN "9" Fed. No. 5

In conjunction with Form 3160-3, Application For Permit to Drill the subject well, Santa Fe Energy Resources, Inc. submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 1.

1. Geologic Name of Surface Formation: Alluvium

2. Estimated Tops of Significant Geologic Markers:

Rustler	875 <i>1</i>
Base of Salt	4450'
Delaware Lime	4775 <i>'</i>
Delaware Sand	4850′
Cherry Canyon	5800 <i>'</i>
Brushy Canyon	70001
Total Depth	7600 <i>'</i>

3. The estimated depths at which water, oil, or gas formations are expected:

Water	None expected in area	
Oil	Delaware @ 4850'	

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.

5. Pressure Control Equipment: See Exhibit B.

6. Drilling Fluid Program: See Exhibit C.

7. Auxiliary Equipment: A mud logging unit will be utilized to monitor penetration rate and hydrocarbon shows while drilling below the intermediate casing at 4500'.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: None Planned.

Logging:

Dual Laterolog w/MSFL and Gamma Ray4500'-7600'Compensated Neutron/Litho-Density/Gamma Ray4500'-7600'Compensated Neutron/Gamma Ray (thru csg)Surface-4500'

wswan9f5.doc

DRILLING PROGRAM White Swan "9" Fed. No. 5 Page 2

# 9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature is 135° psi and the estimated bottom hole pressure is 2900 psi. Hydrogen Sulfide shows form the Salado/Castile have been reported in the area at  $\pm 3300'$ . We have enclosed a Hydrogen Sulfide Drilling Operation to address the potential situation. No major lost circulation zones have been reported in the offsetting wells.

# 10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is <u>January 2, 1998</u>. Once spudded the drilling operation should be completed in approximately 15 days. If the well is productive, an additional 30 days will be required for completion and testing before permanent facilities are installed.

# EXHIBIT A OPERATIONS PLAN SANTA FE ENERGY RESOURCES, INC. White Swan "9" Federal No. 5 Section 9, T-22-S, R-32-E Lea County, New Mexico

- 1. Drill a 17-1/2" hole to approximately 600'.
- Run 13-3/8" 48.0 ppf H-40 ST&C casing. Cement with 600 sx Class "C" cement containing 2% CaCl₂. Run centralizers on every other joint above the shoe.
  Apply thread lock to bottom two joints and guide shoe.
- 3. Wait on cement twelve hours prior to cutting off.
- 4. Nipple up an annular BOP system and test casing to 600 psi. WOC twentyfour (24) hours prior to drilling out.
- 5. Drill a 11" hole to approximately 4600'.
- 6. Run 8-5/8" 32.0 ppf K-55 ST&C casing. Cement with 1100 sx Cl "C" Lite containing 12 pps salt and 1/4 pps celloflake followed by 200 sx Class "C" with 2% CaCl₂. Run guide shoe on bottom and float collar two joints from bottom. Centralize every other joint for bottom 400' of casing and place two centralizers in surface casing. Thread lock bottom 2 joints.
- 7. Wait on cement for twelve hours prior to cutting off.
- 8. Nipple up and install a 3000 psi. Double Ram and Annular BOP system with choke manifold. WOC 24 hours prior to drilling out.
- 9. Test BOP system to 1500 psi with the rig pump. Test casing to 1500 psi.
- 10. Drill 7-7/8" hole to 7600'. Run logs.
- 11. Either run and cement 7600' of 5-1/2" 17.0 ppg K-55 LT&C casing or plug and abandon as per BLM requirements.



EXHIBIT C DRILLING FLUID PROGRAM SANTA FE ENERGY RESOURCES, INC. White Swan "9" FED NO. 5 Section 9, T-22-N, R-32-E Lea County, New Mexico

#### 0-600'

Spud mud consisting of fresh water gel flocculated with lime. Use ground paper for seepage control and to sweep the hole. MW-8.5 ppg, Vis-40.

# 600'-4500'

Drill out with brine water circulating the inner portion of the reserve pit. Utilize ground paper mixed in prehydrated fresh gel to sweep the hole. MW-10.0 ppg, Vis-28.

# 4500'-7600'

Drill out with cut brine (30,000 ppm chlorides minimum) circulating the outer portion of the reserve pit. Maintain pH at 8.5-9.5 with caustic and sweep the hole as necessary with ground paper. If it becomes necessary to mud up due to hole conditions, utilize a cut brine/Drispac system for 15-20 WL and a Vis of 30-32. MW-8.5/8.9 ppg.

.

#### EXHIBIT D AUXILIARY EQUIPMENT Santa Fe Energy Resources, Inc. White Swan "9" Federal No. 5 Section 9, T-22-S, R-32-E Lea County, New Mexico

DRAWWORKS BDW 650M 650 HP, with Parmac Hydromatic brake

- ENGINES Two Caterpillar D-353 diesels rated at 425 HP each
- ROTARY Ideco 23", 300 ton capacity
- MAST/SUB Ideal 132', 550,000 lb rated static hook load with 10 lines. Wagner 15' high substructure

**TRAVELLING** Gardner-Denver, 300 ton, 5 sheave w/BJ 250 ton hook. **EQUIPMENT** Brewster Model 7 SX 300 ton swivel

- **PUMPS** Continental-EMSCO DC-700 and DB-550, 5-12 x 16" Duplex, Compound driven
- **PIT SYSTEM** 1-Shale Pit 6X7X35', 1-Setting Pit 6X7X38', 1-Suction Pit 6X7X34' w/5 mud agitators. Two centrifugal mud mixing pumps and a Double Screen Shale Shaker.
- LIGHT Two CAT 3306 diesel electric sets 180 KW prime power PLANT
- BOP13-5/8" 3000 psi WP double ram and 13-5/8" 3000 psi WP ShafferEQUIPAnnular Preventer. Choke manifold rated at 3000 psi. Valvcon 5-<br/>station 80 gallon closing unit



EXHIBIT E TOPO MAP OF LOCATION AREA SANTA FE ENERGY RESOURCES, INC. WHITE SWAN "9" FED #5 660' FNL & 330' FEL SEC 9, T-22-S, R-32-E LEA COUNTY, NEW MEXICO

U.S.	2 1 117 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Bilbrey Fed. U.S. "Allwey fed"	U. <b>S</b> .	(CHINNEL), U.S	0.5
More Porto oz oz	MW FVI. HOCIEIE	Apache IgPhilliped	Marala Inc Huraku etal Marala Muraku etal 4 1 95 3360	Santa fe Ener, Vj Marrilo, Iric 1. 1. 16	Page Fred
Phillips 0.5   Fogo Frod. 66710   42814 11 sea fr   5 0 ⁴	LG-6640	BETIO ((CHE Fred ()))	260 49	85934	* 1 96 85935 40020
Jased F. 1 32014	17,555 17,555 17,555 17,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,555 1,55	((chē rod./))	1014830 1.10190. 1014830 2.101 1014830 2.1014830 2.1010 1014830 2.1010 1014830 2.1010 10140	Guiney feed Congrey feed Con	40522
red Ol Army Dist.	100	33	Bilbrey-Fed. U.S 260		36
	and memory to A	₩.1 <b>#</b> ¹	HBC Phillips (Not Gos, that)		5
100-1	<u> HOEY</u> BA. Ivit	WW Constraints	5/2 85110 (11:1-3)	Programo Bil Disc.	
Collins I L. D. oglass Fed." Collins I L. D. oglass Fed." War Fed		Bilbrey-Fed."	Bilbrey Fed." To 14990 ⊕ U.S.M.I. J.T.M.I.S I.T.M.I.S LESED		U. S.
	Store B 399	U.S.	JCNIIIS dersztal	and and <u>Auis</u> and and	and the second second second
d Gran Bred (Konter, Eropeis	Apachy (1,12) 44 400 Apachy (1,12) 44 40 (Union )(Pro) 44 57 0.16 (Union )(Pro) 44 57 0.16	Atute (Genil	Union (Lergius)	11111 - 40013 - 71042 - 71112 - 7 Santa I - Vates Yoles I - 45 1 - 31 - 91 - 921 - 7 1 - 35 - 124 - 7026 - 1202 7 1 - 35 - 124 - 7026 - 1202 7 1 - 102 - 17 - 21 - 7 126 - 21 - 7 126 - 21	Yotes Pet
17895 Sabafner	Union)(Pi8) 8-3970.16 (190) 14491 Pel. Disc.	Apache 2145 16 16 10 17 10 Union (Aminoil) 18 11 100 14 131 Union 66710 14431	(4 4 3) (021 96)(F31)	71056 15-1-91 7094 1100	Vites Pel etal 7 KG
Yeter Per toising O	Li1	12-1-81	Siete DE,G 54 54 -5 Office St 54 -5 YO B 35 7 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	Phillips 1 K G S   B 1 31	Yates Pel, etal 7 KG 11 1 44 82712 4198
Australy Ford in the state of t		A UL AMIA.(3)	<u>bia Bili 93</u> ,3- <u>Julu</u>	म्ब्रिज्	YatesPet.etal   San
→ 12 7 4115 • 448 [Pet,eta] Arroco • 0 148	Santa Fogo Prod. te Eller 4 t 2000 1 2000 V 4616 9 1615 525 25	61271	hilys fel 2 = 1 1000 € 1 Photleps 2 = 1 000 € 6 = 1 = 96 0 = 555	1 4 58 7 1	64601 g
Per and Tua	9.1615 260 90 Fogn Fred	V 3113 7000 U.S.	43 22 230 20	2300	Active Cos
64 605 U.S.	Sites      Fogn Fred        26000      Fogn Fred        4      2100        V 2816      V        U.S.      Store 525 22        J C Atilis,(S)	"Trympeter St" P42	U.S. W.I State JCMillis,(S)	U S	9-1-15 84888 U.S
4114   YotesPet.etal		State Posto Lecourton Santa Fe Ener,	(D. Pietenpoletal) Phillips 86147 3320	Marcile, Phillips	Marala
Aussa Valtes Pet, etcil Vates Pet., etal Valtes Pet, etcil 6 el 6 el 84830 100 47899 100	1000 road Food Food Food Food Food 903 ref 1 3 1 a 1 a 106 21 1 5 a 1 a 1 a 1 a 1 a 1 a 1 a 1 a 1 a	Aidye Fed •		1001 13 HBP 56746 14334	inc etal 85937
Halle Tetrata Yutes Pet etal Ilon   Pradi   9   1 red : 0   Flommen   84890	, Pegg	Maralo ( R French) V 4081 Start Annus Start Q 12 V	ment fed subsents	Marula, etal Thamlo, e 193 l etal	
hbas37 1792	1000 () 1.1.5100	Startenals Marale Jr. Vz	88161 156400 1 86147	56746	OI starts inc.
4114 \$ Pogo Fogo 9:0 94 (9 20 94 63377 30 50		Tirtey Maralo	Marala L # -10 L # Franck y		VON FED UNIT
-\$Kee 118	() () () () () () () () () () () () () (	10 10 10 10 10 10 10 10 10 10 10 10 10 1	vicaz stale wild Jurkey-st	05936 MARALO	(OPER.)
Page Field		1 4 4 1 1 10 to 13 4A	"Emerald-Fea"	"Prohibilion-Frd. Unit"	Prohibilion F
Lingthen		U.S. 23755 of U.S. State   P146	PIRT U.S.	US	
1 112 Pogo Prizid. 11 Pogo Prizid. 11 Pogo Prod. 12 Pogo Prod. 12	L2-14 03 17 http://taits.prt.etal fostao 85148 chr	Yates Pet,etal	(Mabil)	Maralo, inc _u etal	Man Pro (Mar Res.
44 164 . (Pado Prod	108740 86148 MKC	¥6-1]4 *Axx	27805	85937	58940
Liniana, 12, 28, 94		5×σ Ριθ6	1 Stinto Aurono-Fed 100 1 2	"Prohubition Fed"	
1 vivingstar 53990 1 Ridge:	- POGO PROD. (OPER.)	16 Pirz -	1	Minidian 14 Meridian	13
Pogn Prod 9 28 94   90587	i Yatestet PS6 (Cleary Pri) (Wa) Cleary AKC"Ted.	5 • • •	Marching Espin, Sharab frod et al. (Unicury Lap) 5 to 15,113 (D) Generity For Sharab (P) (Construction of the Sharab (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construction) (Construc	/ 94097	
te te te T	JH Rigg "AKC" Fed. Ica. If nage Int gaage Nat Ici	* Kiwi - St.* P195	Lechuze Led Preisigo Pio3 Urenn Oise	(Corper) FISO F2001 (Hed Tank) Red Red Checker	Cw Traingr For
Of 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	U "Cleary Fed." U, S.	PIOZ . 5 Stall 4 22	32 · Usin Fed.	Ly TIAIOIS 4 61 2 (Caroy) FISE F2001 ped Und Yank Red - 1 Crecker bailides 5 Tionk-Fed Fred Pag ³ rait ⁰ y 5 ⁶ .10	Cw Traingr [Fo Souther Fulling, [Fo For 10 10 83 [69 06 10 10 83 US M
9 3 8 3 4 9 0 8 3 4 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A.R.Co. V3	Cellu Oil 9 3 Strata	P130 2	Cw Meridian Cw Hendian	• • • • BR • • • • • • • • • • • • • • •
			Stratu Prod 1 15 (Exx 311) 17058 1 9	4 816 2 11 4 215 1751	e'
CHG, 1/2 Toga 1/2 V L E Innerarity Jr.	LE line tority Jr 12 Years and J Tannel (to base Morr.) 1971 Light Date	B. 176 77058 Lt jargemeily A la base Morrow Strate Prod.	4 1 81272	Mills Checkerboord isd Checker	
+ Warnes 16 . 91.941 Fer 11.941 JCA4.1155	Cities Strv 6 1-11(3) 018 Aff Tennel LF finson typy Yites for for the form (to base Morr.] (147 - 472 for the form - 400 for the form the form the form the form - 400 for the form the form the form the form the form - 400 for the form the form the form the form the form - 400 for the form the form the form the form the form - 400 for the form the form the form the form the form - 400 for the form the form the form the form the form the form - 400 for the form the form the form the form the form the form the form - 400 for the form the f	An harde	(1) H + + + + + + + + + + + + + + + + + +	Ford a Strate for 10 - 2000 - 10 - 2000 - 10 - 2000 - 10 - 2000 - 10 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2	Churkerhours Ind " 24 -
Pogo	Getty "		E13632 /	Meridian Trainer	Regionarfed 07 (F Prime IV stal)
90587 Boss Fea	A	<b>1</b>	DA5-10-#2 ) P77	UII + (P/8)- 7477 - 140 Wildon	TOCO,LLC BIG33
1 Dia 6: 8: 64	L E Laper,			Cherker, Mult Pay 1 plar 1	Page Arted Red Tank Fed Files (vil 0-st
1 115	0.3	ola cerchantea			
2 Pogu i Gethy Oili/3 02 Pogu i Gethy Oili/3 9:7:53 I C.I.I.S S.F.V.V 77055 A.R.Co.V3 45:52 B 1:76	Yates Pet. Gatty Oil etat A Co 9 1 94 H 12	Getty Cil 1 Pago 150 A R Co 1500	Pogo (Exxon)81272	1407 Pogo Pies Pogo Prodo 94	Guili Pill I B
5. sear # 1 100	58821   Cilies Serv./s	8 1 76 9311	69376 PoyaPod FD	2379	(Guit) File Segingren 's B (Alfile pirc) (P/8) (1141) Bene Spr. Dirc
LE Inurrarity, Jr K (to base Norrow	LE Innerarily Jr 52				3 .6
Tune 7 30	29		27 E	26 Cultertson	25
		Yates 1 Tates Pet.eni ret.etall 9 19414 1 34 Red Tiank. Frd	6 PIGS 1 Pure 14 Fisc	1010	A 0 ⁷ A 5
une i		50821 81273 •9 5022	Face Fred   Erron Face 27 Fed .	s i	
" proximity - 1 Fed." U.S.	<i>U.</i> <b>S</b> .	U.S	rzoi a rzd" - OUS. Prize For F52	1 m m m 1 m m m m m m m m m m m m m m m	
		La construction de la constructi	Printed 31	<b>1</b>	P120 P238US

EXHIBIT F EXISTING WELLS SANTA FE ENERGY RESOURCES, INC. WHITE SWAN "9" FED #5 660' FNL & 330' FEL SEC 9, T-22-S, R-32-E LEA COUNTY, NEW MEXICO





# MULTI-POINT SURFACE USE AND OPERATIONS PLAN SANTA FE ENERGY RESOURCES, INC. White Swan "9" FEDERAL NO. 5 SECTION 9, T-22-S, R-32-E LEA COUNTY, NEW MEXICO

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effects associated with the operation.

# 1. EXISTING ROADS.

A. Exhibit E is a 15 minute topographic map which shows the location of the proposed wellsite and roads in the vicinity. The proposed location is situated approximately 12 miles southeast of Halfway Bar, New Mexico.

#### DIRECTIONS:

 From Jal, go west 34.2 miles on Hwy 128, turn north on Red Road for 7.2 miles, then east and northeast 1.6 miles to cattleguard. Turn northeasterly at cattleguard and travel 2.2 miles on lease road and turn right on lease road for .3 miles to a point 300' south of the proposed well.

# 2. PLANNED ACCESS ROAD.

No access road will be required as south side of location will be on existing road.

# 3. LOCATION OF EXISTING WELLS.

A. The well locations in the vicinity of the proposed well are shown in Exhibits E & F.

## 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There are two producing Delaware oil wells on the lease at this time.
- B. In the event the well is productive, a flowline will be laid along the existing road to the pipeline ROW then south to the tank battery located at the White Swan "9" Fed. No. 1. Electricity to power a pumping unit will be run from the existing power line east ±1300' to the proposed well.

# 5. LOCATION AND TYPE OF WATER SUPPLY

A. It is planned to drill the well with both fresh water and brine water systems. Both types of waters will be hauled to the location by truck over existing roads. Both types will be obtained from commercial sources. We also plan to use produced water from our offsetting wells to drill the intermediate portion of the hole. MULTI-POINT SURFACE USE AND OPERATIONS PLAN WHITE SWAN "9" FED NO. 5 Page 2

#### 6. SOURCES OF CONSTRUCTION MATERIALS.

A. Any caliche required for construction of the drilling pad will be obtained from a pit located off the wellsite.

# 7. METHODS OF HANDLING WASTE DISPOSAL

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. Water produced during operations will be either placed in the reserve pits and allowed to evaporate or collected in tanks until hauled to an approved disposal system or a separate disposal application will be submitted to the BLM for appropriate approval.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Human waste will be disposed of per current standards.
- F. Trash, waste paper, garbage, and junk will be collected in trash trailers and disposed of in an approved waste facility such as a land fill. The trash trailers will contain all material to prevent scattering by the wind.
- G. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.

# 8. ANCILLARY FACILITIES

A. None required at this time.

#### 9. WELLSITE LAYOUT

- A. Exhibit G shows the dimensions of the well pad and reserve pits, and the location of major rig components.
- B. The ground surface of the location is sandy with sparse vegetation. The location will be constructed by leveling the necessary dunes and covering the sand with at least six inches of compacted caliche.
- C. The reserve pits will be plastic lined.
- D. A 400' x 400' work area which will contain the pad and pit area has been staked and flagged.

#### 10. PLAN FOR RESTORATION OF THE SURFACE

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleared of all trash and junk, to leave the wellsite in an aesthetically pleasing a condition as possible.

wswan9f5.doc

Multi-Point Surface Use and Operations Plan WHITE SWAN "9" FED NO. 5 Page 3

- B. Unguarded pits, if any, containing fluid will be fenced until they have been filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and levelled within 300 days after abandonment.

# 11. TOPOGRAPHY

- A. The wellsite and access route are located in a relatively flat area.
- B. The top soil at the wellsite is sandy.
- C. The vegetation cover at the wellsite is moderately sparse with prairie grasses, some mesquite bushes, and shinnery oak.
- D. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- E. There are no ponds, lakes, streams, or rivers within one mile of the wellsite.

# 12. OPERATOR'S REPRESENTATIVES

A. The field representatives responsible for assuring compliance with the approved surface use plan are:

Michael R. Burton Division Operations Manager Santa Fe Energy Resources, Inc. 550 W. Texas, Suite 1330 Midland, Texas 79701 915-686-6616 - office 915-699-1260 - home 915-529-6842 - cellular

wawan905.duc

Multi-Point Surface Use and Operations Plan WHITE SWAN "9" FED NO. 5 Page 4

# 13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Santa Fe Energy Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

SIGNED this 25 day of Nov, 1997.

amer 3. The Stinson

James P. (Phil) Stinson Agent for Santa Fe Energy Resources, Inc

#### Santa Fe Energy Resources, Inc.

#### HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

# White Swan "9" Fed No. 5 Section 9, T-22-S, R-32-E Lea County, New Mexico

While drilling to the Delaware formation, the Salado/Castile formation will be drilled. These zones have reportedly had Hydrogen Sulfide shows while drilling through them with 10.0 ppg Brine. These occurrences are spotty and unpredictable. The following is our plan for drilling through the Salado/Castile formations on our way to the Delaware. We will case off this interval with the 8 5/8" intermediate casing prior to drilling our prospective pay zones.

# 1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on the well:

- 1. The hazards and characteristics of hydrogen sulfide (H₂S).
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuations procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of  $H_2S$  on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering the Salado/Castile (training will take place while waiting on cement prior to drilling out of the 13 3/8" casing shoe), and will have weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentations that they have received the proper training.

wswan9f5.doc

White Swan "9" Fed #5 H₂S Drilling Operations Plan Page 2

# 2. H₂S Safety Equipment and Systems

Note: All  $H_2S$  safety equipment and systems will be installed, tested, and operational prior to drilling out of the surface casing set at 600', prior to drilling the Salado/Castile formation.

- 1. Well Control Equipment:
  - A. An annular preventer capable of accommodating all pipe sizes with properly sized closing unit.
- 2. Protective Equipment for Personnel:
  - A. Scott Air-Pack Units located on the rig floor and at briefing areas, as indicated on well site diagram.
- 3. H₂S Detection and Monitoring Equipment:
  - A. 2-portable  $H_2S$  monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when  $H_2S$  levels of 20 ppm are reached.

# 4. Visual Warning Systems:

- A. Wind direction indicators as shown on well site diagram.
- B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. See Example Attached.
- 5. Mud Program:
  - A. The mud program is designed to minimize any  $H_2S$  circulated to the surface. Proper mud weight, safe drilling practices, and the use of  $H_2S$  scavengers will be used to minimize hazards when penetrating  $H_2S$  bearing zones (Salado/Castile).

# 6. Metallurgy:

- A. All of the drill string, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for  $H_2S$  service.
- B. All elastomers used for packing and seals shall be  $\mathrm{H}_2S$  trim.

# WARNING YOU ARE ENTERING AN H2S AREA TIGHT HOLE LOCATION DO NOT ENTER UNLESS YOU WERE CALLED !! WHITE SWAN "9" FED. NO. #5 SANTA FE ENERGY RESOURCES, INC.

White Swan "9" Fed #5 H₂S Drilling Operations Plan Page 3

- 7. Communication:
  - A. Cellular phone communications in company vehicles.
  - B. Radio communications on the drilling rig.
- 8. Well Testing:
  - A. No tests are planned in the Salado/Castile formations.

<u>on</u>

James P. (Phil) Stinson Agent for Santa Fe Energy Resources, Inc.

wswan9[5.doc

